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## 1 General Policies and Information

Students must inform themselves of University rules and regulations and keep abreast of any changes that may occur. The *General Policies and Information* section of this publication contains important details required by students during their studies at McGill and should be periodically consulted, along with other sections and related publications.

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### 1.1 Authorization, Acknowledgement and Consent

When applying for admission to the University, you are bound by and agree to observe all statutes, rules, regulations, and policies at McGill University and the faculty or faculties to which you may be accepted and registered in, including policies contained in the University Calendars and related fee documents. Your obligation as a student begins with your registration and ends in accordance with the University's statutes, rules, regulations, and policies.

You should verify all information or statements provided with your application. Incorrect or false information may jeopardize your admission. The University reserves the right to revoke an admission that is granted based on incorrect or false information in an application or supporting documents.

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### 1.2 Student Rights and Responsibilities

The *Handbook on Student Rights and Responsibilities* is published jointly by the Office of the Dean of Students and the University Secretariat. It contains regulations and policies governing your rights and responsibilities as a student at McGill. You will receive it when you get your student ID card at Enrolment Services (Downtown) or the ID Centre at Macdonald Campus.

The Handbook is also available at [www.mcgill.ca/students/srr/publications](http://www.mcgill.ca/students/srr/publications).

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### 1.3 Language Policy

The main language of instruction at McGill is English. You have the right to write essays, examinations, and theses in English or in French except in courses where knowledge of a language is one of the objectives of the course.

If you need to improve your English skills, you should take an intensive course in English as a second language before or at the start of your studies. Information concerning second-language course offerings can be found in the *Faculty of Arts* section of this publication and in the Summer Studies and Continuing Education Calendars. There are special language requirements for Faculty of Education students; see *Faculty of Education* in this publication.

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### 1.4 Policy Concerning Access to Records

The University sends statements of account and all other correspondence directly to students. You retain full control over who has access to your records or accounts; however, officers and members of the University staff also have access to relevant parts of your records for recognized and legitimate use. The University does not send progress reports or any other information to your parents and/or sponsors unless you specify.

9. The McGill Alumni Association.
10. Professional bodies or corporations (e.g., engineers, dentists).
11. McGill Network and Communications Services for the purposes of listing your McGill email address in an online email directory.

If you do not want to authorize the University to disclose personal information to the organizations mentioned above in 8, 9, 10 and 11, you must complete and submit an *Opposition Form*, available at Enrolment Services.

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## 1.5 Email Communication

All students are assigned a McGill Email Address (usually in the form of `firstname.lastname@mail.mcgill.ca`) and are given a McGill email mailbox. You can view your McGill Email Address and set your McGill Password on Minerva, under the *Personal Menu*



Students who meet certain criteria may be eligible for an *exemption*. If you believe you are eligible, you must present your case to Enrolment Services before the deadline.

Enrolment Services  
James Administration Building Room 205  
845 Sherbrooke Street West  
Montreal, Quebec, H3A 2T5

*Note that this office will be moving in Summer 2010. See [www.mcgill.ca/students](http://www.mcgill.ca/students) for details.*

For enrolment procedures and details on the health insurance plan, consult the website: [www.mcgill.ca/internationalstudents/health](http://www.mcgill.ca/internationalstudents/health). For information concerning rates, see [www.mcgill.ca/internationalstudents/health/fee](http://www.mcgill.ca/internationalstudents/health/fee).

All inquiries related to this University policy must be directed to International Student Services:

International Health Insurance  
Telephone: 514-398-6012  
Email: [international.health@mcgill.ca](mailto:international.health@mcgill.ca)  
Website: [www.mcgill.ca/internationalstudents/health](http://www.mcgill.ca/internationalstudents/health)

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## 1.11 Health Insurance – Canadian Residents

If you are a Canadian student from outside Quebec, you should check with your provincial medicare office to ensure that you have valid health coverage while studying at McGill.

If you are a Canadian student who has been living abroad, you may not be eligible for provincial health insurance coverage to arrive in Montreal. For more information, contact the International Student Services office at 514-398-6012.

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## 1.14 myMcGill

McGill's portal, myMcGill, gives students and staff a personalized interface to the University's information systems.

myMcGill is a collection of useful links and offers an integrated web experience with a single sign-on (SSO) to several McGill web systems. This allows you to access multiple McGill systems without being prompted for additional logins.

Systems that you can access through the portal are:

- myCourses (WebCT)
- Exchange (email)
- Gateway ([www.mcgill.ca](http://www.mcgill.ca))
- Library
- Minerva
- Athletics
- myFuture

To log into myMcGill, click the myMcGill tab at the top-right corner of the McGill homepage ([www.mcgill.ca](http://www.mcgill.ca)) or go to <https://my.mcgill.ca>.

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## 2 Personal Information

Students must inform themselves of University rules and regulations and keep abreast of any changes that may occur. The *Personal Information* section of this publication contains important details pertaining to nominative information, legal documents, ID Cards, as well as other topics, and should be consulted periodically.

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### 2.1 Updating Personal Information

It is important to keep your official records up to date, especially your mailing or billing address, because these are used by the University year round. If your address information on file is invalid, incomplete or missing, the University will hold your mail. Once you have provided a valid address, the University will resume sending your mail.

You must update your address(es) and/or telephone number(s) and emergency contact information on Minerva ([www.mcgill.ca/minerva](http://www.mcgill.ca/minerva)) under the *Personal Menu*.

If you are away from campus and do not have access to the internet, you can request changes by writing to your Student Affairs Office or to Enrolment Services. Your written request must include your signature.

If you need to change important personal information that requires the University to verify official documents, such as a name or citizenship change, or correction of your birth date, you must go in person (as soon as possible) to Enrolment Services, James Administration Building, Room 205. (Note that this office will be moving in Summer 2010. See [www.mcgill.ca/students](http://www.mcgill.ca/students))





**Note 4:** If you are a refugee, you should instead provide your Convention Refugee status document.



**Note 5:** Usually McGill needs your birth certificate to prove your place of birth in Quebec. If you already have a valid Quebec Permanent Code, but McGill is still charging you Canadian fees, McGill will accept as proof that you qualify for Quebec residency a copy of your Canadian passport that indicates your birth place as being within the province of Quebec.



**Note 6:** You can find links to download and print the Permanent Code Data and Attestation of Quebec Residency forms at [www.mcgill.ca/legaldocuments/forms](http://www.mcgill.ca/legaldocuments/forms).

## Fee Exemptions

Students in certain categories may be eligible to claim an exemption from the international rate of tuition fees according to the regulations set by the Quebec *Ministère de l'Éducation, du Loisir et du Sport* (MELS).

If you are eligible for one of the exemption categories you are assessed at the Quebec rate of tuition. You can find a list of categories and the required application form at [www.mcgill.ca/student-records/fees/exemption](http://www.mcgill.ca/student-records/fees/exemption) and also at Enrolment Services. An exemption will not be granted unless you submit the application form along with your supporting documents to Enrolment Services.

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## 2.4 Legal Documents: Has McGill Received Your Documents?

### Quebec/Canadian/International Fees

Once McGill has received your documents, it usually takes one week to process them and update your file accordingly.

- Check your tuition status on the Minerva ([www.mcgill.ca/minerva](http://www.mcgill.ca/minerva)) Student Accounts menu: *Student Menu > Student Accounts Menu > View your Tuition and Legal Status*.
- Check the phrase: *Fees currently calculated according to rules for...* This will tell you if you are assessed as: an international student, a Canadian student, or a Quebec student.
- Electronic billing is the official means of delivering fee statements to all students; you may view your e-bill on Minerva. For more information, see the following website: [www.mcgill.ca/student-accounts/e-bill](http://www.mcgill.ca/student-accounts/e-bill).

**If you do not agree with your assessment, notify McGill right away. If you provide additional documentation in support of your file after the last day of classes for the given term, McGill cannot accept changes or offer you a lower tuition rate for that term.**

### Permanent Code

The Quebec *Ministère de l'Éducation, du Loisir et du Sport* (MELS) usually takes one to four weeks to verify or issue your Permanent Code.

- Check your Permanent Code on Minerva: *Personal Menu > Name Change* or alternately via *Student Menu > Student Accounts Menu > View Tuition Fee and Legal Status*. If your 12-character Permanent Code appears there, your documents are in order. If not, you have not yet provided McGill with your documents listed in [section 2.3: Legal Documents: What Documents Does McGill Need from You?](#) or the Quebec *Ministère de l'Éducation, du Loisir et du Sport* (MELS) has not yet confirmed that your documents are sufficient to create a Permanent Code.

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## 2.5 Legal Documents: What Are the Consequences of Not Providing Your Documents?

McGill must receive all proofs of citizenship, requests for Quebec residency, international fee ex

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## 2.6 Legal Documents: Where Do I Send my Documents?

You must send in all your documents after you have been accepted to McGill but before your classes begin. **Do not send originals.** Email, fax or mail clear and legible copies of your documents. Write your student ID on the documents so that McGill can match them to your record. The sooner you submit your documents, the sooner the University can update your status and ensure that your record is in order.

### **By Email:**

Follow these steps to submit your legal documents electronically.

#### **1. Save the attached file in an accepted format.**

Standard PDF (.pdf) - encrypted PDFs will not be accepted.

Tagged image format (.tif, .tiff; for scans). Ensure that you save your documents properly in one of the above formats - do not just rename the file extension. Due to the possibility of computer viruses, McGill does **not** accept Microsoft Word documents (.doc), hypertext files (.htm, .html), JPG, GIF, or any other format.

#### **2. Ensure that the resolution used is at least 300 dpi (dots per inch)** for an electronic replica (scan) of documentation (e.g., a scan of your birth certificate). The preferred file size is 100KB per image.

#### **3. Address your email to [legaldocumentation@mcgill.ca](mailto:legaldocumentation@mcgill.ca) and attach your relevant scanned document(s).** Attach the file(s) to your email; do not include the documents in the body of your email.

#### **4. Put your First Name, Last Name, and McGill ID number in the subject line of your email.**

Note: Individual email size (including your attachments) should not exceed 5 MB (5120 KB).

### **By Mail:**

Enrolment Services  
Documentation Centre  
688 Sherbrooke Street West, Suite 760  
Montreal, QC H3A 3R1 CANADA

### **By Fax:**

514-398-3227

### **In Person or by Courier:**

Enrolment Services  
James Administration Building, Room 205  
845 Sherbrooke Street West  
Montreal, QC H3A 2T5 CANADA

*Note that this office will be moving in Summer 2010. See [www.mcgill.ca/students](http://www.mcgill.ca/students) for details.*

### **If there is a problem with your documents, contact:**

Telephone: 514-398-7878  
Email: [admissions@mcgill.ca](mailto:admissions@mcgill.ca)

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## 2.7 Identification (ID) Cards

As a student registered at McGill you are required to present an ID card to write examinations, when using libraries and student services and certain laboratories, and to access residence buildings.

To receive your ID card, you must be a registered student, and you must present your Permanent Code information and proof of legal status in Canada (for a list of acceptable documents, see [section 2.3: Legal Documents: What Documents Does McGill Need from You?](#)).

### **ID cards will not be issued if any of your legal documents are missing.**

The Student Identification Card is the property of the University, for use by the cardholder only and is not transferable. If you withdraw from all of your courses, you must attach your ID card to the withdrawal form or return it to Enrolment Services (or the Faculty of Agricultural and Environmental Sciences, Student Affairs Offi



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## 2.10 Name: Verification of Name

You should verify the accuracy of your name on McGill's student records via Minerva. To do this, go to the *Personal Menu > Name Change Form*, where you can make minor corrections such as changing case (upper/lower), adding accents and spacing.

Note that you cannot change the name on your record via Minerva. Requests for such changes must be made by presenting official documents (see [section 2.8: Name: Legal Name](#) and [section 2.9: Name: Preferred First Name](#)) in person at Enrolment Services, James Administration Building, Room 205. *Note that this office will be moving in Summer 2010. See [www.mcgill.ca/students](http://www.mcgill.ca/students) for details.*

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To successfully complete registration, you must have an acceptable academic standing from the previous session and have paid any outstanding fees and/or fines.

### **3.1.2 Newly Admitted Students Entering in September 2010**

Registration will take place between



### 3.2.1.1 Course Numbering

Each McGill course is assigned a unique seven-character course “number”.

**The first four characters (Subject Code)** refer to the unit offering the course.

These codes were implemented in September 2002, replacing the three-number Teaching Unit Codes previously used. A complete list of Teaching Unit Codes and their Subject Code equivalents can be found at [www.mcgill.ca/student-records/transcripts](http://www.mcgill.ca/student-records/transcripts) in the section *Grading and pre-2002 course numbering*.

**The three numbers following the Subject Code** refer to the course itself, with the first of these indicating the level of the course.

- Courses numbered at the 100, 200, 300, and 400 levels are intended for undergraduate students. In most programs, courses at the 300 level and 400 level are normally taken in the student’s last two years.
- Courses at the 500 level are intended for graduate students, but may also be open to qualified senior undergraduate students.
- Courses at the 600 and 700 level are intended for graduate students only.

**Two additional characters (D1, D2, N1, N2, J1, J2, J3) at the end of the seven-character course number identifies multi-term courses.**

### 3.2.1.2 Multi-term Courses

Most courses at McGill are single term (Fall or Winter or Summer) courses with final grades issued and any credits earned recorded at the end of that term. Single term courses are identified by a seven-character course number.

A unit may, however, decide that the material to be presented cannot be divided into single term courses or it is preferable that the work to be done is carried out over two, or three, terms. Under such circumstances, courses are identified by a two-character extension of the course number.

In some cases, the same course may be offered in various ways: as a single term and/or in one or more multi-term versions. The course content and credit weight is equivalent in all modes, the only difference being the scheduling, and students cannot obtain credit for more than one version.

**Courses with numbers ending in D1 and D2** are taught in two consecutive terms (most commonly Fall and Winter). Students must register for the same section of both the D1 and D2 components. When registering for a Fall term D1 course on Minerva, the student will automatically be registered for the Winter term D2 portion. No credit will be given unless both components (D1 and D2) are successfully completed in consecutive terms, e.g., Fall 2010 and Winter 2011.

**Courses with numbers ending in N1 and N2** are taught in two non-consecutive terms (Winter and Fall). Students must register for the same section of both the N1 and N2 components. No credit will be given unless both components (N1 and N2) are successfully completed within a twelve (12) month period.

**Courses with numbers ending in J1, J2 and J3** are taught over three consecutive terms. Students must register for the same section of all three components (J1, J2, J3). No credit will be given unless all three components are successfully completed.



**Note for the Faculties of Arts and Science (including B.A. & Sc.):** If you select a multi-term course, you are making a commitment to that course for its entirety. You **MUST** register in the same section in all terms of a multi-term course. Credit will be jeopardized if you deliberately register in different sections of a multi-term course.

In exceptional cases, when circumstances are beyond the student's control, the Faculty Student Affairs Office may grant permission to change sections mid-way through a multi-term course. You must make your request in writing citing your reason for the request. The request must also have the written support of the instructors of the sections involved and of the coordinator of the course (if applicable). Your request must be submitted to:

- Arts students - Associate Dean, Student Affairs
- Science and B.A. & Sc. students - Director of Advising Services, Science

### Important Conditions for Multi-term Courses

1. Students must be registered for each component of the multi-term course. Students must ensure that they are registered in the same section in each term of the multi-term course.
2. Students must successfully complete each component in sequence as set out in the multi-term course. Credit is granted only at the end of the multi-term course; no credit is given for partial completion.

### 3.2.1.3 Course Terminology

**Prerequisite:** Course A is prerequisite to course B if a satisfactory pass in course A is required for admission to course B.

**Corequisite:** Course A is corequisite to course B if course A must be taken concurrently with (or may have been taken pr.283 course

**Elective Courses:** Courses that do not count toward the fulfillment of the requirements of a major, minor, etc. They are often, but need not be, selected from outside a student's program of study. Some restrictions may apply, but students have the most choice in selecting elective courses. Some faculties also permit students to take elective courses using the satisfactory/unsatisfactory option. Consult your faculty regulations concerning elective courses.

#### **3.2.1.4 First-Year Seminars**

First-Year Seminars (FYS) are limited-enrolment credit courses offered by the Faculties of Arts and Science to students in their first year of undergraduate study at McGill, i.e., newly admitted students in U0 or U1. Students in any faculty can enrol in an FYS, subject to the conditions and/or restrictions of the program in which they are registered. Students may take only one FYS.

FYS classes are limited to a maximum of 25 students and are designed to provide closer interaction with the professor, and better working relations with peers than are available in large introductory courses. The seminars endeavour to teach the latest academic developments and expose participants to advanced research methods. Registration is on a first-come, first-served basis.

For a listing of First-Year Seminars, see *Faculty of Arts > First-Year Seminars* and *Faculty of Science > Registration for First-Year Seminars*.

#### **3.2.1.5 Faculty/School Specific Information**

All students must comply with the regulations and requirements contained in their Faculty section of this publication.

##### **3.2.1.5.1 Agricultural and Environmental Sciences**

Students should note that there are no supplemental examinations for Agricultural and Environmental Sciences courses.

##### **3.2.1.5.2 Arts**

For Faculty of Arts specific program and course information, refer to:

*section 3.2: Course Information and Regulations*  
[www.mcgill.ca/oasis](http://www.mcgill.ca/oasis)

Term(s) offered (Fall, Winter, Summer) may appear after the course credit weight to indicate when a course would normally be taught.

All courses have limited enrolment. You may register for and take for credit any course, unless otherwise indicated, in the sections of this publication applicable to the Faculties of Arts and of Science, subject to the course restrictions listed in this section.

Since the registration system is unable to verify whether or not Faculty regulations are respected, it is technically possible to register for courses that may not be credited towards your program. When your record is manually verified, however, any courses taken that break the Faculty or degree re

*Desautels Faculty of Management > Grading and Credit*

*Desautels Faculty of Management > BCom Program Credit Structure: General Management Program (Concentrations)*

*Desautels Faculty of Management > BCom Program Credit Structure: Major or Honours Programs*

*Desautels Faculty of Management > Management Core*

### 3.2.1.5.6 Science

For Faculty of Science specific program and course information, refer to:

[section 3.2: Course Information and Regulations](#)

[www.mcgill.ca/science/sousa](http://www.mcgill.ca/science/sousa)

Term(s) offered (Fall, Winter, Summer) may appear after the course credit weight to indicate when a course would normally be taught.

All courses have limited enrolment. You may register for and take for credit any course, unless otherwise indicated, in the sections of this publication applicable to the Faculties of Arts and of Science, subject to the course restrictions listed in this section.

Since the registration system is unable to verify whether or not Faculty regulations are respected, it is technically possible to register for courses that may not be credited towards your program. When your record is manually verified, however, any courses taken that break the Faculty or degree regulations will be flagged after the end of course change period as “not for credit towards the program.” As a result, your expected date of graduation may be delayed.

Some courses may require special permission. You should consult this publication and/or the Class Schedule at [www.mcgill.ca/study](http://www.mcgill.ca/study) well in advance of the course change period to determine if permission is required of the instructor, the department, or the Faculty for any course you want to take.

If you believe that you have valid reasons for taking a course that may not be credited towards your program, you must obtain the permission of the Associate Dean or Director.

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## 3.3 Course Load

It is your responsibility to follow the faculty regulations listed below. When registering on Minerva ([www.mcgill.ca/minerva](http://www.mcgill.ca/minerva)), you must not exceed the maximum credits permitted by your faculty. For information on course load requirements for entrance scholarships' renewal and in-course awards, see [section 8.1: Entrance Awards for McGill Students](#).

### 3.3.1 Normal Course Load

The normal course load in most undergraduate faculties is 15 credits per term. If you carry fewer than 12 credits per term, you are considered to be a part-time student in that term.



#### **Note for the Faculty of Agricultural and Environmental Sciences and the Schulich School of Music:**

- The normal course load is 15 to 18 credits per term.



#### **Note for the Faculties of Arts and Science (including B.A. & Sc.):**

- Newly admitted students may take up to 17 credits per term.
- Continuing students in **satisfactory standing** may take up to 17 credits per term.
- Continuing students whose CGPA is above 3.50 may take more than 17 credits per term *only* with written permission from their faculty Associate Dean or Director.

**Note for the Faculties of Education, Management and Religious Studies:** acue520.231 432.021 211.aloTq0 Tc21 0 0 21 0 0 cm/I1 DoQ.021 211.al.1 Tf1 0

### **3.3.2 Course Load for Students in Probationary Standing**

Students in probationary standing may take up to 12 credits per term, with the following exceptions:

- Agricultural and Environmental Sciences: 14 credits.
- Arts: up to 14 credits.

Regular undergraduate and graduate degree, diploma or certificate students registered at McGill may register, with their faculty's permission, at any university in the province of Quebec for three, or in some cases six, **credits** per term in addition to their registration at McGill. Students may also obtain permission to complete a full term away (i.e., 12 to 15 credits) at another Quebec university. These courses, subject to faculty regulations, will be recognized by McGill for the degree that you are registered for, up to the limit imposed by the residency requirements of the program. Normally, you must complete a minimum residency requirement of 60 credits at McGill in order to qualify for a McGill degree (you should check with your faculty). This privilege will be granted if there are valid academic reasons.

If you want to take advantage of this agreement, consult your Student Affairs Offi



**Note:** To be considered for in-course awards, including Dean's Honour List designations, and/or the renewal of entrance scholarships, you must complete at least 27 graded credits in the regular academic session, not including courses completed under the S/U option.

**Note:** The S/U option is not available via Minerva to Visiting, Exchange or Quebec Inter-University Transfer

Deadlines for withdrawal (grade of W) without refund:

- Single-term courses: Tuesday, October 19, 2010
- Multi-term courses that begin in Fall term: Tuesday, January 18, 2011

### **Courses that begin in the Winter Term**

Deadline for withdrawal (grade of W) with refund:

- Tuesday, January 25, 2011

Deadline for withdrawal (grade of W) without refund:

- Single-term courses: Tuesday, February 15, 2011
- Multi-term courses that begin in Winter term: Saturday, May 15, 2011\*

\*Note that if you are in multi-term courses with course numbers ending in N1 and N2 (course begins in the Winter term, skips the Summer term, and is completed in the subsequent Fall term) you may withdraw after May 15 and until the end of the Fall term Course Change period by contacting your Faculty Student Affairs Office.

After the withdrawal (without refund) deadline but before the end of term, and only under exceptional circumstances, you may be granted permission to withdraw from a course. Permission will not be granted merely because you are doing unsatisfactory work. A grade of W or WF, as appropriate, will appear on your transcript but will not be calculated in your GPA. For further information, consult your Faculty Student Affairs Office.



**Note:**

1. To withdraw from required or complementary courses after the withdrawal (without refund) deadline, you may need to obtain permission from

**Fall Term:**

Deadline for University withdrawal with refund (minus \$200 for returning and the registration deposit for new students):  
Tuesday, September 21, 2010

Deadline for University withdrawal without refund:  
Tuesday, October 19, 2010

**Winter Term:**

Deadline for University withdrawal with refund (minus \$200 for returning and the registration deposit for new students):  
Tuesday, January 25, 2011

Deadline for University withdrawal without refund:  
Tuesday, February 15, 2011

If you are blocked from dropping or withdrawing from your last course on Minerva, you are required to contact your Student Affairs Office, which will supply any forms necessary to complete the University withdrawal as long as you have not missed **the deadline for University withdrawal**.



**Note for Faculty of Agricultural and Environmental Sciences:** In addition to the above procedures, you must contact your Student Affairs Office for further information on University withdrawal procedures.



**Note for the Faculties of Arts and Science (including B.A. & Sc.):** If you want to withdraw after the deadlines indicated above, under exceptional circumstances you may be granted permission for University withdrawal. As of summer 2010, requests normally made at your Faculty Student Affairs Office will need to be made at the *Service Point* (see [www.mcgill.ca/students](http://www.mcgill.ca/students)). However, it is important that you also see a Faculty adviser in Dawson Hall to talk about your options and the effects that your request may have on your studies. For more information, see [www.mcgill.ca/students/advising](http://www.mcgill.ca/students/advising).



**Note for the Faculties of Engineering, Management, and Music:** If you want to withdraw after the deadlines indicated above, under exceptional circumstances you may be granted permission for University withdrawal. You should contact your Student Affairs Office ([www.mcgill.ca/students/advising/advisordirectory](http://www.mcgill.ca/students/advising/advisordirectory)) for further information.



**Note for the Faculty of Law:** In addition to the above procedures, you must contact your Student Affairs Office for further information on University withdrawal procedures.

### 3.10.3 Regulations Concerning University Withdrawal: Consequences of University Withdrawal

Fee refunds, if any, for the term in which you withdraw will be according to [section 4.9: Fees and Withdrawal from the University](#).

Upon withdrawal, you must return your ID card to the University as stated in [section 2.7: Identification \(ID\) Cards](#).

If you withdraw from the University during the Fall term, you are considered withdrawn from the entire academic year, regardless of whether you dropped Winter term courses. To return for the Winter term, follow the procedures for readmission.



**Note:** If you withdraw from the University and want to re-register in a subsequent term, you must follow the procedures for readmission, except if you are in the following faculties where you must contact your Student Affairs Office: Music, and Agricultural and Environmental Sciences. See [section 3.14: Readmission](#) for more information.



**Note for the Faculty of Law:** You must reapply for admission via the McGill online application process. For more information, see [www.mcgill.ca/law-admissions/undergraduates/admissions/how](http://www.mcgill.ca/law-admissions/undergraduates/admissions/how).

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## 3.11 Deferred Admission

To defer admission to McGill you must make an official request no later than **August 31** for the Fall term and **December 31** for the Winter term to:

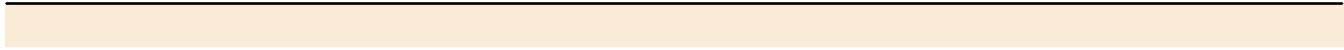
Deferral Coordinator  
Enrolment Services  
James Administration Bldg

(Note that this office will be moving in Summer 2010. See [www.mcgill.ca/students](http://www.mcgill.ca/students) for details.)

Fax: 514-398-4193  
Email: [deferral@mcgill.ca](mailto:deferral@mcgill.ca)







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## 4.2 Tuition Fees

Tuition rates are subject to change each academic year. Please access the *Schedule of Fees* at [www.mcgill.ca/student-accounts/fees](http://www.mcgill.ca/student-accounts/fees).

### 4.2.1 Quebec Students and Non-Quebec Students (Canadian or Permanent Resident)

In accordance with provincial government requirements, students must provide proof that they qualify for assessment of fees at the Quebec or non-Quebec Canadian rates; see [www.mcgill.ca/legaldocuments](http://www.mcgill.ca/legaldocuments) for details.

**Note:** Students who do not submit appropriate documentation by the stipulated deadlines (December 1st - Fall; April 1st - Winter) are billed at the non-Quebec Canadian or the international rate, depending on the documentation submitted. Should your tuition status be changed during the evaluation period, any late payment and/or interest charges accumulated on the difference between the Quebec and Canadian tuition rates will also be waived.

For Canadian students, the Student Society fees include health and dental insurance. For international students, the Student Society fees include a dental insurance plan. International students are required to participate in the Uni

All students except Special students and Graduate part-time and additional session students.	\$150
Special students and Graduate part-time and additional session students.	\$75
Late Course Change Fee	\$50
Registration Cancellation Fee upon withdrawal	\$200
Rereading Examination Paper (refundable if the letter grade is increased)	\$35
Supplemental Examinations, each written paper	\$35
Duplicate ID Card	\$25
Late Payment charged on balances >\$50 as of the end of October (end of February for the Winter term)	\$50
Interest on outstanding balances (rate determined in February, to be applicable on June 1, is 14.9% annually)	
Returned cheque charge	\$35
Cheque Refund charge:	
on balances less than \$100	\$5
on balances \$100 and over	\$10
Schulich School of Music Fees:	
Audition Fee	\$60
Late Music Placement Examination Fee	\$50
Late application fee for Music Performance examination (requires the permission of the Chair of the Department of Performance)	\$50
Supplemental Practical Examination in Music	\$150
Music Private Lessons Fee (MUIN, MUPG subject code courses)	\$500
Music Practical Instruction: part-time or Special student status, <u>or</u> 2 <sup>nd</sup> instrument or voice, <u>or</u> in excess of quota; 1 hr/wk lessons	\$785

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\$1,175

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The [www.mcgill.ca/student-accounts/guest](http://www.mcgill.ca/student-accounts/guest) web page describes how to set up this access. You need to provide certain information about the individual you want to access your fee-related information. The guest will be contacted by email and provided with a link to use within a designated time period.

You can cancel guest access privileges at any time.

Note that Student Accounts staff may respond to questions from your authorized guest regarding the information to which they have been given access.

If you do not want to give a guest access privileges to Minerva, you can enter an alternative student billing email address on Minerva to which Student Accounts will send a copy of the monthly e-bill notification. However, if someone has been granted access as a guest and their guest email is the same as a student billing email address, the University will de-activate the student billing email address in order to only notify your guest about the billings once.

You should NO



**Note:** You should regularly verify your account balance on Minerva.

The University has no obligation to issue any transcript of record, award any diploma, or re-register a student if you do not pay your tuition fees, library fees, residence fees or loans by their due date.

### Information for Registered Students

If you register for a term but still owe amounts from previous terms, you must either pay your account or make payment arrangements with the Student Accounts Office before the end of the course add/drop period. If you have financial difficulty, first contact the Student Aid Office (Brown Student Services Building, Room 3200; 514-398-6013) to discuss the possibility of obtaining financial aid.

If you fail to pay the previous term's fees or to make arrangements to settle your debt prior to the add/drop deadline, the University will cancel your registration in the current and subsequent terms.

### Information for Students Who Are No Longer Registered

When students fail to settle their debt or reach a suitable payment arrangement, or fail to provide the Student Accounts Office with up-to-date contact information, the University refers these delinquent accounts to a collection agency. **If neither the University nor the collection agency is able to collect on the account, the University reserves the right to have the student reported to a credit bureau.** You should be aware that the University is entitled to use all legal means to obtain payment and that students are responsible for all costs associated with such actions.

### Cancelling Registration for Non-Payment

In accordance with the fee policy stated in Overdue Accounts.

The Student Accounts Office will make all reasonable efforts to notify you if your account is delinquent, or if you owe more than \$100 from the previous term, before the University cancels your registration for non-payment. The cancellation is effective the last day of the add/drop period unless you settle the account or make payment arrangements with the University by then. If you pay or make payment arrangements with the Student Accounts Office after the add/drop deadline and you want the University to reinstate your registration for the current or subsequent term(s), you must complete the *Request for Reinstatement* form ([www.mcgill.ca/files/student-accounts/RequestforReinstatementForm.pdf](http://www.mcgill.ca/files/student-accounts/RequestforReinstatementForm.pdf)) and submit it to the Student Accounts Office, which will forward it to Enrolment Services for approval and processing. Your fee account will be charged \$150 (Reinstatement Penalty) for the processing of the re-enrolment.

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## 4.11 Other Policies Related to Fees: Acceptance of Fees vs Academic Standing

Acceptance of fees by the University in no way guarantees that students will receive academic permission to pursue their studies. If it is subsequently determined that your academic standing does not permit you to continue, all fees paid in advance will be refunded by applying to the Student Accounts Office.

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## 4.12 Other Policies Related to Fees: Fees for Students in Two Programs

Students in two programs normally are billed additional fees for their second program. Depending on the level of the two programs (e.g., one at the undergraduate versus one at the graduate level), you may incur both society and faculty fees and/or additional tuition fees. Consult the Student Accounts website at [www.mcgill.ca/student-accounts](http://www.mcgill.ca/student-accounts) for further details.

You should consult the Fee Coordinator in Enrolment Services ([www.mcgill.ca/student-records/contact](http://www.mcgill.ca/student-records/contact)) for information on tuition fees if you are a student in two programs. Adjustments to bills are made throughout the term in cases where fees cannot be automatically calculated.

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## 4.13 Other Policies Related to Fees: Quebec Inter-University Transfer Agreements

If you are taking courses as part of the Quebec Inter-University Transfer (IUT) agreement, you are required to pay the fees at your home university; see [section 3.5: Quebec Inter-University Transfer Agreement: McGill Students](#). The agreement covers only the transfer of academic credits.

International students in undergraduate programs are not usually permitted to take IUT courses.

IUT students taking courses at McGill are required to pay additional course charges that are compulsory upon registration, such as special activity charges or course material costs.

The University reserves the right to refuse course registrations in non-government-funded activities.



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the Relevé 8 slip, therefore it is highly recommended that if you expect to be completing a Quebec income tax return, you provide this information to the University upon registration. More information on these slips is available on [www.mcgill.ca/student-accounts/tax](http://www.mcgill.ca/student-accounts/tax)

- if your CGPA falls between 1.50 and 1.99 and if you were previously in satisfactory standing;
- if your CGPA falls between 1.50 and 1.99 and your TGP

If your standing changes to unsatisfactory:

- you may ask for permission to continue in your program;
- you must make a request for readmission as soon as you are placed in unsatisfactory standing;
- you must provide proof of extenuating circumstances that affected your academic performance (e.g., medical or other documentation).

Requests for readmission following an unsatisfactory standing must be submitted to:

- Arts: Associate Dean (Student Affairs)
- Science and B.A. & Sc.: Director of Advising Services

If your standing is still incomplete by the end of course change period, you should immediately consult with your Faculty Student Affairs Office.

At the end of the Winter term, if you have a mark of K or L, you will be placed in the appropriate standing in June, if the outstanding mark in the course will not affect your standing. Otherwise, standing decisions will be made only once incomplete marks have been cleared. For more information about incomplete grades, please refer to [section 5.6: Incomplete Courses](#).



**Note:** As of summer 2010, requests normally made at your Faculty Student Affairs Office will need to be made at the *Service Point* (see [www.mcgill.ca/students](http://www.mcgill.ca/students)). However, it is important that you also see a Faculty adviser in Dawson Hall to talk about your options and the effects that your request may have on your studies. For more information, see [www.mcgill.ca/students/advising](http://www.mcgill.ca/students/advising).

### 5.1.2 Academic Standing: Faculty of Engineering

In the Faculty of Engineering, a decision on your academic standing is determined on the basis of your Cumulative Grade Point Average (CGPA) in the appropriate program.

If at any time, you were placed in unsatisfactory standing and were readmitted to the Faculty of Engineering after one term away, and you are placed in unsatisfactory standing again at the end of any subsequent term, you may not continue in your program. You will be asked to withdraw from the Faculty of Engineering for a minimum of one term or permanently, based on the conditions of your last letter of readmission.

If you are in unsatisfactory standing for the first time, the regulations below apply.

#### Students in unsatisfactory standing after the Fall term:

You may continue with your studies under the following conditions:

- You must reduce your credit load to a maximum of 13 credits per term and must obtain, at the end of the term, either a CGPA of 2.00 or greater or a TGPA of 2.50 or greater.
- If you have a TGPA of 2.50 or greater, but your CGPA is less than 2.00, you may continue with your studies but will remain in probationary standing until you obtain a CGPA of 2.00 or greater.
- If you do not obtain either the TGPA or CGPA noted above, you will be placed in unsatisfactory standing.
- You must consult a faculty or departmental adviser before withdrawal deadlines concerning your course selection.

#### Students in unsatisfactory standing after the Winter term:

- You must withdraw from the Faculty of Engineering for a minimum of one term.

For more information about academic standing, see [www.mcgill.ca/engineering/student/sao/policies/academic](http://www.mcgill.ca/engineering/student/sao/policies/academic).

### 5.1.3 Academic Standing: Faculty of Law

If you do not obtain a sessional Grade Point Average (GPA at the end of Fall and Winter terms combined) of 1.50, you will be required to withdraw from the Faculty. If your sessional GPA is between 1.50 and 1.99, you will be permitted to continue with your program, but you must obtain a subsequent sessional GPA of 2.50 or a Cumulative GPA (CGPA) of 2.00. You must have a CGPA of 2.00 to be considered for graduation. Students who are required to withdraw from the Faculty may be authorized to continue in their program by the Faculty Admissions Committee if there are exceptional reasons for the required withdrawal.

## 5.2 Credit System

The faculties listed in this publication use the credit system, where each course is assigned a credit rating reflecting the number of weekly contact hours. In general, a three-credit course indicates three hours of lectures per week for one term but this does not apply to all faculties. Laboratory contact hours usually count for fewer credits. Credits also reflect the amount of effort required of the student and generally assume two hours of personal study for each contact hour.

The credit weight of each course is indicated in parentheses beside the course title.



**Note:** Credit for multi-term courses (courses with the suffixes: D1, D2; N1, N2; J1, J2, J3) is granted only after successful completion of all components in the specified time frame. For example, a student would have to take D1 and D2 components in consecutive terms and successfully complete them both in order to obtain credit.



**Note for Agricultural and Environmental Sciences, and Science:** As a guideline, a one-credit course would represent approximately 45 hours total work per course. This is, in general, a combination of lecture hours and other contact hours such as laboratory periods, tutorials and problem periods as well as personal study hours.



**Note for Engineering:** One credit normally represents three hours total work per week. This is, in general, a combination of lecture hours and other contact hours such as laboratory periods, tutorials and problem periods as well as personal study hours. As a guide, the average number of hours per week of course activities is indicated in hours in the course listing under the course description. For example, (3-0-6) indicates a course consisting of three lecture hours per week, no other contact hours, and six hours of personal study per week.

## 5.3 Grading and Grade Point Averages (GPA)

Courses can be graded either by letter grades or in percentages, but the official grade in each course is the letter grade. Where appropriate, a class average appears on transcripts expressed as the letter grade most representative of the class performance.

Since Fall 2002, the University has only used letter grades on transcripts and verification forms.

Grades A through C represent satisfactory passes, D a conditional (non-continuation) pass, and F a failure. Certain courses have been approved for Pass/Fail (P/F) grading. Students may also designate elective courses to be graded under the S/U option. See [section 3.7: Courses Taken under the Satisfactory/Unsatisfactory \(S/U\) Option](#).

You must obtain a grade of C or better in courses that you take to fulfil program requirements. You may not register in a course unless you have passed all the prerequisite courses with a grade of C or better, except by written permission of the appropriate department chair.

Grades	Grade Points	Numerical Scale of Marks
A	4.0	85 - 100%
A-	3.7	80 - 84%
B+	3.3	75 - 79%
B	3.0	70 - 74%
B-	2.7	65 - 69%
C+	2.3	60 - 64%
C	2.0	55 - 59%
D	1.0	50 - 54%
F (Fail)	0	0 - 49%

**Note f**

**Grades have the following designations:**

D	Conditional Pass
F	Failed

**5.4 Grading and Grade Point Averages (GPA): Other Grades**

J	—	unexcused absence (failed); the student is registered for a course but does not write the final examination or do other required work; calculated as a failure in the TGPA and CGPA.
K	—	incomplete; deadline extended for submission of work in a course.
KE or K*	—	further extension granted.
KF	—	failed to meet the extended deadline for submission of work in a course; calculated as a failure in TGPA and CGPA.
KK	—	completion requirement waived. Not calculated in TGPA or CGPA.
L	—	deferred examination.
LE or L*	—	permitted to defer examination for more than the normal period.
NR	—	no grade reported by the instructor (recorded by the Registrar).
P	—	pass; not calculated in TGPA or CGPA.
Q	—	course continued in next term (applicable only to courses taken pre-Fall 2002).
S	—	satisfactory; equivalent to C or better in an elective course; not calculated in TGPA or CGPA. (See <a href="#">section 3.7: Courses Taken under the Satisfactory/Unsatisfactory (S/U) Option</a> )
U	—	unsatisfactory; equivalent to D or F in an elective course; not calculated in TGPA or CGPA. (See <a href="#">section 3.7: Courses Taken under the Satisfactory/Unsatisfactory (S/U) Option</a> )
W	—	withdrew; a course dropped, with permission, after the Course Change deadline; not calculated in TGPA or CGPA.
WF	—	withdrew failing; a course dropped, with special permission in an exceptional case, after faculty deadline for withdrawal from course, the student's performance in the course at that stage being on the level of an F; not calculated in TGPA or CGPA. (Not used by Music.)
WL	—	faculty permission to withdraw from a deferred examination; not calculated in TGPA or CGPA.
NA or &&	—	grade not yet available.
W- - or - -	—	no grade; student withdrew from the University, not calculated in TGPA or CGPA.

**5.5 Grading and Grade Point Averages (GPA): Unexcused Absences**

All students who miss a final exam are given a J grade. You then have the following options:

1. Ask to be assigned a grade based only on the grades earned for your work submitted up to, but not including, the final exam.

The grade earned is calculated by adding the grades obtained on the individual pieces of work and a grade of 0 for the portion of the final grade allocated to the final exam. This option is not available if the professor stipulated in the course outline that the final exam is a required part of the evaluation.

2. Request a deferred exam, if you have the appropriate reasons and documentation.
3. Apply for a supplemental exam if permitted by your faculty.



**Note for Engineering:** Option 1 is not available to students in the Faculty of Engineering.

You must request option 1) no later than four months after the end of the examination period of the original course.

You must request option 2) by the faculty deadlines as indicated in [section 6.5.2: Final Examinations: Deferred Examinations](#) of this publication.

You must request option 3) by the faculty deadlines as indicated at [www.mcgill.ca/student-records/exam/schedules](http://www.mcgill.ca/student-records/exam/schedules).

If you wish to appeal a J grade, you should write to your Associate Dean or Director.

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## 5.6 Incomplete Courses

If the instructor decides there is sufficient reason to permit a delay in the submission of required term work, an e



on the student's faculty reports and verification forms. However, on the student's official transcript the new grade will replace the K. If the required work is not completed before the deadline, a grade of KF will be updated on the student's record. A KF denotes a failed course and is calculated in the TGPA and CGPA the same as an F. In exceptional circumstances, and with the approval of the Assistant Dean (Student Life and Learning), the deadline may be extended further, in which case the grade of KE (further extension granted) will appear. If the extended deadline is not met, a grade of KF will replace the KE.



**Note 2 for Law students:** If, without a valid excuse, you do not participate in or write a final examination or submit required term work for any courses you were registered in, you will receive a final grade of J (unexcused absence). For more information regarding the J grade, see [section 5.5: Grading and Grade Point Averages \(GPA\): Unexcused Absences](#).



**Note for Music students:** A Music student who has a mark of K not cleared in mid-May is ineligible for scholarships.

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## Transfer Credits



**Note for the Faculties of Arts and Science (including B.A. & Sc.):** As of summer 2010, requests normally made at your Faculty Student Affairs Office will need to be made at the *Service Point* (see [www.mcgill.ca/students](http://www.mcgill.ca/students)). However, it is important that you also see a Faculty adviser in Dawson Hall to talk about your options and the effects that your request may have on your studies. For more information, see [www.mcgill.ca/students/advising](http://www.mcgill.ca/students/advising).

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## 5.9 Verification of Student Records: Degree Evaluation

*Degree Evaluation* is a Minerva tool to help students and advisers compare the student's academic record with the requirements of a specific program. If

If you want to contest the fee assessment, you must make a written request to Enrolment Services. Enrolment Services reviews the extraordinary circumstances described in the supporting documentation provided by your faculty, and consults with the Student Accounts Office if necessary, to decide whether or not to consider the request. Enrolment Services then sends you a letter explaining the decision.

### **Student's Citizenship and/or Immigration or Fee Exemption Status**

Note that your faculty/school or Graduate and Postdoctoral Studies does not handle changes related to your citizenship and/or immigration or fee exemption status; see [section 2.3: Legal Documents](#).

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## **5.11 Empty Transcripts of Academic Record: Unofficial Transcripts**

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## **6 Examinations: General Information**

In addition to the general examination policies listed here, you should consult the faculty sections of this publication for particular regulations. You will be informed by the end of the Course Change period of the evaluation method used in each course.

Every student has a right to write term papers, e

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## 6.5 Final Examinations

Formal final examinations are held during an examination period at the end of the course term. The dates of the examination periods are listed at [www.mcgill.ca/importantdates](http://www.mcgill.ca/importantdates).



**IMPORTANT NOTE: You are advised not to make travel plans prior to the release of the Final Exam Schedule. Vacation plans *do not* constitute grounds for the deferral or re-scheduling of final exams.**

In some courses there is no final examination; your standing in these courses is determined by term work and class tests.

### 6.5.1 Final Examinations: University Regulations Concerning Final Examinations

#### Preamble

The objectives of these regulations are as follows:

1. to protect students from excessive workloads;
2. to use the full 15-week term to maximum advantage.

#### Regulations

1. These regulations shall apply to undergraduate courses up to and including the 500 level that are evaluated by the use of written examinations. They shall not apply to clinical, field, laboratory, performance, and seminar courses, or to other courses that are evaluated solely by means of a design, paper, program, or project.
2. Written examinations (including take-home examinations) shall not be held during the last two weeks of scheduled classes during the Fall and Winter terms, except where a pattern of continuous evaluation has been established, in which case the total value of examinations given in this period shall comprise no more than 10% of the final mark.
3. If the written examinations in a course constitute 50% or more of the final mark, one of these shall be given as a final written examination; and it shall take place during the examination period after the last day of scheduled lectures in December or April.
4. A final examination given during the examination period shall be worth at least 25% of the final mark.
5. Students shall be informed of all course requirements by the end of the course change period. All term work shall be assigned early enough in the term for students to complete the assignment(s) by the last day of class.
6. The due date for term work in courses to which these regulations apply shall be no later than the last day of classes.
7. In courses that span the Fall and Winter terms (course pairs with numbers ending D1 and D2), instructors who wish to give a mid-year examination in December must schedule it in the formal examination period.
8. The principles enunciated in these regulations shall be applied, appropriately modified, to courses given during the summer, to other courses of less than a 13-week duration, and to courses in the Faculties of Law, Medicine, Dentistry, and Education that do not follow the normal University Timetable.
9. Individual faculties may propose variations in these regulations to the Academic Policy and Planning Committee in order to meet their special needs.
10. These regulations, and any variations to them, shall be made known to students by each faculty.

**Instructors are not permitted to grant any special treatment regarding examinations to any student.**

If your request is approved, an L will appear in place of a grade in those courses. The grade you obtain on the deferred examination will replace the grade of L on your official transcript.

If you receive a grade of D, F, J, or U in a course after a deferred examination, no supplemental examinations will be available. You must either re-register in the same course the following term or in an approved course substitute.



**Note for the Faculties of Arts and Science (including B.A. & Sc.):** As of summer 2010, requests normally made at your Faculty Student Affairs Office will need to be made at the *Service Point* (see [www.mcgill.ca/students](http://www.mcgill.ca/students)). However, it is important that you also see a Faculty adviser in Dawson Hall to talk about your options and the effects that your request may have on your studies. For more information, see [www.mcgill.ca/students/advising](http://www.mcgill.ca/students/advising).



**Note for Music Students:** A Music student who has not cleared a grade of L by mid-May is ineligible for scholarships.

If you are not granted deferred status, you will receive a grade of J in the course, which will count as a failure in the TGPA and CGPA. You may, however,



- additional work involves revising one or more previously submitted papers or submitting new written work to replace the original work;
- you must be in satisfactory or probationary standing;
- you must have received a final grade of D, J, F, or U in the course;
- the weight of the additional work will be equal to the weight given the work revised or replaced when the original grade was submitted;
- the grade resulting from the revised or additional work will be recorded as a supplemental grade;
- the supplemental result will not replace the grade originally obtained, which is used in calculating the GPA; both the original grade and the supplemental grade will count in calculating the CGPA;
- in courses in which both a supplemental e



- No supplemental examinations are available if you fail to achieve a satisfactory grade in a course with a deferred examination.
- A \$35 non-refundable fee for each supplemental exam application is assessed at the time of application and charged directly to your McGill account.

#### **6.5.5.2 Supplemental Examinations: Faculties of Arts and Science (including B.A. & Sc.)**

If you want to write supplemental examinations for certain courses, you must submit a request on Minerva ([www.mcgill.ca/minerva](http://www.mcgill.ca/minerva)) by going to *Student Menu > Student Records Menu > Supplemental Exam Application*. The following conditions apply:

- you must be in satisfactory or probationary standing;
- you must have received a final grade of D, F, J or U in the course;
- you must make yourself available at the time of the next supplemental examination period;
- special permission is required if you want to write supplementals totalling more than 8 credits;
- only one supplemental examination is allowed in a course;
- the supplemental result may count for 100% of the final grade or may include the same proportion of class work as did the original grade; the instructor will announce the arrangements to be used for the course by the end of the course change period;
- the format and content of the supplemental examination will not necessarily be the same as for the final examination, so you should consult the instructor;
- the supplemental result will not replace the grade originally obtained, which is used in calculating the GPA; both the original mark and the supplemental result will be calculated in the CGPA;
- in courses in which both a supplemental e

James Administration Building  
McGill University  
845 Sherbrooke Street West, Room 205  
Montreal, Quebec H3A 2T5

*Note that this office will be moving in Summer 2010. See [www.mcgill.ca/students](http://www.mcgill.ca/students) for details.*

Telephone: 514-398-2207

Email: [proctor.es@mcgill.ca](mailto:proctor.es@mcgill.ca)

Website: [www.mcgill.ca/student-records/exam/other](http://www.mcgill.ca/student-records/exam/other)

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## **7 Internships, Exchanges and Co-op Programs**

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### **7.1 Internships and Co-op Programs**

Several faculties at McGill offer undergraduate students the opportunity to participate in an internship or co-op program.

Faculty of Agricultural and Environmental Sciences students: See *Faculty of Agriculture*

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## 7.5 Study Abroad Opportunities

For information on Study Abroad, refer to *Field Studies > Opportunities for Field Study and Study Abroad* in this publication.

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## 8 Scholarships and Student Aid

The Scholarships and Student Aid Office offers a complete range of merit and need-based awards for entering and in-course undergraduate students. As well, the office administers all federal, provincial and U.S. government student aid programs. For information and links to government websites, see [www.mcgill.ca/studentaid](http://www.mcgill.ca/studentaid). Comprehensive information concerning all undergraduate awards also appears in the *Undergraduate Scholarships and Awards Calendar* available at [www.mcgill.ca/students/courses/calendars](http://www.mcgill.ca/students/courses/calendars) or from the Scholarships and Student Aid Office.

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### 8.1 Entrance Awards for McGill Students

Undergraduate Entrance Scholarships are available to students entering McGill University for the first time in a full-time undergraduate degree program.

You should consult [www.mcgill.ca/studentaid/scholarships/prospective](http://www.mcgill.ca/studentaid/scholarships/prospective) for details. Highlights include:

- Entrance Scholarships are entirely merit-based; financial need is not considered.
- Value ranges from \$3,000 to \$10,000.
- There are two types: the One-Year, where eligibility is based solely on academic achievement; and the renewable Major, based on academic achievement as well as leadership qualities in school and/or community activities.

#### Application Procedures

- **One-Year:** by applying to McGill, all eligible applicants are automatically considered. No separate application is required.
- **Major:** candidates can apply on the web after their application for admission has been submitted and they have received an email acknowledgment.
- You must ensure that you send in all required supporting documentation.
- Dentistry, Law, Medicine and Music applicants should inquire at their own faculty's admissions office regarding availability of awards.
- If you hold a renewable scholarship from the Committee on Enrolment and Student Affairs, the scholarship is *only* renewed if you meet the McGill standards for renewal. See [www.mcgill.ca/studentaid/scholarships/prospective/regulation](http://www.mcgill.ca/studentaid/scholarships/prospective/regulation).

#### Need-Based Entrance Financial Aid

This program of

- A maximum of the top 10% of students in each faculty are named to the Dean's Honour List. This designation is based on the combined GPA for the Fall and Winter terms (i.e., your sessional GPA) and the minimum required combined GPA is determined by each faculty. It is an official University recognition of the student's achievements and appears on the transcript. There is no monetary reward.
- All awards, with the exception of prizes, are credited to the tuition fee accounts of students for the following academic year. Students must be registered on a full-time basis to receive the funds.
- If you hold a renewable scholarship from the Committee on Enrolment and Student Affairs, it will *only* be renewed if you meet the McGill standards for renewal. See [www.mcgill.ca/studentaid/scholarships/prospective/regulation](http://www.mcgill.ca/studentaid/scholarships/prospective/regulation).

### **Need-Based Entrance Financial Aid**

This program offers financial aid to students from families of modest means who require assistance to attend McGill. Upon acceptance to the University, first-year, first-degree students can apply for an entrance bursary on Minerva. The value of the entrance bursary depends on the student's degree of need. Since financial need is the primary factor in the selection of aid recipients, applicants for this program are expected to apply for government student aid programs where eligible.

The University offers an In-Course Financial Aid program to full-time undergraduate degree students on the basis of demonstrated financial need. This aid includes bursaries, short- and long-term loans, a Work Study Program, and a Travel Award Program for exchanges/study abroad. To be considered for McGill financial aid, the University recommends that applicants apply for the maximum government student assistance for which they are eligible. The Scholarships and Student Aid Office oversees all provincial, federal and U.S. student aid programs and disburses government funds.

Student Aid Counsellors are available for consultation on an individual basis to reo

You should contact your adviser (Music students should contact the Senior Student Adviser; graduate students should contact the Graduate Program Director) early in the graduating year to make sure you will meet your program requirements by graduation time. For contact information on advisers, see [www.mcgill.ca/students/advising/advisordirectory](http://www.mcgill.ca/students/advising/advisordirectory).

## 9.1 Graduation Honours: Dean's Honour List

If you are graduating with an undergraduate degree, you may be awarded the designation Dean's Honour List under the following conditions:

1. you have completed a minimum of 60 McGill credits towards your degree; and
2. you are in the top 10% of the faculty's graduating class of students; this calculation is based on the CGPA.



**Note for transfer students:** this designation may be withdrawn if your CGPA at another university or in another faculty at McGill is not comparable to the CGPA earned in your graduating faculty.



**Note for Faculty of Arts:**

- the calculation used to determine the top 10% of the faculty's graduating class is based on the sessional GPA (i.e., the combined GPA for the Fall and Winter terms).

## 9.2 Graduation Honours: Distinction

If you are graduating with an undergraduate degree, you may be awarded the designation Distinction under the following conditions:

1. you have completed a minimum of 60 McGill credits towards your degree; and
2. you are in the top 25%, but below the top 10%, of your faculty's graduating class of students; this calculation is based on the CGPA.



**Note for transfer students:** this designation may be withdrawn if your CGPA at another university or in another faculty at McGill is not comparable to the CGPA earned in your graduating faculty.



**Note:** the Faculties of Education, Dentistry, Law, Medicine, and the School of Nursing, as well as the Centre for Continuing Education do not assign the designation of Distinction to graduating students.



**Note:** the designation of Great Distinction is no longer awarded at graduation. Prior to September 2009, Distinction and Great Distinction were awarded at graduation according to faculty-specific regulations. You can find these rules in the faculty chapters of the *2008-2009 Undergraduate Programs Calendar* or any earlier version at [www.mcgill.ca/students/courses/calendars](http://www.mcgill.ca/students/courses/calendars).

## 9.3 Graduation Honours: Faculty of Science Dean's Multidisciplinary Undergraduate Research List

The Dean's Multidisciplinary Undergraduate Research List recognizes students who have participated in substantial and broad undergraduate research. To be placed on the Dean's Multidisciplinary Undergraduate Research List at graduation time:

- you must have completed at least 9 credits of research-based courses, taken for a letter grade,
- where qualifying courses are specified in the list of approved research courses (see [www.mcgill.ca/science/ours/researchcourses](http://www.mcgill.ca/science/ours/researchcourses)).

Furthermore, considering all qualifying research-based courses on your transcript at graduation time:

- at least one course, worth at least 3 credits, must be from a different unit than the other research-based courses; and
- every qualifying course must have been completed with a grade of C or above; and
- the average GPA over all qualifying courses must be 3.0 or above.

If these requirements are met, the mention "Dean's Multidisciplinary Undergraduate Research List" will be recorded on your transcript at graduation time. No application is necessary; all graduating students' records are considered by the Office for Undergraduate Research in Science.

## 9.4 Graduation Honours: Honours and First-Class Honours

### 9.4.1 Graduation Honours: Honours and First-Class Honours for Faculties of Arts and Science (including B.A. & Sc.)

As a graduating student registered in an Honours program, you may be recommended for *Honours* or *First-Class Honours* by your department(s) to the Faculty, under the following conditions only:

- you must complete all requirements imposed by the department;
- for *Honours*, the CGPA at graduation must be at least 3.00;
- for *First-Class Honours*, the CGPA at graduation must be 3.50 or better;
- students in a Joint Honours program must satisfy the above criteria for both Joint Honours components;
- some departments have additional requirements which must be met before you are recommended for *Honours* or *First-Class Honours* (see the departmental entries).

Students in an Honours program whose program GPA or CGPA is below 3.00, or who did not satisfy certain additional program requirements, must consult their adviser to determine if they are eligible to graduate in a program other than Honours.

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## 9.5 Apply to Graduate

**Most undergraduate students and non-thesis graduate students (master's, certificates, diplomas) must use Minerva ([www.mcgill.ca/minerva](http://www.mcgill.ca/minerva)) to apply to graduate.** It is your responsibility to inform McGill of your intention to graduate. You need a minimum residency requirement of 60 credits at McGill to qualify for a McGill degree. The minimum CGPA required to graduate is 2.00.

The Application for Graduation is available on Minerva when you register for your final year, except if you are in the Faculty of Medicine or Faculty of Dentistry, where you are automatically flagged for graduation in your final year. For more information on how to apply on Minerva, go to [www.mcgill.ca/minerva-students/records/graduation](http://www.mcgill.ca/minerva-students/records/graduation).

### Deadlines:

- Fall term graduation (courses completed in December for June convocation): You must apply on Minerva by the end of November.
- Winter term graduation (courses completed in April for June convocation): You must apply on Minerva by the end of February.
- Summer term graduation (courses completed by August for October convocation): You must apply on Minerva by the end of March.

If you miss one of these deadlines, contact your Faculty Student Affairs Office immediately.



**Note for the Faculties of Arts and Science (including B.A. & Sc.):** As of summer 2010, requests normally made at your Faculty Student Affairs Office will need to be made at the *Service Point* (see [www.mcgill.ca/students](http://www.mcgill.ca/students)). However, it is important that you also see a Faculty adviser in Dawson Hall to talk about your options and the effects that your request may have on your studies. For more information, see [www.mcgill.ca/students/advising](http://www.mcgill.ca/students/advising).

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## 9.6 Graduation Approval Query

As a graduating student, you can view the status of your graduation record on Minerva ([www.mcgill.ca/minerva](http://www.mcgill.ca/minerva)) during the Faculty review and approval process (go to *Student Records > Graduation Approval Query*). The *Graduation Approval Query* form becomes available to graduating students approximately three to four weeks before the *Degree Granted* notation is updated on their records.

If you have met all requirements for graduation, your student record on Minerva will display the *Degree Granted* notation at the appropriate time:

- Late February, for Fall term graduation (Convocation in Spring).
- Late May, for Winter term graduation (Convocation in Spring).
- Late October, for Summer term graduation (Convocation in Fall).

See [www.mcgill.ca/convocations](http://www.mcgill.ca/convocations) for information regarding convocation ceremonies.

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## 9.7 Replacement Diploma

If your diploma was lost, damaged, or the name on the diploma should be changed, you can request a replacement diploma. You must send a written request plus a certified cheque or money order for CAD\$60, payable to McGill University. You should refer to the sections below to determine which situation applies to you. Send your request to:

Enrolment Services

Duplicate Diploma Request

McGill University

James Administration Building, Room 205

**Note: Y**



refer to your faculty's section of this publication for additional advising information specific to your degree program. Note that some academic matters require approval of more than one adviser, e.g., the faculty adviser and the department/school academic adviser.

**Faculty Advisers** are normally located in the Student Affairs Office of each faculty and are av

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**You do not need to pre-register:** consult the list of courses available at [www.mcgill.ca/visiting/studentforaday](http://www.mcgill.ca/visiting/studentforaday) and select 1 or 2 (maximum) courses you wish to attend. Pick up your Student-For-A-Day pass at the Welcome Centre on the day of your visit. Please note that only 100-level and 200-level lectures are available. For further information, contact the Welcome Centre (514-398-6555).

Note that there are generally few lectures available on Fridays.

If you visit our **Macdonald Campus**, you can participate in the Student-For-A-Day program that provides a total immersion in the Macdonald experience. Prospective students tour the campus, sit in on classes, meet professors and students, and visit labs, facilities and residences. For further information, email the Macdonald Campus Student Affairs Office at [studentinfo.macdonald@mcgill.ca](mailto:studentinfo.macdonald@mcgill.ca) to register.

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## 11.5 Contact Information for Advising

In general, contact your Faculty Student Affairs Office if you have any questions on programs.

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## 11.6 Faculty Student Affairs Offices

### Faculty of Agricultural and Environmental Sciences

Telephone: 514-398-7925 or 514-398-7928  
Email: [studentinfo.macdonald@mcgill.ca](mailto:studentinfo.macdonald@mcgill.ca)  
Website: [www.mcgill.ca/macdonald](http://www.mcgill.ca/macdonald)

### Faculty of Arts

Office of Advising and Student Information Services (OASIS)  
Telephone: 514-398-1029 (from June 1 to August 31)  
Telephone: 514-398-4210 (before June 1 and after August 31)  
Newly admitted students email: [newstudentadvising.arts@mcgill.ca](mailto:newstudentadvising.arts@mcgill.ca)  
Returning students email: [adviser.arts@mcgill.ca](mailto:adviser.arts@mcgill.ca)  
Website: [www.mcgill.ca/oasis](http://www.mcgill.ca/oasis)

Students in U1 or above should also see the contact information for advisers in [section 11.7: Contact Information for Departments, Schools and Programs for Students in the Faculty of Arts \(or the B.A. & Sc. Degree\)](#).

### Faculty of Education

Telephone: 514-398-7042  
Email: [sao.education@mcgill.ca](mailto:sao.education@mcgill.ca)  
Website: [www.mcgill.ca/edu-sao](http://www.mcgill.ca/edu-sao)

### Faculty of Engineering

McGill Engineering Student Centre (Student Affairs Office, Career Centre, and Peer Tutoring Service)	514-398-7257
Architecture	514-398-6702
Chemical Engineering	514-398-4494
Civil Engineering and Applied Mechanics	514-398-6345
Electrical and Computer Engineering	514-398-3943
General Engineering	514-398-7257
Mechanical Engineering	514-398-8070
Mining and Materials Engineering	Mining: 514-398-2215 Materials: 514-398-1040
Urban Planning	514-398-4075

## Faculty of Engineering

Email: [adviser@engineering.mcgill.ca](mailto:adviser@engineering.mcgill.ca) or [information@engineering.mcgill.ca](mailto:information@engineering.mcgill.ca)

Website: [www.mcgill.ca/engineering](http://www.mcgill.ca/engineering)



**Note:** You are required to meet with an academic adviser before the start of classes. If you are admitted to Year 0 and you are seeking transfer credits, you are initially advised by the Student Affairs Office, Engineering Student Centre, followed by advising in your department. If you are admitted to Year 0 and you are not seeking transfer credits, or if you are admitted to Year 1, you should contact the department/school directly.

## Desautels Faculty of Management

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**Hispanic Studies (Department of)**

Telephone: 514-398-6683  
Email: [hispanic.studies@mcgill.ca](mailto:hispanic.studies@mcgill.ca)  
Website: [www.mcgill.ca/hispanic](http://www.mcgill.ca/hispanic)

**History (Department of)**

Telephone: 514-398-3975  
Email: [undergrad.history@mcgill.ca](mailto:undergrad.history@mcgill.ca)  
Website: [www.mcgill.ca/history](http://www.mcgill.ca/history)

**History and Philosophy of Science (program)**

Telephone: 514-398-4210  
Email: [interdisciplinary.arts@mcgill.ca](mailto:interdisciplinary.arts@mcgill.ca)  
Website: [www.mcgill.ca/hpsc](http://www.mcgill.ca/hpsc)

**Humanistic Studies (program)**

Telephone: 514-398-4804  
Email: [humanisticstudies.arts@mcgill.ca](mailto:humanisticstudies.arts@mcgill.ca)  
Website: [www.mcgill.ca/humanistic](http://www.mcgill.ca/humanistic)

**Industrial Relations (program)**

Telephone: 514-398-4804  
Email: [interdisciplinary.arts@mcgill.ca](mailto:interdisciplinary.arts@mcgill.ca)  
Website: [www.mcgill.ca/indr](http://www.mcgill.ca/indr)

**International Development Studies (program)**

Telephone: 514-398-4804  
Email: [ids@mcgill.ca](mailto:ids@mcgill.ca)  
Website: [www.mcgill.ca/ids](http://www.mcgill.ca/ids)

**Islamic Studies (Institute of)**

Telephone: 514-398-6077  
Email: [info.islamics@mcgill.ca](mailto:info.islamics@mcgill.ca)  
Website: [www.mcgill.ca/islamicstudies](http://www.mcgill.ca/islamicstudies)

**Italian Studies (Department of)**

Telephone: 514-398-3953  
Email: [italian.studies@mcgill.ca](mailto:italian.studies@mcgill.ca)  
Website: [www.mcgill.ca/italian](http://www.mcgill.ca/italian)

**Jewish Studies (program)**

Telephone: 514-398-6543  
Email: [stefka.iorgova@mcgill.ca](mailto:stefka.iorgova@mcgill.ca)  
Website: [www.mcgill.ca/jewishstudies](http://www.mcgill.ca/jewishstudies)

**Latin American and Caribbean Studies (program)**

Telephone: 514-398-4804  
Email: [ids@mcgill.ca](mailto:ids@mcgill.ca)  
Website: [www.mcgill.ca/lacs](http://www.mcgill.ca/lacs)

**Linguistics (Department of)**

Telephone: 514-398-4222  
Email: [andria.de\\_luca@mcgill.ca](mailto:andria.de_luca@mcgill.ca)  
Website: [www.mcgill.ca/linguistics](http://www.mcgill.ca/linguistics)

**Mathematics & Statistics (Department of)**

Telephone: 514-398-3800  
Email: [ugrad.mathstat@mcgill.ca](mailto:ugrad.mathstat@mcgill.ca)  
Website: [www.math.mcgill.ca](http://www.math.mcgill.ca)

**Middle East Studies (program)**

Telephone: 514-398-6077  
Email: [laila.parsons@mcgill.ca](mailto:laila.parsons@mcgill.ca)  
Website: [www.mcgill.ca/mes](http://www.mcgill.ca/mes)

**Music (program)**

Telephone: 514-398-4535  
Email: [bruce.minorgan@mcgill.ca](mailto:bruce.minorgan@mcgill.ca)  
Website: [www.mcgill.ca/music](http://www.mcgill.ca/music)

**North American Studies (program)**

Telephone: 514-398-4210  
Email: [interdisciplinary.arts@mcgill.ca](mailto:interdisciplinary.arts@mcgill.ca)  
Website: [www.mcgill.ca/nast](http://www.mcgill.ca/nast)

**Philosophy (Department of)**

Telephone: 514-398-6060  
Email: [info.philosophy@mcgill.ca](mailto:info.philosophy@mcgill.ca)  
Website: [www.mcgill.ca/philosophy](http://www.mcgill.ca/philosophy)

**Philosophy and Western Religions (program)**

Telephone: 514-398-4210

Email: [interdisciplinary.arts@mcgill.ca](mailto:interdisciplinary.arts@mcgill.ca)

Website: [www.mcgill.ca/phwr](http://www.mcgill.ca/phwr)

**Political Science (Department of)**

Telephone: 514-398-4800 or 514-398-4183

Email: [della.maharajh@mcgill.ca](mailto:della.maharajh@mcgill.ca)

Website: [www.mcgill.ca/politicalscience](http://www.mcgill.ca/politicalscience)

**Psychology (Department of)**

Telephone: 514-398-6100

Email: [info@psych.mcgill.ca](mailto:info@psych.mcgill.ca)

Website: [www.psych.mcgill.ca](http://www.psych.mcgill.ca)

**Québec, Études sur le (program)**



### **Social Studies of Medicine (program)**

Telephone: 514-398-6033

Email: [ssom@mcgill.ca](mailto:ssom@mcgill.ca)

Website: [www.mcgill.ca/ssom](http://www.mcgill.ca/ssom)

### **Social Work (School of)**

Telephone: 514-398-7070

Email: [undergraduate.socialwork@mcgill.ca](mailto:undergraduate.socialwork@mcgill.ca)

Website: [www.mcgill.ca/socialwork](http://www.mcgill.ca/socialwork)

### **Sociology (Department of)**

Telephone: 514-398-6868

Email: [giovanna.terresi@mcgill.ca](mailto:giovanna.terresi@mcgill.ca)Social

#### Teaching French as a Second Language

Telephone: 514-398-4527  
Email: [advisedise.education@mcgill.ca](mailto:advisedise.education@mcgill.ca)

#### Music

Telephone: 514-398-4527  
Email: [advisedise.education@mcgill.ca](mailto:advisedise.education@mcgill.ca)

#### Concurrent B.Mus./B.Ed.

Telephone: 514-398-4527  
Email: [advisedise.education@mcgill.ca](mailto:advisedise.education@mcgill.ca)

#### Concurrent B.Sc./B.Ed.

Telephone: 514-398-4527  
Email: [advisedise.education@mcgill.ca](mailto:advisedise.education@mcgill.ca)

#### Physical & Health Education

Telephone: 514-398-4184 ext. 0472  
Email: [kin.physed@mcgill.ca](mailto:kin.physed@mcgill.ca)

#### Kinesiology

Telephone: 514-398-4184 ext. 0472  
Email: [kin.physed@mcgill.ca](mailto:kin.physed@mcgill.ca)

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### 11.9 Contact Information for Departments, Schools and Programs for Students in the Faculty of Engineering

All students in the Faculty of Engineering are required to meet with an Academic Adviser prior to the start of classes.

**U0 students (seeking transfer credits):** You are initially advised by the Faculty of Engineering Student Affairs Office, followed by advising in your department/school.

**U0 students (not seeking transfer credits) and U1 students:** Contact your department/school directly.

Additional contact information can be found in the relevant sections of this publication.

#### Architecture

Telephone: 514-398-6702  
Email: [mary.lanni@mcgill.ca](mailto:mary.lanni@mcgill.ca)  
Website: [www.mcgill.ca/architecture](http://www.mcgill.ca/architecture)

#### Chemical Engineering

Telephone: 514-398-4494  
Email: [info.chemeng@mcgill.ca](mailto:info.chemeng@mcgill.ca)

**Chemical Engineering**

Website: [www.mcgill.ca/chemeng](http://www.mcgill.ca/chemeng)

**Civil Engineering and Applied Mechanics**

Telephone: 514-398-6345

Email: [ugradinfo.civil@mcgill.ca](mailto:ugradinfo.civil@mcgill.ca)

Website: [www.mcgill.ca/civil](http://www.mcgill.ca/civil)

**Electrical and Computer Engineering**

Telephone: 514-398-3943

Email: [undergrad.ece@mcgill.ca](mailto:undergrad.ece@mcgill.ca)

Website: [www.mcgill.ca/ece](http://www.mcgill.ca/ece)

**Mechanical Engineering**

Telephone: 514-398-8070

Email: [lisa.lapka@mcgill.ca](mailto:lisa.lapka@mcgill.ca)

Website: [www.mcgill.ca/mecheng](http://www.mcgill.ca/mecheng)

**Mining and Materials Engineering****Mining**

Telephone: 514-398-2215

Email: [admin.mining@mcgill.ca](mailto:admin.mining@mcgill.ca)

Website: [www.mcgill.ca/minmat](http://www.mcgill.ca/minmat)

**Materials**

Telephone: 514-398-1040

Email: [coordinator.minmat@mcgill.ca](mailto:coordinator.minmat@mcgill.ca)

Website: [www.mcgill.ca/minmat](http://www.mcgill.ca/minmat)

**Urban Planning**

Telephone: 514-398-4075

Email: [admissions.planning@mcgill.ca](mailto:admissions.planning@mcgill.ca)

Website: [www.mcgill.ca/urbanplanning](http://www.mcgill.ca/urbanplanning)

**11.10 Contact Information for Departments, Schools and Programs for Students in the Faculty of Science (or the B.A. & Sc. Degree)**

**U0 students:** Contact the Faculty of Science Student Affairs Office for advising on the Science freshman program or the B.A. & Sc. freshman program.

**U1 students or any other year:** Contact the department (school or program) directly for academic advising.

Additional contact information is located in the relevant sections of this publication.

**Anatomy and Cell Biology (Department of)**

Telephone: 514-398-6335

Email: [vittoria.catania@mcgill.ca](mailto:vittoria.catania@mcgill.ca)

**Anatomy and Cell Biology (Department of)**

Website: [www.mcgill.ca/anatomy](http://www.mcgill.ca/anatomy)

**Atmospheric & Oceanic Sciences (Department of)**

Telephone: 514-398-3764

Email: [undergraduateinfo@meteo.mcgill.ca](mailto:undergraduateinfo@meteo.mcgill.ca)

Website: [www.mcgill.ca/meteo](http://www.mcgill.ca/meteo)

**Biochemistry (Department of)**

Telephone: 514-398-2423

Email: [christine.laberge@mcgill.ca](mailto:christine.laberge@mcgill.ca)

Website: [www.mcgill.ca/biochemistry](http://www.mcgill.ca/biochemistry)

**Biology (Department of)**

Telephone: 514-398-6400

Email: [nancy.nelson@mcgill.ca](mailto:nancy.nelson@mcgill.ca)

Website: <http://biology.mcgill.ca>

**Biotechnology (program)**

Telephone: 514-398-3998

Email: [dalia.sanmartin@mcgill.ca](mailto:dalia.sanmartin@mcgill.ca)

Website: [www.mcgill.ca/sheldon](http://www.mcgill.ca/sheldon)

**Chemistry (Department of)**

Telephone: 514-398-6999

Email: [advisor.chemistry@mcgill.ca](mailto:advisor.chemistry@mcgill.ca)

Website: [www.chemistry.mcgill.ca](http://www.chemistry.mcgill.ca)

**Cognitive Science (program)**

Telephone: 514-398-7330

Email: [wendy.brett@mcgill.ca](mailto:wendy.brett@mcgill.ca)

Website: [www.mcgill.ca/cogsci](http://www.mcgill.ca/cogsci)

**Computer Science (School of)**

Telephone: 514-398-7071 ext. 00739

Email: [ugrad-sec@cs.mcgill.ca](mailto:ugrad-sec@cs.mcgill.ca)

Website: [www.cs.mcgill.ca](http://www.cs.mcgill.ca)

**Earth and Planetary Sciences (Department of)**

Telephone: 514-398-6767

Email: [kristy.thornton@mcgill.ca](mailto:kristy.thornton@mcgill.ca)

**Earth and Planetary Sciences (Department of)**

Website: [www.eps.mcgill.ca](http://www.eps.mcgill.ca)

**Earth Systems Science Interdepartmental (program)**

Telephone: 514-398-3833

Email: [jeffrey.mckenzie@mcgill.ca](mailto:jeffrey.mckenzie@mcgill.ca)

Website: [www.ess.mcgill.ca/index.php](http://www.ess.mcgill.ca/index.php)

**Environment (School of)**

Telephone: 514-398-4306

Email: [kathy.roulet@mcgill.ca](mailto:kathy.roulet@mcgill.ca)

Website: [www.mcgill.ca/mse](http://www.mcgill.ca/mse)

**Geography (Department of)**

Telephone: 514-398-4951 or 398-4111

Email: [gakman@geog.mcgill.ca](mailto:gakman@geog.mcgill.ca)

Website: [www.geog.mcgill.ca](http://www.geog.mcgill.ca)

**Human Nutrition (program)**

Telephone: 514-398-7840

Email: [jocelyne.begin@mcgill.ca](mailto:jocelyne.begin@mcgill.ca)

Website: [www.mcgill.ca/dietetics](http://www.mcgill.ca/dietetics)

**Interdepartmental Honours Immunology (program)**

elephone: 514184 e(kathy)Tj1 0731 r8.2.727 322.8xt. 03028-7840



### **Psychology (Department of)**

Email: [info@psych.mcgill.ca](mailto:info@psych.mcgill.ca)

Website: [www.psych.mcgill.ca](http://www.psych.mcgill.ca)

### **Redpath Museum**

Telephone: 514-398-4086 ext. 3188

Email: [marie.laricca@mcgill.ca](mailto:marie.laricca@mcgill.ca)

Website: [www.mcgill.ca/redpath](http://www.mcgill.ca/redpath)

### **Science for Teachers**

Telephone: 514-398-6522

Email: [dik.harris@mcgill.ca](mailto:dik.harris@mcgill.ca)

Website: [www.mcgill.ca/scienceforteachers](http://www.mcgill.ca/scienceforteachers)

### **Technological Entrepreneurship for Science Students (program)**

Telephone: 514-398-4068

Email: [bcom.mgmt@mcgill.ca](mailto:bcom.mgmt@mcgill.ca)

Website: [www.mcgill.ca/54desautels0G0g/F17.54900.396.600.m.48494.396.600.1.48494.399.600.1.4900.399.600.1.0GF38.130100184.695456388551\(S](http://www.mcgill.ca/54desautels0G0g/F17.54900.396.600.m.48494.396.600.1.48494.399.600.1.4900.399.600.1.0GF38.130100184.695456388551(S)

Telephone: 514-398-3825

Website: [www.mcgill.ca/studentsservices](http://www.mcgill.ca/studentsservices)

The Executive Director, Services for Students (EDSS), coordinates all student services at McGill to help promote student success and well-being. The EDSS is available to provide assistance and/or information on almost all aspects of non-academic student life. Concerns of an academic nature are directed to the proper individual, office or department.

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## 13.2 Student Services – Downtown Campus

Unless otherwise indicated, all Student Services on the Downtown Campus are located in the William and Mary Brown Student Services Building, 3600 McTavish Street, Montreal, Quebec, H3A 1Y2.

A list of services available is given below. For further information, see the Student Services website: [www.mcgill.ca/studentsservices](http://www.mcgill.ca/studentsservices).

### **Student Services:**

Brown Student Services Building, suite 4100

3600 McTavish Street

Montreal, Quebec, H3A 1Y2

General Information: 514-398-8238

Website: [www.mcgill.ca/studentsservices](http://www.mcgill.ca/studentsservices)

**Career Planning Service (CaPS):** Provides career education, guidance, and individual advising to help you in your search for permanent, part-time, or summer jobs and internships.

Brown Student Services Building, Suite 2200

Telephone: 514-398-3304

Email: [careers.caps@mcgill.ca](mailto:careers.caps@mcgill.ca)

Website: [www.mcgill.ca/caps](http://www.mcgill.ca/caps)

**Chaplaincy Service:** Concerned with the spiritual and mental well-being of all students.

Brown Student Services Building, Suite 4400

Telephone: 514-398-4104

Email: [chaplaincy@mcgill.ca](mailto:chaplaincy@mcgill.ca)

Website: [www.mcgill.ca/chaplaincy](http://www.mcgill.ca/chaplaincy)

**Counselling Service:** Assists with psychological, emotional, and interpersonal issues as well as vocational and academic concerns.

Brown Student Services Building, Suite 4200

Telephone: 514-398-3601

Email: [counselling.service@mcgill.ca](mailto:counselling.service@mcgill.ca)

Website: [www.mcgill.ca/counselling](http://www.mcgill.ca/counselling)

**First Peoples' House:** Fosters a sense of community for Aboriginal students studying at McGill.

3505 Peel Street

Telephone: 514-398-3217

Email: [firstpeopleshouse@mcgill.ca](mailto:firstpeopleshouse@mcgill.ca)

Website: [www.mcgill.ca/fph](http://www.mcgill.ca/fph)

**First-Year Office:** Helps ease the transition of all students new to McGill. Coordinates "Discover McGill," a one-day, campus-wide University and f.m6acultye EDSS





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Telephone: 514-398-7992

**Off-Campus Housing:** Maintains computerized lists of available off-campus student housing.

Telephone: 514-398-7992

Website: [www.mcgill.ca/offcampus](http://www.mcgill.ca/offcampus)

**Student (Financial) Aid Office:** Information about government aid, McGill loans and bursaries, and Work Study programs can be obtained at the Centennial Centre. During the academic year (September to April), an Administrator visits the campus every Wednesday to help students with financial concerns.

Telephone: 514-398-7992

**Chaplaincy Service:** Offers two support programs: the **Winter Coat Project**, which provides students with slightly used winter jackets and accessories, and the **McGill Student Parents' Network (MSPN)**, which provides students with children the support they need to succeed in their studies.

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### 13.4 Ombudsperson for Students

The position of Ombudsperson for Students is filled on a half-time basis by an academic staff member. The Ombudsperson receives complaints from students and assists in the resolution of those complaints through informal means including information, advice, intervention, and referrals with a view to avoiding the more formal grievance procedures that already exist in the University.

The Office of the Ombudsperson is a confidential, independent, and neutral dispute-resolution service for all members of the student community.

Office of the Ombudsperson

3610 McTavish (above Dr. Penfield)

Main Floor, Suite 14

Telephone: 514-398-7059 (for an appointment)

Website: [www.mcgill.ca/ombudsperson](http://www.mcgill.ca/ombudsperson)

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### 13.5 Extra-Curricular Activities

There are over 250 activities, clubs and services that students may join. These include international clubs; religious groups; political clubs; communications groups such as Radio McGill, the McGill Tribune, and the McGill Daily; and some 50 miscellaneous groups (e.g., science clubs; literary, theatrical and musical societies; a chess club; and the McGill Outing Club).

The University Centre, 3480 McTavish Street, provides club rooms for these activities in a four-storey building with cafeterias, a ballroom, lounges and an experimental theatre. Activities for graduate students are centred in David Thomson House at 3650 McTavish Street. On the Macdonald Campus, facilities are located in the Centennial Centre. Refer to *Faculty of Agricultural and Environmental Sciences* in this publication.

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### 13.6 Bookstore

The McGill University Bookstore stocks new and used textbooks, a full range of books for the academic and professional community, stationery supplies, and McGill insignia clothing and gift items. Visit the Bookstore website or in person to sign up for email reminders so you are the first to know about services such as used textbook buy-back and other events.

3420 McTavish Street

Telephone: 514-398-7444

Website: [www.mcgill.ca/bookstore](http://www.mcgill.ca/bookstore)

Macdonald Bookstore

Centennial Centre

Telephone: 514-398-8300

Website: <http://mcss.mcgill.ca/bookstore.html>

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### 13.7 Computer Store

The McGill Computer Store, located on the second floor of the University Bookstore, sells a full range of computer hardware, software, peripherals and consumer electronics at educational prices.

3420 McTavish Street



- Royal Victoria College (RVC), which has one all-female and one co-ed wing (ne

#### **14.1.6 Student Government**

Each Hall has a Residence Council, elected at the start of the academic year. It is the job of the council to gather Hall opinions, supervise financial affairs, and org

#### 14.2.4 Student Parking – Macdonald Campus

Parking permits are available from Macdonald Campus Security, Room 101 Laird Hall. A parking decal is \$165 for one year and \$99 for one semester and can be picked up Monday to Friday from 8:15 a.m. to 3:40 p.m.

Daily passes for students are \$3 and can be purchased from the parking meter located in the Upper East Gravel lot. The meter is coin-operated and exact change is required. All students obtaining a daily pass must park in the Horticulture lot, east of the Highway 20 overpass. If you are not sure of the location, you can pick up a map from the Campus Security office in Laird Hall. For more information, see [www.mcgill.ca/transport/parking/mac](http://www.mcgill.ca/transport/parking/mac).

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## 15 Athletics & Recreation

### Downtown Campus

#### Department of Athletics & Recreation

Offers a wide range of facilities, activities, and equipment. Facilities include a gymnasium, fully-equipped fitness centre, varsity weight room, pool, arena, Fieldhouse, stadium, indoor & outdoor running tracks, tennis courts, squash & racquetball courts, spinning, dance & martial arts studios, and various playing fields.

McGill students can participate in instructional, recreational, intramural and intercollegiate activities, as well as sports clubs. There are nominal fees for instructional courses and membership to the Fitness Centre.

McGill Sports Complex

475 Pine Avenue West

Telephone: 514-398-7000

Email: [perry.karnofsky@mcgill.ca](mailto:perry.karnofsky@mcgill.ca) (recreational sports) or [earl.zukerman@mcgill.ca](mailto:earl.zukerman@mcgill.ca) (intercollegiate sports)

Website: [www.mcgill.ca/athletics](http://www.mcgill.ca/athletics)

### Macdonald Campus

#### Athletics & Recreation

Offers a wide range of facilities, activities, and equipment free of charge. Facilities include a gymnasium, weight room (with fitness trainers on hand four evenings per week), arena, tennis courts, playing fields and large and four 57 T37.7rsity wte 0 1 130.233 1m(736 T37.7rsity ws & RecrTj1 0 0 1 155.379 161(es7 T37.7

Take an interactive video tour of IT services at

## Online Student Directory

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The Museum welcomes McGill students and staff to visit its permanent exhibit, which presents the history of life through the ages illustrated by material from Quebec and neighbouring regions, as well as displays that feature the mineral and mollusc collections. The Museum also features an ethnology gallery devoted to cultures throughout the world, including ancient Egypt, classical Greece and Rome, Asia, and Africa.

859 Sherbrooke Street West  
Telephone: 514-398-4086  
Email: [redpath.museum@mcgill.ca](mailto:redpath.museum@mcgill.ca)  
Website: [www.mcgill.ca/redpath](http://www.mcgill.ca/redpath)

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## 20 Resources for Study and Research: McCord Museum of Canadian History

The McCord Museum houses one of the finest historical collections in North America. It possesses some of Canada's most significant cultural treasures, including the most comprehensive collection of clothing - comprising over 16,000 garments or accessories - made or worn in Canada; an extensive collection of First Nations artifacts - the most important of its kind in Quebec with a corpus of over 13,000 objects from across Canada; and the renowned Notman Photographic Archives, which contain over one million historical photographs and offers a unique pictorial record of Canada from pre-Confederation to the present. The McCord also houses paintings by renowned artists such as Théophile Hamel, Cornelius Krieghoff, James Pattison Cockburn and George Heriot. The Museum's Textual Archives include some 185 linear metres of documents relating to Canadian history. Finally, the McCord's website ([www.mccord-museum.qc.ca](http://www.mccord-museum.qc.ca)) features award-winning virtual exhibitions, innovative learning resources and a vast, searchable database of information on the Museum's collections.

Exhibitions at the McCord provide innovative interpretations of the social and cultural history of Montreal, Quebec and Canada. In addition to guided tours, school programs, cultural activities and lectures, the McCord offers a range of services including the Museum Café and the boutique.

Researchers welcome by appointment.

690 Sherbrooke Street West  
Telephone: 514-398-7100  
Email: [info@mccord.mcgill.ca](mailto:info@mccord.mcgill.ca)  
Website: [www.mccord-museum.qc.ca](http://www.mccord-museum.qc.ca)

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## 21 Resources for Study and Research: Lyman Entomological Museum and Research Laboratory

Located on the Macdonald Campus, this institution is the insect collection and systematic entomology laboratory of McGill University. The collection houses 2.8 million specimens of insects and other arthropods, making it the second largest insect collection in Canada, and the largest university insect collection in the country. The Lyman Museum is not generally open to the public since its main functions are research and teaching, not exhibitions. Ho

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## **23 The University**

McGill University is one of Canada's best-known institutions of higher learning and one of the country's leading research-intensive universities. With students coming to McGill from about 150 countries, our student body is the most internationally diverse of any medical-doctoral university in Canada.

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### **23.1 History**

The Hon. James McGill, a leading merchant and prominent citizen of Montreal, who died in 1813, bequeathed an estate of 46 acres called Burnside Place together with £10,000 to the "Royal Institution for the Advancement of Learning" upon condition that the latter erect "upon the said tract or parcel of land,



H. Arnold Steinberg; C.M., B.Com., M.B.A.(Harv.), LL.D. (McG.)

Chancellor

Heather Munroe-Blum; O.C., O.Q., B.A., B.S.W.(McM.), M.S.W.(W. Laur.),  
Ph.D.(N. Carolina)

### **23.5.2.1 Members**

Roshi Chadha

Ronald Harry Critchley; B.A.(C' dia-Loyola), M.A.(York)

Lili de Grandpré; B.A.(Western), M.B.A.(McG.)

Darren Entwistle; B.Econ.(C' dia), M.B.A.(McG.)

Kathy Fazel; B.Com.(McG.)

Morna Flood Consedine; B.A.(C' dia), M.Ed., D.Ed.(McG.)

Daniel J. Gagnier; B.A.(Lo

The deans of faculties  
 The Dean of Continuing Education  
 The Dean of Graduate and Postdoctoral Studies  
 The Dean of Students  
 The Director of Libraries

**Elected Members**

63 members elected by the faculties, the University Libraries, the Board of Governors, and administrative and support staff.  
 Medical Residents or Postdoctoral Scholars Group (1)  
 Student Members (19)

**23.7 Administration**

Heather Munroe-Blum; O.C., O.Q., B.A., B.S.W.(McM.), M.S.W. (W. Laur.), Ph.D.(N. Carolina)	<b>Principal and Vice-Chancellor</b>
Anthony C. Masi; A.B.(Colgate), Ph.D.(Brown)	<b>Provost</b>
Morton J. Mendelson; B.Sc.(McG.), Ph.D.(Harv.)	<b>Deputy Provost (Student Life and Learning)</b>
Kathleen Massey; B.A.(York)	<b>University Registrar and Executive Director of Enrolment Services</b>
Jana Luker; B.A.(Guelph), B.Ed., M.Ed.(Tor.)	<b>Executive Director of Services for Students</b>
William F. Foster (until June 30, 2010); LL.B.(Auck.), LL.M.(Br.Col.)	<b>Associate Provost (Policies and Procedures)</b>
Jan Jorgensen; B.A., M.A.(N. Carolina), Ph.D.(McG.)	<b>Associate Provost (Academic Staff and Faculty Affairs)</b>
Martin Kreiswirth; B.A.(Hamilton), M.A.(Chic.), Ph.D.(Tor.)	<b>Associate Provost (Graduate Education) and Dean (Graduate and Postdoctoral Studies)</b>
Chandra Madramootoo; B.Sc., M.Sc., Ph.D.(McG.)	<b>Associate Vice-Principal (Macdonald Campus) and Dean (Faculty of Agricultural and Environmental Sciences)</b>
Danielle Levasseur (Interim); B.A., M.P.M.(UQAM)	<b>Chief Information Officer</b>
Stephen Strople; B.A.(Dal.), M.A.(York (Can.))	<b>Secretary-General</b>
François R. Roy; B.A., M.B.A.(Tor.)	<b>Vice-Principal (Administration and Finance)</b>
Lynne B. Gervais; B.A.(C'dia)	<b>Associate Vice-Principal (Human Resources)</b>
Jim Nicell; B.A.Sc., M.A.Sc., Ph.D.(Windsor), P.Eng.	<b>Associate Vice-Principal (University Services)</b>
Marc Weinstein; B.A., B.C.L., LL.B.(McG.)	<b>Vice-Principal (Development and Alumni Relations) and Director (University Campaigns)</b>
Richard I. Levin; B.S.(Yale), M.D.(NYU)	<b>Vice-Principal (Health Affairs) and Dean (Faculty of Medicine)</b>
Sam Benaroya; B.Sc., M.D.,C.M.(McG.)	<b>Associate Vice-Principal (Health Affairs) and Associate Dean (Inter-Hospital Affairs)</b>
Rima Rozen (Interim)	<b>Vice-Principal (Research and International Relations)</b>
Rima Rozen; B.Sc., Ph.D.(McG.)	<b>Associate Vice-Principal (Research and International Relations)</b>
Vaughan Dowie	<b>Executive Head of Public Affairs</b>

**23.7.1 Deans, Directors of Schools and Libraries**

**Deans**

Chandra Madramootoo; B.Sc., M.Sc., Ph.D.(McG.)	<b>Agricultural and Environmental Sciences</b>
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Christopher Manfredi; B.A., M.A.(Calg.), M.A., Ph.D.(Claremont)  
Judith Potter; B.Sc.(Tor.), M.Ad.Ed.(St. FX), Ed.D.(Tor.)  
Paul J. Allison; B.D.S., F.D.S.R.C.S., M.Sc.(Lond.), Ph.D.(McG.)  
Hélène Perrault; B.Sc.(C' dia), M.Sc., Ph.D.(Montr.)  
Christophe Pierre; M.Sc.(Prin.), Ph.D.(Duke)  
Martin Kreiswirth; B.A.(Hamilton), M.A.(Chic.), Ph.D.(Tor.)  
Daniel Jutras; LL.B.(Montr.), LL.M.(Harv.)  
Peter Todd; B.Com.(McG.), Ph.D.(Br.Col.)  
Richard I. Levin; B.Sc.(Yale), M.D.(NYU)

**Arts**

**Continuing Education**

**Dentistry**

**Education**

**Engineering**

**Graduate and Postdoctoral Studies**

**Law**

**Management**

**Medicine**

Vice President External Affairs: [external@ssmu.mcgill.ca](mailto:external@ssmu.mcgill.ca)  
Vice President Finance and Operations: [operations@ssmu.mcgill.ca](mailto:operations@ssmu.mcgill.ca)  
Vice President University Affairs: [ua@ssmu.mcgill.ca](mailto:ua@ssmu.mcgill.ca)

Or visit the website at [www.ssmu.ca](http://www.ssmu.ca).

Welcome to McGill and we look forward to representing your interests.

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## 24 Faculty of Agricultural and Environmental Sciences

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### 24.1 About the Faculty of Agricultural and Environmental Sciences, including School of Dietetics and Human Nutrition

The Faculty of Agricultural and Environmental Sciences is committed to excellence in teaching, research and service to ensure that humanity's present and future food, health and natural resource needs are met while protecting the environment.

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### 24.2 History of the Faculty

Dedicated to improving the quality of life in Quebec's rural communities, Sir William Christopher Macdonald founded the School of Agriculture, the School for Teachers and the School of Household Science at Macdonald College in Ste. Anne de Bellevue in 1906. Macdonald College opened its doors to students in 1907 and its first degrees were awarded in 1911. The School for Teachers became the Faculty of Education in 1965 and moved to the downtown campus in 1970. Currently the Macdonald Campus is home to the Faculty of Agricultural and Environmental Sciences, the School of Dietetics and Human Nutrition and the Institute of Parasitology. The Faculty is comprised of the Departments of Animal Science, Bioresource Engineering, Food Science and Agricultural Chemistry, Natural Resource Sciences and Plant Science. The Faculty is one of the founding members of the McGill School of Environment and is also home to the Farm Management and Technology Program. The current enrolment is over 1500 undergraduate and graduate students.

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### 24.3 Macdonald Campus Facilities

#### 24.3.1 Morgan Arboretum

The Morgan Arboretum has 245 hectares of managed and natural woodlands, fields and tree plantations used for environmental research and teaching in a wide range of courses. Eighteen formal tree collections contain groups of most Canadian native trees and many useful and important exotics. In addition, over 170 species of birds, 30 species of mammals and 20 species of reptiles and amphibians seasonally inhabit the property. Finally, the Arboretum features 25 kilometres of ski, snowshoe and walking trails, a variety of forest ecosystems, conservation projects and forest operations such as maple syrup production. A nature interpretation program is also offered. More information is available at [www.mcgill.ca/nrs/arboretum](http://www.mcgill.ca/nrs/arboretum).

#### 24.3.2 Macdonald Campus Library

Located in the Barton Building, the Macdonald Campus Library provides access to leading-edge print and electronic collections, facilities and services to support a broad range of needs. The library's collections encompass a wide variety of print and electronic resources in the areas of agriculture, nutrition and environmental sciences.

The library's catalogue, research databases, McGill theses, past exams and other online resources are accessible to you via the library website. The library is also a depository for many print and electronic government publications. The library's eZone computers provide access to specialized software such as



For more information and to search the IT Knowledge Base, visit the IT Services web page at [www.mcgill.ca/it](http://www.mcgill.ca/it).

#### **24.3.4 Lyman Entomological Museum and Research Laboratory**

Originally established in 1914 and formerly housed in the Redpath Museum, the Lyman Entomological Museum was moved to the Macdonald Campus in 1961. It houses the largest university collection of insects in Canada, second in size only to the National Collection. The Museum also has an active graduate research program in association with the Department of Natural Resource Sciences. Study facilities are available, on request from the Curator, to all bona fide students of entomology. Visits by other interested parties can be arranged by calling 514-398-7914. More information is available at <http://lyman.mcgill.ca>.

#### **24.3.5 Brace Centre for Water Resources Management**

The Brace Centre for Water Resources Management is located on the Macdonald Campus. It is a multidisciplinary and advanced research and training centre of McGill University, dedicated to solving problems of water management for all human and environmental uses. It brings together staff from several McGill faculties to undertake research, teaching, specialized training, and policy and strategic studies, both in Canada and internationally. The Centre draws on the wide range of facilities available within the University. More information is available at [www.mcgill.ca/brace](http://www.mcgill.ca/brace).

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### **24.4 About the Faculty of Agricultural and Environmental Sciences, including School of Dietetics and Human Nutrition (Undergraduate)**

The Faculty of Agricultural and Environmental Sciences and the School of Dietetics and Human Nutrition are located on McGill University's Macdonald Campus, which occupies 650 hectares in a beautiful waterfront setting on the western tip of the island of Montreal.

Students can earn internationally recognized degrees in the fields of agricultural sciences and applied biosciences, food and nutritional sciences, environmental sciences, and bioresource engineering. Students have the opportunity, in all programs, to study abroad in places such as Panama, Barbados or Africa. Students may also have the opportunity to participate in internships.

Macdonald is a very diverse and international campus. Students are taught by outstanding professors who are among the top in their fields. The campus has excellent facilities for teaching and research, including well-equipped laboratories, experimental farm and field facilities, and the Morgan Arboretum. The campus is surrounded by the Ottawa and St. Lawrence rivers.

The Faculty is at the forefront of advances in the basic sciences and engineering associated with food supply, human health and nutrition, and the environment, and it is a world leader in plant and animal biotechnology, bioproducts and bioprocessing, bioinformatics, food safety and food quality, environmental engineering, water management, soils, parasitology, microbiology and ecosystem science and management.

The Macdonald Campus is an exciting place to live, work, study, learn and discover. Its very intimate collegial and residential setting allo

Gary O'Connell; B.Comm.(C'dia)

William R. Ellyett; B.A.(Sir G. Wms.), B.Ed.(Phys.Ed.)(McG.)

Paul Meldrum; B.J.(Hons.)(Car.)

Ginette Legault

Peter D.L. Knox; B.Sc.(Agr.)(McG.)

**Director, Academic and Administrative Services**

**Director of Athletics**

**General Manager, Macdonald Campus Farm**

**Manager, Campus Housing**

**Supervisor, Property Maintenance**

**F**

and organizations. Student life is informal and friendly and student groups range from the Outdoor Adventure Club to the Photography Society. Major social events include Orientation activities, Halloween Party and Winter Carnival. The Ceilidh, a student-run bar located in the Centennial Centre, is open every Thursday night.

The Centennial Centre is the centre of student life, offering facilities for student activities, such as meeting rooms, club rooms, pool tables, great places to relax, listen to music and meet friends. Also located in the Centre are the Students' Council offices, an information desk and the Robber's Roost Campus Bookstore.

#### **24.4.4.5 Student Rights and Responsibilities**

*The Handbook on Student Rights and Responsibilities*

Normally, Quebec students who have completed the *Diplôme d'études collégiales* (DEC) or equivalent diploma are admitted to the first year of a program requiring the completion of a minimum of 90 credits, 113 credits for Bioresource Engineering, 115 credits for Dietetics plus any missing basic science prerequisites, and 122 credits for the Concurrent Degrees in Food Science and Nutritional Sciences.

Students from outside Quebec who are admitted on the basis of a high school diploma enter the Freshman Major, which comprises 30 credits (see [section 24.6.1: Freshman Major](#) in this publication).

You will not receive credit toward your degree for any course that overlaps in content with a course successfully completed at McGill, at another university,

#### 24.4.5.7 Academic Credit Transfer

Transfer credits based on courses taken at other institutions (completed with a grade of C or better) before entrance to this Faculty are calculated and assigned after you are accepted and have accepted the offer of admission.

Transfer credits may also be granted for courses taken at other institutions (completed with a grade of C or better) while you are attending McGill University. You must secure permission to apply such credits to your program in this Faculty before you begin the work. Prior Approval Forms are available in the Student Affairs Office in the Faculty. Grades obtained in such courses do not enter into calculations of grade point averages (GPA).

Exemption from a required or complementary course on the basis of work completed at another institution must be approved by both the instructor of the appropriate McGill course and the Academic Adviser.

As a full-time degree student, you may register, with approval of the Student Affairs Office, for course(s) at any university in the province of Quebec. Those courses successfully completed with a minimum grade of C (according to the standards of the university giving the course), will be recognized for the purpose of your degree but the grades obtained will not enter into your GPA calculations.

For further details, see *University Regulations and General Information > Registration > Quebec Inter-University Transfer Agreement (IUT)*, or go to [www.crepug.qc.ca](http://www.crepug.qc.ca) to access the online application.

#### 24.4.5.8 Regulations Regarding Second Academic Majors

While registered in a Major in the Faculty of Agricultural and Environmental Sciences, you may pursue a second set of courses of greater scope than a Minor (e.g., Faculty Program, Major, Honours Program, Major Concentration) in either this Faculty or another faculty. Application for a Second Academic Major must be made to the Associate Dean (Student Affairs) in the Student Affairs Office, Laird Hall, Room 106. Following are the regulations and procedures for Second Academic Majors:

1. You must be in Satisfactory academic standing with a minimum CGPA of 3.00 in order to apply for a Second Academic Major.
2. In consultation with the appropriate authority associated with each Major (Academic Adviser, Associate Dean), you must construct a proposal showing all the courses that are to be taken to satisfy the entrance and program requirements of both the First and Second Academic Majors.
3. A minimum of 36 credits must be unique to the Second Major (i.e., not part of the Required or Complementary courses taken for the First Major).
4. fice, Laird Hall, Room 106. Fgd.1 Tf 1 0 0 1 299.725 54.846 Tm302).ce, LairdW.1 Tf(Tj/F1 6.1 Tf(ce, Laird): th aszed fly for.1 Tf1 0 0 1 142.308 52839576m20.642)Tj11 0 0 1 164.721 590.6755m20.642Ac9

<b>Students graduating in June</b>	
Fall courses	January 15
Winter courses, and courses spanning Fall/Winter	April 30

<b>Non-graduating students</b>	
Fall courses	January 15
Winter courses, and courses spanning Fall/Winter	May 15

Students' deadlines for submitting their work must be sufficiently in advance of these dates to ensure that the work can be graded and the mark submitted on time. It is important to note that instructors may impose earlier deadlines than those listed above.

If marks to clear Ks have not been submitted to the Student Affairs Office by the above dates, the K is automatically changed to a KF and counts as an F in the GPA.

Students with a grade of K who have serious extenuating circumstances may request an extension of the K deadline (KE) from the Associate Dean (Student Affairs). Please refer to *University Regulations and General Information > Student Records > Grading and Grade Point Averages (GPA)* for more information about grading and credit.

#### **24.4.5.13 Examinations**

You should refer to *University Regulations and General Information > Examinations* for information about final examinations and deferred examinations. Examination schedules are posted on the McGill website, [www.mcgill.ca](http://www.mcgill.ca), normally one month after the start of classes for the Tentative Exam Schedule, and two months after the start of classes for the Final Exam Schedule.

Every student has a right to write essays, examinations and theses in English or in French except in courses where knowledge of a language is one of the objectives of the course.

Oral presentations made as part of course requirements are in English.

##### **24.4.5.13.1 Reassessments and Rereads**

In accordance with the *Charter of Student Rights*, and subject to its stated conditions, you have the right to consult any written submission for which you have received a mark. You also have the right to discuss this submission with the examiner.

If, after discussion with your instructor, you want to have a formal final examination reread, you must apply in writing to the Associate Dean (Student Affairs). The following conditions apply:

- grades may be either raised or lowered as the result of a reread;
- rereads in courses outside the Faculty of Agricultural and Enall coursiscmses outsideTmby Sn cembise30ahich 0 0 1 385.632 503.2219m(all c1 0 0 1 216.439Tm(42

#### **24.4.5.16 Distinction**

For information on the designation of Distinction awarded at graduation, see *University Regulations and General Information > Distinction* in this publication.

#### **24.4.5.17 Honours and First Class Honours**

Departments may recommend to the Faculty that graduating students registered in an Honours program be awarded Honours or First-Class Honours under the following conditions:

- you must complete all Honours program requirements; for Honours, the CGPA at graduation must be at least 3.00;
- for First-Class Honours, the CGPA at graduation must be at least 3.50;
- some programs may impose additional requirements, which must be met before you are recommended for Honours or First-Class Honours.

Students in an Honours program whose CGPA is below 3.00 or who did not satisfy certain program requirements must consult their academic adviser to determine their eligibility to graduate in a program other than Honours.

#### **24.4.5.18 Medals and Prizes**

Various medals, scholarships and prizes are open to graduating students. No application is required. Full details of these are set out in the *Undergraduate Scholarships and Awards Calendar*, available at [www.mcgill.ca/students/courses/calendars](http://www.mcgill.ca/students/courses/calendars).

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### **24.5 Overview of Programs Offered by the Faculty of Agricultural and Environmental Sciences**

The Faculty of Agricultural and Environmental Sciences and the School of Dietetics and Human Nutrition offer degrees in Bachelor of Science (Agricultural and Environmental Sciences), Bachelor of Engineering (Bioresource Engineering), Bachelor of Science (Food Science), Bachelor of Science (Nutritional Sciences), Concurrent degree program in Food Science and Nutritional Sciences, Certificate in Food Science, Certificate in Ecological Agriculture, Diploma in En

## 24.5.1 Internship Opportunities and Co-op Experience

### 24.5.1.1 FAES 200/300 Internship Program

As a full-time undergraduate student (with a CGPA of 2.9 or higher) in one of the following programs: B.Sc.(Ag.Env.Sc.), B.Sc.(F.Sc.) and B.Eng.(Bioresource), you have the opportunity to participate in the Internship Program. It's a non-credit (Pass/Fail only) course, where you can intern in a place related to your field of study.

The internship should be a minimum length of 14 weeks, working 35 hours a week or more. Internships are a great way to get your foot in the door and experience practical work firsthand and see how it compliments your studies.

### 24.5.1.2 AGRI 310 Internship in Agriculture/Environment

The objective of AGRI 310 is to give you experience working in an enterprise that is related to your field of study, and to find out how your studies can contribute to your understanding and performance in the workplace environment. Through observations of the enterprise function, the decision-making process and the economic constraints, you should obtain a better understanding of the technical, economic and social challenges faced by enterprises working in the chosen field of study.

### 24.5.1.3 AGRI 410 D1 and D2 Internship and Co-op Experience

As a qualified student in the B.Sc.(Ag.Env.Sc.), you have the opportunity to participate in a summer-long internship related to your field of study. If you aspire to become a professional agrologist, you will be required to complete an internship under the supervision of a professional agrologist.

AGRI 410 is part of the professional agrology specialization and is obligatory for students wanting to become professional agrologists (*agronomes*) in Quebec as part of the 6 credits of practical training required by the *Ordre des agronomes du Quebec*.

Most undergraduate programs offered in the Faculty include the opportunity for a Co-op work experience. Internships and Co-op experience both involve a work placement of 12 to 16 weeks' duration where you are exposed to the main areas of operation of your employer. Each work placement is unique, and you benefit from a program developed exclusively for you by both your employer and your instructor.

When you register for an internship or Co-op experience, you benefit from the practical learning that you undergo during your work-term in a meaningful job situation. As well, you benefit from the non-tangible learning experience that comes from the increased responsibilities needed to acquire and successfully complete your work term.

You also have the opportunity to pursue a 6-credit internship within the Barbados and Panama Field Studies semesters. For details, see *Field Studies and Study Abroad > Field Study Semesters and Off-campus Courses*.

## 24.5.2 Exchange Programs

The Faculty of Agricultural and Environmental Sciences participates in all University-wide student exchange programs available at McGill and also has Faculty-specific exchange programs. For more information, see *Field Studies and Study Abroad > Exchange Programs*.

## 24.5.3 Bachelor of Science in Agriculture and Environmental Sciences - B.Sc.(Ag.Env.Sc.)

See [section 24.6.2: Bachelor of Science \(Agricultural and Environmental Sciences\) – B.Sc.\(Ag.Env.Sc.\)](#) for details.

### 24.5.3.1 Major Programs

Graduates of programs mark



Water En

Soils Science Option
Animal Biology
Animal Science*
Applied Zoology
Botanical Science:
Ecology Option
Molecular Option
Environmental Biology (pre 2009 program)
Microbiology:
Biotechnology Option
Applied Ecology Option
Environment Option
Plant Science*
Resource Conservation
Wildlife Biology

#### 24.5.4 Bachelor of Engineering in Bioresource Engineering - B.Eng.(Bioresource)

See [section 24.6.3: Bachelor of Engineering \(Bioresource\) - B.Eng.\(Bioresource\)](#) for details.

This normally leads to professional qualification in any provincial professional engineering order plus the *Ordre des agronomes du Québec*.

Bioresource Engineering:
Agricultural Engineering Stream
BioEnvironmental Engineering Stream
Ecological Engineering Stream
Food and Bioprocess Engineering Stream
Soil and Water Engineering Stream
Professional Agrology Stream

#### 24.5.5 Bachelor of Science in Food Science - B.Sc.(F.Sc.)

See [section 24.6.4: Bachelor of Science \(Food Science\) - B.Sc.\(F.Sc.\)](#) for details.

Food Science:
Food Chemistry Option
Food Science Option

#### 24.5.6 Bachelor of Science in Nutritional Sciences - B.Sc.(Nutr.Sc.)

Two Majors are offered by the School of Dietetics and Human Nutrition. See [section 24.6.5: Bachelor of Science \(Nutritional Sciences\) - B.Sc.\(Nutr.Sc.\)](#) for details.

Dietetics (professional program leading to professional licensing as Dietitian/Nutritionist)
Nutrition:
Food Function and Safety)

Global Nutrition  
Nutritional Biochemistry  
Sports Nutrition

**24.5.7 Concurrent Bachelor of Science in Food Science - B.Sc.(F.Sc.) and Bachelor of Science in Nutritional Sciences - B.Sc.(Nutr.Sc.)**

See [section 24.6.4.3: Concurrent Bachelor of Science in Food Science \(B.Sc.\(F.Sc.\)\) and Bachelor of Science Nutritional Sciences \(B.Sc.\(Nutr.Sc.\)\) - Food Science/Nutritional Science Major \(122 credits\)](#) for details.

Food Science / Nutritional Science

**24.5.8 Honours Program**

Environment, under McGill School of Environment

**24.5.9 Minor Programs**

Agricultural ProductionMironment, under McGill School of EnMironment, j1 0 0 1 15 1 y24.417 Tm(Ag)Tj1 0 0 1 79.195 544.417 Tm(Agronment, BiEngineeringj1 0

A list of the B.Sc.(Ag.Env.Sc.) Domains is given under [section 24.6.2: Bachelor of Science \(Agricultural and Environmental Sciences\) – B.Sc.\(Ag.Env.Sc.\)](#). Further information on all programs is given under *McGill School of Environment* and on the MSE website: [www.mcgill.ca/mse](http://www.mcgill.ca/mse).

#### **24.5.13.2 Environmental Programs on the Macdonald Campus**

A number of integrated environmental science programs are also offered on the Macdonald Campus, particularly within the B.Sc.(Ag.Env.Sc.) and B.Eng.(Bioresource) degrees. The objective of these interdepartmental programs is to provide you with a well-rounded training in a specific interdisciplinary subject as well as the basis for managing natural resources. For a complete list of the programs, see [section 24.5: Overview of Programs Offered by the Faculty of Agricultural and Environmental Sciences](#).

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## **24.6 Academic Programs**

Degree programs at the undergraduate level in the Faculty may lead to a B.Sc. degree in Agricultural and Environmental Sciences (Ag.Env.Sc.), Food Science

AEPH 112	(4)	Introductory Physics 1
AGRI 195	(.5)	Freshman Seminar 1

#### Required Courses - Winter (12.5 credits)

AECH 111	(4)	General Chemistry 2
AEMA 102	(4)	Calculus 2
AEPH 114	(4)	Introductory Physics 2
AGRI 196	(.5)	Freshman Seminar 2

#### Elective - Winter (3 credits)

#### B.Sc. (Ag. & Env. Sci.) - Agricultural Economics Major - Freshman Program (30 credits)

If you are entering university for the first time from a high school system, outside of the Quebec CEGEP system, you will be required to complete a freshman year of at least 30 credits as listed below.

Note: Mathematical skill level will be determined during the first week of classes. The freshman adviser may recommend students register for an additional weekly Precalculus Lab, of one credit, which may be applied towards the required credits of the degree program.

Freshman Adviser: Dr. Alice Cherestes

Macdonald-Stewart Building, Room 1-023

Telephone: 514-398-7980

#### Required Courses - Fall (14 credits)

AECH 110	(4)	General Chemistry 1
AEMA 101	(3)	Calculus 1
AEPH 112	(4)	Introductory Physics 1
AGEC 200**	(3)	Principles of Microeconomics

#### Required Courses - Winter (13 credits)

AEBI 122	(3)	Cell Biology
AEHM 205	(3)	Science Literacy
AEMA 102	(4)	Calculus 2
AGEC 201**	(3)	Principles of Macroeconomics

#### Complementary Courses - Winter (3 credits)

One of the following:

AGRI 120	(3)	Exobiospheres
BREE 103	(3)	Linear Algebra
NUTR 301	(3)	Psychology

Advising Notes:

\* Freshman students intending to major in Agricultural Economics in the B.Sc. (Ag. & Env. Sci.) degree program should note that the courses AEBI 120 (General Biology), AECH 111 (General Chemistry 2), and AEPH 114 (Introductory Physics 2) are required for all other majors in the B.Sc. (Ag. & Env. Sci.) degree. Students who are uncertain about their choice of major should be completing the 'regular' Agricultural & Environmental Sciences Freshman Program; the AGECE 200/201 courses would then be taken as part of the 'regular' U1 curriculum should they ultimately decide on103.046 Tm(Progru4 0 )Tj9e



**Required Courses - Winter (12.5 credits)**

AECH 111	(4)	General Chemistry 2
AEMA 102	(4)	Calculus 2
AEPH 114	(4)	Introductory Physics 2
AGRI 196	(.5)	Freshman Seminar 2

**Elective - Winter (3 credits)**

**24.6.1.4 Bachelor of Science (Nutritional Sciences) (B.Sc.(Nutr.Sc.)) - Freshman Program (30 credits)**

If you are entering university for the

Telephone: 514-398-7974

### Required Courses - Fall (14.5 credits)

AEBI 120	(3)	General Biology
AECH 110	(4)	General Chemistry 1
AEMA 101	(3)	Calculus 1
AEPH 112	(4)	Introductory Physics 1
AGRI 195	(.5)	Freshman Seminar 1

### Required Courses - Winter (15.5 credits)

AEBI 122	(3)	Cell Biology
AEMA 102	(4)	Calculus 2
AEPH 114	(4)	Introductory Physics 2
AGRI 196	(.5)	Freshman Seminar 2
FDSC 230	(4)	Organic Chemistry

## 24.6.2 Bachelor of Science (Agricultural and Environmental Sciences) – B.Sc.(Ag.Env.Sc.)

### 24.6.2.1 General rules for the following B.Sc.(Ag.Env.Sc.) programs

Students register in one *major* and at least one *specialization*. They may design their own program by choosing one of the four majors and at least one of the 23 specializations. By choosing two different specializations, students have the option of developing their own interdisciplinary interests. The multidisciplinary specializations are designed for those interested in broad training.

All the required and complementary courses for the major must be completed in full. Within each specialization, at least 18 credits must be unique: that is, they only count for that specialization and do not overlap with either the major or a second specialization. At least 54 credits of the 90 credits required for the degree (120 for students admitted to the Freshman year) must be from 300-level courses or higher; of this at least 12 credits must be from 400-level courses or higher.



**Note:** Below the program description for each major is a suggested list of specializations that complement the major.

#### **Majors:**

- Agricultural Economics
- Agro-environmental Sciences
- Environmental Biology
- International Agriculture and Food systems
- Life Sciences (Biological and Agricultural)

#### **Specializations:**

- Agribusiness, [section 24.6.2.7.2: Bachelor of Science \(Agricultural and Environmental Sciences\) \(B.Sc.\(Ag.Env.Sc.\)\) - Agribusiness \(24 credits\)](#)
- Agricultural Economics, [section 24.6.2.7.3: Bachelor of Science \(Agricultural and Environmental Sciences\) \(B.Sc.\(Ag.Env.Sc.\)\) - Agricultural Economics \(24 credits\)](#)
- Agriculture and Food Systems (Multidisciplinary), [section 24.6.2.7.4: Bachelor of Science \(Agricultural and Environmental Sciences\) \(B.Sc.\(Ag.Env.Sc.\)\) - Agriculture and Food Systems \(Multidisciplinary\) \(24 credits\)](#)
- Animal Biology, [section 24.6.2.7.5: Bachelor of Science \(Agricultural and Environmental Sciences\) \(B.Sc.\(Ag.Env.Sc.\)\) - Animal Biology \(24 credits\)](#)
- Animal Health and Disease, [section 24.6.2.7.6: Bachelor of Science \(Agricultural and Environmental Sciences\) \(B.Sc.\(Ag.Env.Sc.\)\) - Animal Health and Disease \(24 credits\)](#)
- Animal Production, [section 24.6.2.7.7: Bachelor of Science \(Agricultural and Environmental Sciences\) \(B.Sc.\(Ag.Env.Sc.\)\) - Animal Production \(24 credits\)](#)
- Applied Ecosystem Sciences, [section 24.6.2.7.8: Bachelor of Science \(Agricultural and Environmental Sciences\) \(B.Sc.\(Ag.Env.Sc.\)\) - Applied Ecosystem Sciences \(24 credits\)](#)



- Environmental Biology (Multidisciplinary), *section 24.6.2.7.11: Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) - Environmental Biology (Multidisciplinary) (24 credits)*
- Environmental Economics, *section 24.6.2.7.12: Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) - Environmental Economics (24 credits)*
- Health and Nutrition, *section 24.6.2.7.13: Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) - Health and Nutrition (24 credits)*
- International Agriculture, *section 24.6.2.7.14: Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) - International Agriculture (24 credits)*
- International Development, *section 24.6.2.7.15: Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) - International Development (IAFS) (24 credits)*
- Life Sciences (Multidisciplinary), *section 24.6.2.7.16: Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) - Life Sciences (Multidisciplinary) (24 credits)*
- Microbiology, *section 24.6.2.7.17: Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) - Microbiology (24 credits)*
- Molecular Biotechnology, *section 24.6.2.7.18: Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) - Molecular Biotechnology (24 credits)*
- Plant Biology, *section 24.6.2.7.19: Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) - Plant Biology (24 credits)*
- Plant Production, *section 24.6.2.7.20: Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) - Plant Production (24 credits)*
- Plant Protection, *section 24.6.2.7.21: Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) - Plant Protection (24 credits)*
- Professional Agrology, *section 24.6.2.7.22: Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) - Professional Agrology (21 credits)*
- Soil and Water Resources, *section 24.6.2.7.23: Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) - Soil and Water Resources (24 credits)*
- Wildlife Biology, *section 24.6.2.7.24: Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) - Wildlife Biology (24 credits)*

#### **24.6.2.2 B.Sc.(Ag.Env.Sc.) – Agricultural Economics Major**

Program Director: Profesor John Henning  
 Macdonald-Stewart Building, Room 3-038  
 Telephone: 514-398-7826

##### **24.6.2.2.1 Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) - Major Agricultural Economics (42 credits)**

#### **Program Prerequisites**

Please refer to Faculty Information and Regulations > Minimum Credit Requirements, in this publication for prerequisites and minimum credit requirements.

#### **Required Courses (33 credits)**

AGEC 200	(3)	Principles of Microeconomics
AGEC 201	(3)	Principles of Macroeconomics
AGEC 231	(3)	Economic Systems of Agriculture
AGEC 320	(3)	Intermediate Microeconomic Theory Agriculture and F

**Specialization (21-24 credits)**

Specializations designed to be taken with the Agricultural Economics major:

-Agribusiness (24 credits)

-Environmental Economics (24 credits)

-Professional Agrology (21 credits)

Note: For a complete list of specializations offered for students in the Bachelor of Science in Agricultural and En

One of:

PLNT 300

(3)

Cropping Systems  
Forage Crops and P

AEBI 210	(3)	Organisms 1
AEBI 211	(3)	Organisms 2
AEBI 212	(3)	Evolution and Phylogeny
AEHM 205	(3)	Science Literacy
AEMA 310	(3)	Statistical Methods 1
ENVB 210	(3)	The Biophysical Environment
ENVB 222	(3)	St. Lawrence Ecosystems
ENVB 410	(3)	Ecosystem Ecology
LSCI 204	(3)	Genetics
LSCI 211	(3)	Biochemistry 1

**Complementary Courses (12 credits)**

12 credits of complementary courses selected from:

AEBI 451	(3)	Research Project 1
AEBI 491	(1)	Scientific Communication
AEMA 406	(3)	Quantitative Methods: Ecology
ENTO 340	(3)	Field Entomology
	(3)	Meteorology

Note: For a complete list of specializations offered for students in the Bachelor of Science in Agricultural and Environmental Sciences, please refer to Academic Programs > Bachelor of Science (Agricultural and Environmental Sciences) - B.Sc.(Ag.Env.Sc.) > Specializations, in this publication. Consult academic adviser for approval of specializations other than those listed above.

### **Electives**

To meet the minimum credit requirement for the degree.

#### **24.6.2.5 B.Sc.(Ag.Env.Sc.) – International Agriculture and Food Systems Major**

##### **Program Director**

Professor Anwar Naseem  
Macdonald-Stewart Building, room 3-037  
Telephone: 514-398-7825

##### **24.6.2.5.1 Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) - Major International Agriculture and Food Systems (42 credits)**

This program is directed at students who seek conceptual understanding of the scope of and inter-relationships among the environmental, economic and

ANSC 250	(3)	Principles of Animal Science
BREE 217	(3)	Hydrology and Water Resources
ENTO 352	(3)	Control of Insect Pests
ENVB 305	(3)	Population & Community Ecology
FDSC 310	(3)	Post Harvest Fruit and Vegetable Technology
LSCI 202	(3)	Molecular Cell Biology

## Program Prerequisites

Please refer to Faculty Information and Regulations > Minimum Credit Requirements, in this publication for prerequisites and minimum credit requirements.

### Required Courses (27 credits)

AEBI 210	(3)	Organisms 1
AEBI 211	(3)	Organisms 2
AEBI 212	(3)	Evolution and Phylogeny
AEHM 205	(3)	Science Literacy
AEMA 310	(3)	Statistical Methods 1
LSCI 202	(3)	Molecular Cell Biology
LSCI 204	(3)	Genetics
LSCI 211	(3)	Biochemistry 1
LSCI 230	(3)	Introductory Microbiology

### Complementary Courses (15 credits)

15 credits of the complementary courses selected from:

\*MIMM 324 is taught at Downtown campus.

AEBI 451	(3)	Research Project 1
AEBI 491	(1)	Scientific Communication
AEHM 330	(3)	Academic and Scientific Writing
ANSC 234	(3)	Biochemistry 2
ANSC 250	(3)	Principles of Animal Science
ANSC 251	(3)	Comparative Anatomy
ANSC 324	(3)	Developmental Biology and Reproduction
ANSC 326	(3)	Fundamentals of Population Genetics
ANSC 330	(3)	Fundamentals of Nutrition
ANSC 420	(3)	Animal Biotechnology
BINF 301	(3)	Introduction to Bioinformatics
BTEC 306	(3)	Experiments in Biotechnology

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**Specialization**

At least one specialization of 18-24 credits from:

Specializations designed to be taken with the Life Sciences (Biological and



MGSC 373	(3)	Operations Research 1
ORGB 321	(3)	Leadership

#### 24.6.2.7.3 Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) - Agricultural Economics (24 credits)

A specialization in Agricultural Economics will complement a student's education in four ways. First, as a social science, Economics will provide an alternative perspective for students in the Faculty. Second, the specialization will provide an excellent foundation of the workings of the economy at large. Third, it will aid students to understand the business environment surrounding the agri-food industry. Finally, it will challenge students to analyze the interaction between the agricultural economy and the natural resource base.

Specialization Coordinator: Professor John Henning

Macdonald-Stewart Building, Room 3-038

Telephone: 514-398-7826

#### Required Courses (12 credits)

AGEC 200	(3)	Principles of Microeconomics
AGEC 201	(3)	Principles of Macroeconomics
AGEC 330	(3)	Agriculture and Food Markets
AGEC 333	(3)	Resource Economics

#### Complementary Courses (12 credits)

12 credits of complementary courses selected from:

AGEC 231	(3)	Economic Systems of Agriculture
AGEC 242	(3)	Management Theories and Practices
AGEC 320	(3)	Intermediate Microeconomic Theory
AGEC 332	(3)	Farm Management and Finance
AGEC 343	(3)	Accounting and Cost Control
AGEC 425	(3)	Applied Econometrics
AGEC 430	(3)	Agriculture, Food and Resource Policy
AGEC 442	(3)	Economics of International Agricultural Development
AGEC 450	(3)	Agriculture Business Management
AGEC 491	(3)	Research & Methodology
AGEC 492	(3)	Special Topics in Agricultural Economics 01

#### 24.6.2.7.4 Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) - Agriculture and Food Systems (Multidisciplinary) (24 credits)

This flexible specialization offers a balance between food systems and consumption and agricultural production. It provides students with an opportunity to select courses in the economics, nutrition and ethical and environmental implications of food systems and in the fundamentals of animal and plant production. The specialization is designed for students in the International Agriculture and Food Systems major who have broad interests in international agriculture and development.

To complete the specialization, students select 12 credits from the block of complementary courses related to Food Systems and Consumption and 12 credits in consumption and 12 credits (v)Tj1 0 0 1 0.1.671 6riculturew(v)Tj1 0 0 1 4149771 6riculturese.

#### Complementary Cour

**Food Systems and Consumption**

12 credits from:

AGEC 201	(3)	Principles of Macroeconomics
AGEC 231	(3)	Economic Systems of Agriculture
AGEC 242	(3)	Management Theories and Practices
AGEC 320	(3)	Intermediate Microeconomic Theory
AGEC 330	(3)	Agriculture and Food Markets
AGEC 333	(3)	Resource Economics
AGEC 343	(3)	Accounting and Cost Control
AGEC 430	(3)	Agriculture, Food and Resource Policy
AGEC 442	(3)	Economics of International Agricultural Development
ANSC 323	(3)	Mammalian Physiology
ANSC 424	(3)	Metabolic Endocrinology
ANSC 551	(3)	Carbohydrate and Lipid Metabolism
ANSC 552	(3)	Protein Metabolism and Nutrition
ECON 225	(3)	Economics of the Environment
ECON 326	(3)	Ecological Economics
FDSC 251	(3)	Food Chemistry I
FDSC 319	(3)	Food Commodities
FDSC 330	(3)	Food Processing
LSCI 202	(3)	Molecular Cell Biology
LSCI 230	(3)	Introductory Microbiology
MICR 331	(3)	Microbial Ecology
MICR 341	(3)	Mechanisms of Pathogenicity
MICR 450	(3)	Environmental Microbiology
NRSC 221	(3)	Environment and Health
NRSC 512	(3)	Water: Ethics, Law and Policy
NUTR 337	(3)	Nutrition Through Life
NUTR 403	(3)	Nutrition in Society
NUTR 420	(3)	Toxicology and Health Risks
NUTR 501	(3)	Nutrition in Developing Countries
NUTR 512	(3)	Herbs, Foods and Phytochemicals
PARA 410	(3)	Environment and Infection
PARA 438	(3)	Immunology
PARA 515	(3)	Water, Health and Sanitation
WILD 424	(3)	Parasitology

**Agricultural Production**

12 credits from:

AGRI 215	(3)	Agro-Ecosystems Field Course
AGRI 340	(3)	Principles of Ecological Agriculture
AGRI 435	(3)	Soil and Water Quality Management

ANSC 250	(3)	Principles of Animal Science
ANSC 312	(3)	Animal Health and Disease
ANSC 451	(3)	Dairy and Beef Production Management
ANSC 458	(3)	Swine and Poultry Production
BREE 217	(3)	Hydrology and Water Resources
ENTO 340	(3)	Field Entomology
ENTO 352	(3)	Control of Insect Pests
FDSC 310	(3)	Post Harvest Fruit and Vegetable Technology
PLNT 300	(3)	Cropping Systems

F

ANSC 565 (3) Applied Information Systems

**24.6.2.7.6 Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) - Animal Health and Disease (24 credits)**

This specialization is offered for students wishing to understand general animal physiology and function, the susceptibility of animals to various diseases, methods for limiting and controlling potential outbreaks, and the resulting implications for the animal, the consumer and the environment. It is an ideal choice for students interested in the care of animals, or in working in laboratories where diseases are being researched.

Specialization Adviser: Professor Sarah Kimmins

Macdonald-Stewart Building, Room 1-091

514-398-7658

**Required Courses (15 credits)**

ANSC 312	(3)	Animal Health and Disease
ANSC 323	(3)	Mammalian Physiology
ANSC 424	(3)	Metabolic Endocrinology
MICR 341	(3)	Mechanisms of Pathogenicity
PARA 438	(3)	Immunology

**Complementary Courses (9 credits)**

9 credits of complementary courses selected from:

AEBI 451	(3)	Research Project 1
ANSC 251	(3)	Comparative Anatomy
ANSC 330	(3)	Fundamentals of Nutrition
NUTR 420	(3)	Toxicology and Health Risks
PHAR 300	(3)	Drug Action
WILD 424	(3)	Parasitology

**24.6.2.7.7 Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) - Animal Production (24 credits)**

This specialization will be of interest to students who wish to study the improved efficiency of livestock production at the national and international levels. Students are exposed to animal nutrition, physiology and breeding in a context that respects environmental concerns and animal-welfare issues. When taken in conjunction with the Major Agro-Environmental Sciences and the specialization in Professional Agriculture, it conforms with the eligibility requirements of the Ordre des agronomes du Québec.

Specialization Adviser: Professor Arif Mustafa

Macdonald-Stewart Building, Room 1-086

Telephone: 514-398-7506

**Required Courses (21 credits)**

ANSC 301	(3)	Principles of Animal Breeding
ANSC 312	(3)	Animal Health and Disease
ANSC 323	(3)	Mammalian Physiology
ANSC 324	(3)	Developmental Biology and Reproduction

438.662 Tm(Animal Nutrition)Tj1 0 0 1 221.9 1 123.023 Dairiology Beefser: productManagquiretion

ANSC 330

(3)

Fundamentals of Nutrition

**24.6.2.7.8 Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) - Applied Ecosystem Sciences (24 credits)**

The goal of this specialization is to pro

with the eligibility requirements of the Ordre des agronomes du Québec. It is suitable for students wishing to farm, do extension and government work, and those intending to pursue postgraduate work in this field.

Academic Adviser: Dr. Caroline Begg

Macdonald-Stewart Building, Room 2-071

Telephone: 514-398-8749

### **Required Courses (9 credits)**

AGRI 210	(3)	Agro-Ecological History
AGRI 215	(3)	Agro-Ecosystems Field Course
AGRI 340	(3)	Principles of Ecological Agriculture

### **Complementary Courses (15 credits)**

15 credits of Complementary courses selected from:

\*Note: Offered in alternate years.

AGEC 333	(3)	Resource Economics
AGRI 310	(3)	Internship in Agriculture/Environment
AGRI 435	(3)	Soil and Water Quality Management
ENTO 352	(3)	Control of Insect Pests
ENTO 446	(3)	Apiculture
MICR 331	(3)	Microbial Ecology
NUTR 512	(3)	Herbs, Foods and Phytochemicals
PLNT 302	(3)	Forage Crops and Pastures
PLNT 312*	(3)	Urban Horticulture
PLNT 315*	(3)	Herbs and Medicinal Plants
PLNT 434	(3)	Weed Biology and Control
PLNT 460	(3)	Plant Ecology
SOIL 326	(3)	Soils in a Changing Environment
SOIL 335*	(3)	Soil Ecology and Management
SOIL 445*	(3)	Agroenvironmental Fertilizer Use

### **24.6.2.7.10 Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) - Entomology (24 credits)**

This specialization offers students expertise in insect biology, ecology, evolution and behaviour. Applied entomology is included, as insects are key pests in v

12 credits of complementary courses selected from:

ENTO 446	(3)	Apiculture
ENTO 515	(3)	Parasitoid Behavioural Ecology
ENTO 520	(3)	Insect Physiology
ENTO 535	(3)	Aquatic Entomology
ENTO 550	(3)	Veterinary and Medical Entomology
PLNT 434	(3)	Weed Biology and Control
SOIL 335	(3)	Soil Ecology and Management
WILD 424	(3)	Parasitology

**24.6.2.7.11 Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) - Environmental Biology (Multidisciplinary) (24 credits)**

This is a flexible specialization offering a balance between organisms, their ecology, and ecosystem processes and applications. Biology and ecology of a variety of taxonomic groups and the ways the organisms interact with and affect ecosystem processes will be examined. Students are exposed to ecosystem management and issues related to environmental change. The proposed specialization is designed for students with broad and general interests in environmental biology, but who wish for a strong grounding in Organismal biology and ecology and environmental sciences.

Specialization Adviser: Professor Christopher Buddle

Macdonald-Stewart Building, Room 2-0276

Telephone: 514-398-8026

**Complementary Courses (24 credits)**

24 credits (total) are selected from various categories as follows:

Minimum of 6 credits - Organisms

Minimum of 3 credits - Ecology

Minimum of 6 credits - Ecosystem Processes and Applications

**Or**

## Ecosystem Processes and Applications



Telephone: 514-398-7843

**Required Courses (12 credits)**

ANSC 323	(3)	Mammalian Physiology
ANSC 330	(3)	Fundamentals of Nutrition
NUTR 337	(3)	Nutrition Through Life
PARA 438	(3)	Immunology

**Complementary Courses (12 credits)**

12 credits from:

ANSC 312	(3)	Animal Health and Disease
ANSC 424	(3)	Metabolic Endocrinology
		Carboh

15 credits, select one of the McGill Field Study Semesters listed below:

**African Field Study Semester (Winter)**

15 credits in African Field Study Semester are selected as follows:

9 credits of courses chosen from the complementary course set offered in the year of participation in the field study semester.

6 credits of Required courses as listed below:

GEOG 416	(3)	Africa South of the Sahara
NRSC 405	(3)	Natural History of East Africa

**Barbados Field Study Semester (Fall)**

15 credits selected as follows:

AGRI 452	(3)	Water Resources in Barbados
AGRI 519	(6)	Sustainable Development Plans
URBP 507	(3)	Planning and Infrastructure
URBP 520	(3)	Globalization: Planning and Change

**Barbados Interdisciplinary Tropical Studies Field Semester (Summer)**

15 credits selected as follows:

AEBI 421	(3)	Tropical Horticultural Ecology
AEBI 423	(3)	Sustainable Land Use
AEBI 425	(3)	Tropical Energy and Food
AEBI 427	(6)	Barbados Interdisciplinary Project

**Panama Field Study Semester (Winter)**

15 credits selected as follows:

AGRI 550	(3)	Sustained Tropical Agriculture
BIOL 553	(3)	Neotropical Environments
ENVR 451	(6)	Research in Panama
GEOG 498	(3)	Humans in Tropical Environments

**24.6.2.7.15 Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) - International Development (IAFS) (24 credits)**

The specialization provides a focus on social science offerings from the International Development Studies program offered by the Faculty of Arts for students in the International Agriculture and Food Systems (IAFS) major. The program combines an overview of development and social science course options with opportunity for field experience.

Specialization Adviser: Professor Anwar Naseem

Macdonald-Stewart Building, Room 3-037

514-398-7825

**Required Course (3 credits)**

INTD 200	(3)	Introduction to International Development
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**Complementary Courses (21 credits)**

21 credits selected as follows:

3 credits of research or internship coursework

18 credits from one of tw

AGEC 430	(3)	Agriculture, Food and Resource Policy
AGEC 442	(3)	Economics of International Agricultural Development
ANTH 206	(3)	Environment and Culture
ANTH 301	(3)	Nomadic Pastoralists
ANTH 339	(3)	Ecological Anthropology
ANTH 418	(3)	Environment and Development
ANTH 512	(3)	Political Ecology
ECON 326	(3)	Ecological Economics
GEOG 302	(3)	Environmental Management 1
GEOG 403	(3)	Global Health and Environmental Change
GEOG 408	(3)	Geography of Development
GEOG 410	(3)	Geography of Underdevelopment: Current Problems
GEOG 508	(3)	Resources, People and Power
GEOG 510	(3)	Humid Tropical Environments
MGCR 360	(3)	Social Context of Business
MIME 524	(3)	Mineral Resources Economics
NRSC 340	(3)	Global Perspectives on Food
NRSC 540	(3)	Socio-Cultural Issues in Water
NUTR 501	(3)	Nutrition in Developing Countries
URBP 506	(3)	Environmental Policy and Planning
URBP 520	(3)	Globalization: Planning and Change

**24.6.2.7.16 Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) - Life Sciences (Multidisciplinary) (24 credits)**

Students taking this specialization have a wide variety of life sciences course offerings to choose from to allow them to target their program to their own interests in the field. Course choices are balanced between "fundamentals" and "applications". Depending upon the courses chosen, the resulting program may be relatively specialized or very broad, spanning several disciplines. Such a broad background in life sciences will open up employment opportunities in a variety of diverse bioscience industries; students with an appropriate CGPA may proceed to a wide variety of post-graduate programs or professional schools.

Academic Adviser: Professor Brian Driscoll

Macdonald-Stewart Building 3-035

Telephone: 514-398-7887

**Complementary Courses (24 credits)**

24 credits of complementary courses are selected from the categories listed below:

12 credits - Fundamentals

12 credits - Applications

**Complementary Courses - Fundamentals**

12 credits selected from:

ANSC 312	(3)	Animal Health and Disease
ANSC 323	(3)	Mammalian Physiology
ANSC 324	(3)	Developmental Biology and Reproduction
ANSC 330	(3)	Fundamentals of Nutrition
ANSC 400	(3)	Eukaryotic Cells and Viruses
ANSC 433	(3)	Animal Nutrition
ENTO 330	(3)	Insect Biology

ENTO 440	(3)	Insect Diversity
ENVB 305	(3)	Population & Community Ecology
ENVB 313	(3)	Phylogeny and Biogeography
ENVB 315	(3)	Science of Inland Waters
MICR 331	(3)	Microbial Ecology
MICR 338	(3)	Bacterial Molecular Genetics
MICR 450	(3)	Environmental Microbiology
NUTR 337	(3)	Nutrition Through Life
PARA 438	(3)	Immunology
PLNT 304	(3)	Biology of Fungi
PLNT 353	(3)	Plant Structure and Function
PLNT 358	(3)	Flowering Plant Diversity
PLNT 424	(3)	Cellular Regulation
PLNT 426	(3)	Plant Ecophysiology
PLNT 460	(3)	Plant Ecology
WILD 375	(3)	Issues: Environmental Sciences
WILD 424	(3)	Parasitology

### Complementary Courses - Applications

12 credits selected from:

AEBI 451	(3)	Research Project 1
AEMA 406	(3)	Quantitative Methods: Ecology
ANSC 420	(3)	Animal Biotechnology
ANSC 424	(3)	Metabolic Endocrinology
ANSC 506	(3)	Advanced Animal Biotechnology
ANSC 560	(3)	Biology of Lactation
ANSC 565	(3)	Applied Information Systems
BINF 301	(3)	Introduction to Bioinformatics
BINF 511	(3)	Bioinformatics for Genomics
BTEC 306	(3)	Experiments in Biotechnology
BTEC 535	(3)	Functional Genomics in Model Organisms
BTEC 555	(3)	Structural Bioinformatics
ENTO 352	(3)	Control of Insect Pests
ENTO 535	(3)	Aquatic Entomology
ENTO 550	(3)	Veterinary and Medical Entomology
ENVB 301	(3)	Meteorology
FDSC 442	(3)	Food Microbiology
MICR 341	(3)	Mechanisms of Pathogenicity
NRSC 430	(3)	GIS for Natural Resource Management
NUTR 420	(3)	Toxicology and Health Risks
NUTR 512	(3)	Herbs, Foods and Phytochemicals
PARA 410	(3)	Environment and Infection
PARA 515	(3)	Water, Health and Sanitation

PLNT 305	(3)	Plant Pathology
PLNT 310	(3)	Plant Propagation
PLNT 315	(3)	Herbs and Medicinal Plants
PLNT 434	(3)	Weed Biology and Control
PLNT 435	(3)	Plant Breeding
SOIL 335	(3)	Soil Ecology and Management

**24.627.17 Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) - Microbiology (24 credits)**

Students following this specialization receive education and training in fundamental principles and applied aspects of microbiology. Complementary courses allow students to focus on basic microbial sciences or applied areas such as biotechnology. Successful graduates may work in university, government and industrial research laboratories, in the pharmaceutical, fermentation and food industries, and with an appropriate CGPA proceed to post-graduate studies or professional biomedical schools.

Specialization Adviser: Professor Lyle Whyte

Macdonald-Stewart Building 3-036

Telephone: 514-398-7889

**Required Courses (15 credits)**

MICR 331	(3)	Microbial Ecology
MICR 338	(3)	Bacterial Molecular Genetics
MICR 341	(3)	Mechanisms of Pathogenicity
MICR 450	(3)	Environmental Microbiology
PARA 438	(3)	Immunology

**Complementary Courses (9 credits)**

9 credits selected from:

\*Note: Students select either MIMM 413 or WILD 424.

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Macdonald-Stewart Building, Room 3-037

Telephone: 514-398-7887

### Required Courses (15 credits)

BINF 301	(3)	Introduction to Bioinformatics
BTEC 306	(3)	Experiments in Biotechnology
MICR 338	(3)	Bacterial Molecular Genetics
PARA 438	(3)	Immunology
PLNT 424	(3)	Cellular Regulation

### Complementary Courses (9 credits)

9 credits selected from:

AEBI 451	(3)	Research Project 1
ANSC 234	(3)	Biochemistry 2
ANSC 323	(3)	Mammalian Physiology
ANSC 400	(3)	Eukaryotic Cells and Viruses
ANSC 420	(3)	Animal Biotechnology
ANSC 508	(3)	Tools in Animal Biotechnology
ANSC 565	(3)	Applied Information Systems
BINF 511	(3)	Bioinformatics for Genomics
BTEC 535	(3)	Functional Genomics in Model Organisms
BTEC 555	(3)	Structural Bioinformatics
CELL 500	(3)	Techniques Plant Molecular Genetics
CELL 501	(3)	Plant Molecular Biology and Genetics
MIMM 324	(3)	Fundamental Virology

### 24.6.2.19 Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) - Plant Biology (24 credits)

This specialization emphasizes the study of plants from the cellular to the organismal level. The structure, physiology, development, evolution, and ecology of plants will be studied. Most courses offer laboratory classes that expand on the lecture material and introduce students to the latest techniques in plant biology. Many laboratory exercises use the excellent research and field facilities at the Morgan Arboretum, McGill Herbarium, Emile A. Lods Agronomy Research Centre, the Horticultural Centre and the Plant Science greenhouses as well as McGill field stations. Students may undertake a research project under the guidance of a member of the Plant Science Department as part of their studies. Graduates with the specialization may continue in post-graduate study or work in the fields of botany, mycology, molecular biology, ecology, conservation or environmental science.

Specialization Adviser: Professor Marcia Waterway

CELL 500	(3)	Techniques Plant Molecular Genetics
CELL 501	(3)	Plant Molecular Biology and Genetics Phylogeny and Biogeograph



in conjunction with the Major Agro-Environmental Sciences or the Major Environmental Biology. Those interested in the biotechnology and molecular aspects of plant-pathogen or plant-insect interactions should choose it in conjunction with the Major Life Sciences (Biological and Agricultural). Complementary specializations could include Plant Biology, Plant Production, Entomology or Microbiology.

Specialization Adviser: Professor Ajjamada Kushalappa

Raymond Building, Room 2-028b

Telephone: 514-398-7867

#### **Required Courses (18 credits)**

ENTO 330	(3)	Insect Biology
ENTO 352	(3)	Control of Insect Pests
PLNT 304	(3)	Biology of Fungi
PLNT 305	(3)	Plant Pathology
PLNT 353	(3)	Plant Structure and Function
PLNT 434	(3)	Weed Biology and Control

#### **Complementary Courses (6 credits)**

6 credits of complementary courses selected from:

ENTO 340	(3)	Field Entomology
ENTO 515	(3)	Parasitoid Behavioural Ecology
PLNT 426	(3)	Plant Ecophysiology
PLNT 430	(3)	Plant Disease Epidemiology
PLNT 520	(3)	Plant-Microbe Interactions

**Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) - Proj I643 713Tm((3))Tj1 0 0 3)**

ANSC 433	(3)	Animal Nutrition
SOIL 445	(3)	Agroenvironmental Fertilizer Use

Plus 6-9 additional credits, approved by the academic adviser, in agricultural sciences or applied agriculture to meet the requirements of the OAQ.

Note: students in the Agricultural Economics specialization must take 12 complementary credits while students in Animal Production, Ecological Agriculture, Plant Production, or Soil and Water Resources specializations must take 9 complementary credits.

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For students in the Agricultural Economics major with a specialization in Agri-Business:

6 credits from:

AEBI 212	(3)	Evolution and Phylogeny
LSCI 202	(3)	Molecular Cell Biology
LSCI 204	(3)	Genetics
LSCI 211	(3)	Biochemistry 1
LSCI 230	(3)	Introductory Microbiology

3 credits from:

ANSC 451	(3)	Dairy and Beef Production Management
ANSC 458	(3)	Swine and Poultry Production

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3 credits from:

PLNT 300	(3)	Cropping Systems
PLNT 302	(3)	Forage Crops and Pastures
PLNT 434	(3)	Weed Biology and Control

**24.6.2.23 Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) - Soil and Water Resources (24 credits)**

This specialization will interest students who w

AGRI 435	(3)	Soil and Water Quality Management
BREE 416	(3)	Engineering for Land Development

6 credits from:

BREE 322	(3)	Organic Waste Management
BREE 327	(3)	Bio-Environmental Engineering
ENVB 301	(3)	Meteorology
NRSC 333	(3)	Pollution and Bioremediation
NRSC 430	(3)	GIS for Natural Resource Management
SOIL 510	(3)	Environmental Soil Chemistry

#### **24.6.2.7.24 Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) - Wildlife Biology (24 credits)**

This specialization focuses on the ecology of vertebrate animals, their biological and physical environment and the interactions that are important in the management of ecological communities and wildlife species. Students have access to local wildlife resources including the Avian Science and Conservation Centre, the McGill Arboretum, the Stonycroft Wildlife Area, the Molson Reserve and the Ecomuseum.

Specialization Adviser: Professor Murray Humphries

Macdonald-Stewart Building 2-069

Telephone: 514-398-7885

#### **Required Courses (13 credits)**

PLNT 358	(3)	Flowering Plant Diversity
WILD 307	(3)	Natural History of Vertebrates
WILD 401	(4)	Fisheries and Wildlife Management
WILD 421	(3)	Wildlife Conservation

#### **Complementary Courses (11 credits)**

11 credits of complementary courses selected as follows:

At least 6 credits from the following:

BIOL 427	(3)	Herpetology
WILD 350	(3)	Mammalogy
WILD 420	(3)	Ornithology

At least 5 credits from the following:

ENVB 315	(3)	Science of Inland Waters
NRSC 514	(3)	Freshwater Ecosystems
WILD 311	(3)	Ethology
WILD 415	(2)	Conservation Law
WILD 424	(3)	Parasitology
WILD 475	(3)	Desert Ecology

### 24.6.3 Bachelor of Engineering (Bioresource) - B.Eng.(Bioresource)

#### 24.6.3.1 Bioresource Engineering Major

The Department of Bioresource Engineering collaborates with other departments and the Faculty of Engineering in providing courses of instruction for a curriculum in Bioresource Engineering. Graduates qualify to apply for registration as professional engineers in any province of Canada. The professional agrology opeerigqualifies graduates to apply for registration to the *Ordre des agronomes du Québec*.

There are six streams offered within the Bioresource Engineering Major. Via the appropriate choice of elective course sets, a particular area of study may be emphasized. More information about these streams and the suggested course sets for each can be found on the Department website at [www.mcgill.ca/bioeng](http://www.mcgill.ca/bioeng).

In the **Bio-Environmental Engineering** stream, students learn about soil and water quality management and conservation, geomechanics, hydrology and water resources, organic waste treatment, use of GIS for biosystem operation, engineering for land development, climate control in buildings, ecosystem remediation, and many other related topics.

Students who follow the **Soil and Water** stream learn about hydrology, irrigation and drainage, soil and water management, environmental quality control and remediation, structural design, machinery design, artificial intelligence, GIS, and remote sensing.

In the **Ecological Engineering** stream, students learn how to apply principles of engineering and ecology to the design and implementation of complex ecological systems. They learn how to create systems that preserve and enhance natural ecological processes as a means of fulfilling design requirements.

In the **Food and Bioprocessing** stream, students are taught about the engineering of foods and food processes, physical properties of biological materials, post-harvest technology, fermentation and bio-processing, the management of organic wastes, biotechnology, the design of machinery for bioprocessing, etc.

Students who specialize in the **Agricultural Engineering** stream will learn about machine design, machinery, robotics, structural design, environmental quality control, waste management, artificial intelligence, GIS, remote sensing, complex system simulation, and much more.

The **Professional Agrology** option offers a course selection guided to qualify graduates for registration as professional agrologists with the *Ordre des agronomes du Québec*.

All required and complementary courses must be passed with a minimum grade of C. One term is spent taking courses from the Faculty of Engineering on the McGill downtown campus.

Students also have the opportunity to pursue a Minor. Several possibilities are: Agricultural Production, Environment, Ecological Agriculture, Biotechnology, Computer Science, Construction Engineering and Management, Entrepreneurship, and Environmental Engineering. Details of some of these Minors can be found under *Faculty of Engineering > Minor Programs*. To complete a Minor, it is necessary to spend at least one extra term beyond the normal requirements of the B.Eng.(Bioresource) program.

See [section 24.4.5.1: Minimum Credit Requirement](#) for prerequisites and minimum credit requirements.

#### 24.6.3.2 About the B.Eng. (Bioresource) Program

Bioresource Engineering is the unique branch of engineering that includes Biological engineering and Bioengineering where professional engineering practice intersects with biological sciences. Bioresource Engineers design, improve and manage biological-based systems to operate in efficient and sustainable ways for the well being of the environment and society.

#### 24.6.3.3 Bachelor of Engineering (Bioresource) (B.Eng.(Bioresource)) - Major Bioresource Engineering (113 credits)

Academic Adviser-U1: Professor Grant Clark

Macdonald-Stewart Building, Room 1-099

Telephone: 514-398-7784

#### Required Courses (53 credits)

AEMA 202	(3)	Intermediate Calculus
AEMA 305	(3)	Differential Equations
BREE 205	(3)	Engineering Design I
BREE 210	(3)	Mechanical Analysis & Design
BREE 216	(3)	Bioresource Engineering Materials
BREE 252	(3)	Computing for Engineers
BREE 301	(3)	Biothermodynamics
BREE 305	(3)	Fluid Mechanics
BREE 312	(3)	Electric Circuits and Machines
BREE 319	(3)	Engineering Mathematics

BREE 327	(3)	Bio-Environmental Engineering
BREE 341	(3)	Mechanics of Materials
BREE 481	(.5)	Undergraduate Seminar 1
BREE 482	(.5)	Undergraduate Seminar 2
BREE 483	(.5)	Undergraduate Seminar 3
BREE 484	(.5)	Undergraduate Seminar 4
BREE 485	(1)	Undergraduate Seminar 5
BREE 486	(1)	Undergraduate Seminar 6
BREE 490	(3)	Engineering Design 2
BREE 495	(3)	Engineering Design 3
FACC 400	(1)	Engineering Professional Practice Design Grapu70.52:r3tice

**Set C - Social Sciences**

BREE 533	(3)	Water Quality Management
CHEE 474	(3)	Biochemical Engineering
CIVE 317	(3)	Structural Engineering 1
CIVE 318	(3)	Structural Engineering 2

#### **24.6.3.4 Bachelor of Engineering (Bioresource) (B.Eng.(Bioresource)) - Major Bioresource Engineering - Professional Agrology (113 credits)**

Academic Adviser-U1: Professor Grant Clark

Macdonald-Stewart Building, Room 1-099

Telephone: 514-398-7784

#### **Required Courses (56 credits)**

AEMA 202	(3)	Intermediate Calculus
AEMA 305	(3)	Differential Equations
AGRI 330	(1)	Agricultural Legislation
AGRI 430	(2)	Professional Practice in Agrology
BREE 205	(3)	Engineering Design 1
BREE 210	(3)	Mechanical Analysis & Design
BREE 216	(3)	Bioresource Engineering Materials
BREE 252	(3)	Computing for Engineers
BREE 301	(3)	Biothermodynamics
BREE 305	(3)	Fluid Mechanics
BREE 312	(3)	Electric Circuits and Machines
BREE 319	(3)	Engineering Mathematics
BREE 327	(3)	Bio-Environmental Engineering
BREE 341	(3)	Mechanics of Materials
BREE 481	(.5)	Undergraduate Seminar 1
BREE 482	(.5)	Undergraduate Seminar 2
BREE 483	(.5)	Undergraduate Seminar 3
BREE 484	(.5)	Undergraduate Seminar 4
BREE 485	(1)	Undergraduate Seminar 5
BREE 486	(1)	Undergraduate Seminar 6
BREE 490	(3)	Engineering Design 2
		Engineering Design 3

**Set A**

6 credits

AEMA 310	(3)	Statistical Methods 1
MECH 346	(3)	Heat Transfer

**Set B - Natural Sciences**

6 credits from each of the following two groups:

**Group 1 - Biology**

AEBI 211	(3)	Organisms 2
LSCI 202	(3)	Molecular Cell Biology
LSCI 204	(3)	Genetics
LSCI 211	(3)	Biochemistry 1
LSCI 230	(3)	Introductory Microbiology

**Group 2 - Agricultural Sciences**

AEBI 210	(3)	Organisms 1
ANSC 250	(3)	Principles of Animal Science
ANSC 433	(3)	Animal Nutrition
ANSC 451	(3)	Dairy and Beef Production Management

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#### 24.6.3.5.2 Barbados Field Study Semester

For more information, see *Field Studies and Study Abroad > Field Studies > Barbados Field Study Semester*.

#### 24.6.3.5.3 Barbados Interdisciplinary Tropical Studies Field Semester

For more information, see *Field Studies and Study Abroad > Field Studies > Barbados Interdisciplinary Tropical Studies Field Semester*.

#### 24.6.3.5.4 Internship Opportunities and Co-op Experiences

For more information, see *Internship Opportunities and Co-op Experiences*.

### 24.6.4 Bachelor of Science (Food Science) - B.Sc.(F.Sc.)

The Food Science program has been designed to combine the basic sciences, particularly chemistry, with speciality courses which are directly related to the discipline.

#### Freshman Adviser

Dr. Alice Cherestes  
 Macdonald-Stewart Building, Room1-023  
 Telephone: 514-398-7980

#### 24.6.4.1 Bachelor of Science (Food Science) (B.Sc.(F.Sc.)) - Major Food Science - Food Science Option (90 credits)

This program is intended for those students interested in the multidisciplinary field of food science. The courses are integrated to acquaint the student with food processing, food chemistry, quality assurance, analytical procedures, food products, standards and regulations. The program prepares graduates for employment as scientists in industry or government, in regulatory, research, quality assurance, or product development capacities.

Graduates have the academic qualifications for membership in the Canadian Institute of Food Science and Technology (CIFST). Graduates of Food Science Major with Food Science Option can also qualify for recognition by the Institute of Food Technologists (IFT).

Food Science Option is completed to 90 credits with free elective courses.

Please refer to Faculty Information and Regulations > Minimum Credit Requirements, in this publication for prerequisites and minimum credit requirements.

Academic Adviser-U1: Professor Salwa Karboune

Macdonald-Stewart Building, Room 1-040

Telephone: 514-398-8666

#### Required Courses (69 credits)

Note: If an introductory CEGEP level Organic Chemistry course has not been completed, then FDSC 230 (Organic Chemistry) must be completed as a replacement.

AEMA 310	(3)	Statistical Methods 1
AGRI 510	(3)	Professional Practice
BREE 324	(3)	Elements of Food Engineering
FDSC 200	(3)	Introduction to Food Science
FDSC 213	(3)	Analytical Chemistry 1
FDSC 251	(3)	Food Chemistry 1
FDSC 300	(3)	Principles of Food Analysis 1
FDSC 310	(3)	Post Harvest Fruit and Vegetable Technology
FDSC 319	(3)	Food Commodities
FDSC 330	(3)	Food Processing
FDSC 400	(3)	Food Packaging
FDSC 425	(3)	Principles of Quality Assurance
FDSC 442	(3)	Food Microbiology
FDSC 495D1	(1.5)	Food Science Seminar
FDSC 495D2	(1.5)	Food Science Seminar

LSCI 211	(3)	Biochemistry 1
LSCI 230	(3)	Introductory Microbiology
NUTR 207	(3)	Nutrition and Health

**Electives (21 credits)**

Electives are selected in consultation with an academic adviser, to meet the minimum 90-credit requirement for the degree. A portion of these credits should be in the humanities/social sciences.

**24.6.4.2 Bachelor of Science (Food Science) (B.Sc.(F.Sc.)) - Major Food Science - Food Chemistry Option (90 credits)**

This program is intended for those students interested in the multidisciplinary field of food science. The courses are integrated to acquaint the student with food processing, food chemistry, quality assurance, analytical procedures, food products, standards and regulations. The program prepares graduates for employment as scientists in industry or government, in regulatory, research, quality assurance, or product development capacities.

Graduates have the academic qualifications for membership in the Canadian Institute of Food Science and Technology (CIFST). Graduates of Food Science Major with Food Chemistry Option can also qualify for recognition by the Institute of Food Technologists (IFT) and the Ordre des chimistes du Québec (OCQ). Food Chemistry Option is completed to 90 credits with free elective courses.

Please refer to Faculty Information and Regulations > Minimum Credit Requirements, in this publication for prerequisites and minimum credit requirements.

Academic Adviser-U1: Professor Salwa Karboune

Macdonald-Stewart Building, Room 1-040

Telephone: 514-398-8666

**Required Courses (51 credits)**

Note: If an introductory CEGEP level Organic Chemistry course has not been completed, then FDSC 230 (Organic Chemistry) must be completed as a replacement.

AEMA 310	(3)	Statistical Methods 1
AGRI 510	(3)	Professional Practice
BREE 324	(3)	Elements of Food Engineering
FDSC 200	(3)	Introduction to Food Science
FDSC 213	(3)	Analytical Chemistry 1
FDSC 251	(3)	Food Chemistry 1
FDSC 300	(3)	Principles of Food Analysis 1
FDSC 310	(3)	Post Harvest Fruit and Vegetable Technology
FDSC 319	(3)	Food Commodities
FDSC 330	(3)	Food Processing
FDSC 400	(3)	Food Packaging
FDSC 425	(3)	Principles of Quality Assurance
FDSC 442	(3)	Food Microbiology
FDSC 495D1	(1.5)	Food Science Seminar
FDSC 495D2	(1.5)	Food Science Seminar
LSCI 211	(3)	Biochemistry 1
LSCI 230	(3)	Introductory Microbiology
NUTR 207	(3)	Nutrition and Health

**Additional Required Courses - Food Chemistry Option (30 credits)**

Note: Graduates of this program are qualified for recognition by the Institute of Food Technologists (IFT) and the Ordre des chimistes du Québec (OCQ).

FDSC 233	(3)	Physical Chemistry
FDSC 305	(3)	Food Chemistry 2

FDSC 315	(3)	Separation Techniques in Food Analysis 1
FDSC 334	(3)	Analysis of Food Toxins and Toxicants
FDSC 405	(3)	Product Development
FDSC 410	(3)	Flavour Chemistry
FDSC 490	(3)	Research Project 1
FDSC 491	(3)	Research Project 2
FDSC 515	(3)	Enzyme Thermodynamics/Kinetics
FDSC 520	(3)	Biophysical Chemistry of Food

### Electives (9 credits)

Electives are selected in consultation with academic adviser, to meet the minimum 90-credit requirement for the degree. A portion of these credits should be in the humanities/social sciences.

### 24.6.4.3 Concurrent Bachelor of Science in Food Science (B.Sc.(F.Sc.)) and Bachelor of Science Nutritional Sciences (B.Sc.(Nutr.Sc.)) - Food Science/Nutritional Science Major (122 credits)

The concurrent program B.Sc.(F.Sc.) and B.Sc.(Nutr.Sc.) is designed to give motivated students the opportunity to combine the two fields. The two disciplines complement each other with food science providing the scientific foundation in the fundamentals of food science and its application in the food system, while nutritional sciences brings the fundamental knowledge in the nutritional aspects of food and metabolism. The program aims to train students with the fundamental knowledge in both disciplines to promote the development of healthy food products for human consumption. The overall program is structured and closely integrated so as to satisfy the academic requirements of both degrees as well as the professional training or exposure to industry.

Please refer to Faculty Information and Regulations > Minimum Credit Requirements, in this publication for prerequisites and minimum credit requirements.

Academic Adviser-U1: Professor Selim Kermasha

Macdonald-Stewart Building, Room 1-033

Telephone: 514-398-7922

### Required Courses (79 credits)

AEMA 310	(3)	Statistical Methods 1
ANSC 234	(3)	Biochemistry 2
ANSC 323	(3)	Mammalian Physiology
ANSC 424	(3)	Metabolic Endocrinology
FDSC 200	(3)	Introduction to Food Science
FDSC 213	(3)	Analytical Chemistry 1
FDSC 251	(3)	Food Chemistry 1
FDSC 300	(3)	Principles of Food Analysis 1
FDSC 305	(3)	Food Chemistry 2
FDSC 310	(3)	Post Harvest Fruit and Vegetable Technology
FDSC 315	(3)	Separation Techniques in Food Analysis 1
FDSC 319	(3)	Food Commodities
FDSC 330	(3)	Food Processing
FDSC 334	(3)	Analysis of Food Toxins and Toxicants
FDSC 400	(3)	Food Packaging
FDSC 425	(3)	Principles of Quality Assurance
FDSC 442	(3)	Food Microbiology
FDSC 497	(1.5)	Professional Seminar: Food
LSCI 211	(3)	Biochemistry 1
LSCI 230	(3)	Introductory Microbiology

NUTR 207	(3)	Nutrition and Health
NUTR 214	(4)	Food Fundamentals
NUTR 307	(3)	Human Nutrition
NUTR 337	(3)	Nutrition Through Life
NUTR 344	(4)	Clinical Nutrition 1
NUTR 497	(1.5)	Professional Seminar: Nutrition
NUTR 512	(3)	Herbs, Foods and Phytochemicals

### Complementary Courses (30 credits)

Complementary courses are selected as follows:

At least 9 credits from the following:

AGEC 200	(3)	Principles of Microeconomics
AGEC 201	(3)	Principles of Macroeconomics
AGEC 330	(3)	Agriculture and Food Markets
AGEC 430	(3)	Agriculture, Food and Resource Policy
AGEC 442	(3)	Economics of International Agricultural Development
AGEC 450	(3)	Agriculture Business Management

At least 9 credits from the following:

AGEC 242	(3)	Management Theories and Practices
ENVR 203	(3)	Knowledge, Ethics and Environment
NRSC 340	(3)	Global Perspectives on Food
NUTR 301	(3)	Psychology
NUTR 322	(2)	Applied Sciences Communication
NUTR 446	(3)	Applied Human Resources

12 credits from the following:

FDSC 480	(12)	Industrial Stage/Food
NUTR 480	(12)	Industrial Stage/Nutrition

### Electives

13 credits to meet the credit requirements for the degree.

#### 24.6.4.3.1 About the Concurrent Bachelor of Science in Food Science (B.Sc.(F.Sc.)) and Bachelor of Science in Nutritional Sciences (B.Sc.(Nutr.Sc.)) Program

Unique in North America, the new concurrent degree program in Food Science and Nutritional Science offers the best education in these complementary fields and opens the door to a multitude of career paths.

The **Food Science** component of the program focuses on the chemistry of food and the scientific principles underlying food preservation, processing and packaging to provide consumers with quality foods. The **Nutritional Science** component deals with the science of the nutritional aspects of food and metabolism. The program has been carefully structured to ensure that students receive the training that industry demands.

#### 24.6.4.4 Bachelor of Science (Food Science) - B.Sc.(F.Sc.) Related Programs

##### 24.6.4.4.1 Certificate in Food Science

Detailed information on this certificate program can be found under [section 24.6.7.3: Certificate in Food Science \(30 credits\)](#) in this publication.

## 24.6.5 Bachelor of Science (Nutritional Sciences) - B.Sc.(Nutr.Sc.)

### 24.6.5.1 Dietetics Major

#### Academic Advising Coordinator

Sandy Phillips, M.Sc., R.D.  
School of Dietetics and Human Nutrition

### 24.6.5.2 Nutrition Major

#### Academic Advising Coordinator

Kristine G. Koski, Ph.D., R.D. (U.S.)  
School of Dietetics and Human Nutrition

### 24.6.5.3 About the B.Sc. (Nutritional Sciences) Program

#### Freshman Adviser

Judy Campbell-Gordon  
Macdonald-Stewart Building, Room 2-019  
Telephone: 514-398-7974

### 24.6.5.4 Bachelor of Science (Nutritional Sciences) (B.Sc.(Nutr.Sc.)) - Major Dietetics (115 credits)

The Dietetics major, which includes a 40 week internship (Stage) as part of its degree requirements, is a professional program that leads to membership in a provincial regulatory body and professional licensure as a dietitian/nutritionist.

Graduates are qualified for challenging professional and leadership positions related to food and health, as dietitians, nutritionists and food administrators. The designations "Dietitian" and "Nutritionist" are reserved titles associated with reserved acts in the province of Quebec. As clinical nutritionists, dietitians may work in health-care settings, nutrition counselling centres, clinics and private practice. As community nutritionists, dietitians are involved in nutrition education programs through school boards, sports centres and local and international health agencies. The dietitian in the food service sector participates in all aspects of management to assure quality food products and services. Postgraduate programs are available to qualified graduates. The duration of the program is three and one-half years.

Successful graduates are qualified to apply for membership with the Ordre professionnel des diététistes du Québec (O.P.D.Q.) and to become a member of the Association of Dietitians of Canada (ADC).

Required courses and Professional Practice (Stage) courses are sequenced in a specific order over 9 terms (3.5 year program). See <http://www.mcgill.ca/dietetics> for detailed information regarding the undergraduate program plan.

AEMA 310	(3)	Statistical Methods 1
AGEC 242	(3)	Management Theories and Practices
AGEC 343	(3)	Accounting and Cost Control
ANSC 234	(3)	Biochemistry 2
ANSC 323	(3)	Mammalian Physiology
ANSC 424	(3)	Metabolic Endocrinology
LSCI 211	(3)	Biochemistry 1
LSCI 230	(3)	Introductory Microbiology
NUTR 207	(3)	Nutrition and Health
NUTR 208	(1)	Professional Practice Stage 1A
NUTR 209	(3)	Professional Practice Stage 1B
NUTR 214	(4)	Food Fundamentals
NUTR 217	(4)	Application: Food Fundamentals
NUTR 310	(1)	Professional Practice Stage 2A
NUTR 311	(1)	Professional Practice Stage 2B

NUTR 320d864 528.2 Tm(Pr2)Tj1 0 0 1 221.949.1751 Sciences ES 100 Tj1 0 0 1 66ANUTR 209NUTR 217ood Fundamentalsoo64 5Serv81.04yste://5.4 Tm(Th))Tj1 0

AGEC 200	(3)	Principles of Microeconomics
ENVR 201	(3)	Society and Environment
ENVR 203	(3)	Knowledge, Ethics and Environment
RELG 270	(3)	Religious Ethics and the Environment

Or social science course from another faculty

### **Elective Courses (6 credits)**

Students who need to improve their proficiency in either English or French are strongly encouraged to choose their electives for that purpose. Students who wish to take language courses should check with the English and French Language Centre, Faculty of Arts, as placement testing may be required. Students are encouraged to develop a working knowledge of French in order to optimize their participation and learning in Stage placement sites.

Alternate elective choices may include, but are not limited to:

AEHM 300	(3)	ESL: High Intermediate 1
AEHM 301	(3)	ESL: High Intermediate 2
		Academic and Scientific 28.4 Tm(RELG 270)Tj1 67.5scienti





Please refer to Faculty Information and Regulations > Minimum Credit Requirements, in this publication for prerequisites and minimum credit requirements.

Academic Advising Coordinator: Professor Kristine Koski

School of Dietetics and Human Nutrition

**Required Courses (54 credits)**

All required courses must be passed with a minimum grade of C.

**Term 1**

Note: The course FDSC 212 has been retired and the program requirements are under review.

FDSC 212	(0)	
LSCI 211	(3)	Biochemistry 1
NUTR 207	(3)	Nutrition and Health
NUTR 214	(4)	Food Fundamentals

**Term 2**

ANSC 234	(3)	Biochemistry 2
FDSC 251	(3)	Food Chemistry 1
LSCI 230	(3)	Introductory Microbiology
NUTR 322	(2)	Applied Sciences Communication

**Term 3**

AEMA 310	(3)	Statistical Methods 1
ANSC 323	(3)	Mammalian Physiology
FDSC 305	(3)	Food Chemistry 2

**Term 4**

ANSC 424	(3)	Metabolic Endocrinology
NUTR 337	(3)	Nutrition Through Life
NUTR 344	(4)	Clinical Nutrition 1

**Term 5**

NUTR 420	(3)	Toxicology and Health Risks
NUTR 450	(3)	Research Methods: Human Nutrition
NUTR 512	(3)	Herbs, Foods and Phytochemicals
NUTR 551	(3)	Analysis of Nutrition Data

**Complementary Courses (15 credits)**

15 credits of Complementary Courses are selected as follows:

3 credits from the list below

12 credits from the Global Nutrition set

3 credits, one of the following courses:

ANSC 330	(3)	Fundamentals of Nutrition
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NUTR 307 (3) Human Nutrition

### **Global Nutrition**

12 credits are selected as follows:

AGRI 340	(3)	Principles of Ecological Agriculture
NRSC 340	(3)	Global Perspectives on Food
NUTR 403	(3)	Nutrition in Society
NUTR 501	(3)	Nutrition in Developing Countries

### **Electives (21 credits)**

21 credits of Electives are taken to meet the minimum credit requirement for the degree. Reciprocal agreement allows all students to take a limited number of electives at any Quebec university. With prior approval students can take electives at any Canadian or international university.

#### **24.6.5.7 Bachelor of Science (Nutritional Sciences) (B.Sc.(Nutr.Sc.)) - Major Nutrition - Nutritional Biochemistry (90 credits)**

This major covers the many aspects of human nutrition and food and gives first, an education in the scientific fundamentals of these disciplines and second, an opportunity to focus in (a) nutritional biochemistry and metabolism, (b) global nutrition issues, (c) food function, product development and safety and/or (d) sports nutrition. Graduates are qualified for careers in pharmaceutical and/or food industries or government laboratories, the health science communications field, sports clinics and national or international food support programs. Graduates often continue on to further studies preparing for careers in research, medicine, and dentistry or as specialists in nutrition. Aside from working as univ



LSCI 211	(3)	Biochemistry 1
NUTR 207	(3)	Nutrition and Health
NUTR 214	(4)	Food Fundamentals

**Term 2**

ANSC 234	(3)	Biochemistry 2
FDSC 251	(3)	Food Chemistry 1
LSCI 230	(3)	Introductory Microbiology
NUTR 322	(2)	Applied Sciences Communication

**Term 3**

AEMA 310	(3)	Statistical Methods 1
ANSC 323	(3)	Mammalian Physiology
FDSC 305	(3)	Food Chemistry 2

**Term 4**

ANSC 424	(3)	Metabolic Endocrinology
NUTR 337	(3)	Nutrition Through Life
NUTR 344	(4)	Clinical Nutrition 1

**Term 5**

NUTR 420	(3)	Toxicology and Health Risks
NUTR 450	(3)	Research Methods: Human Nutrition
NUTR 512	(3)	Herbs, Foods and Phytochemicals
NUTR 551	(3)	Analysis of Nutrition Data

**Complementary Courses (15 credits)**

15 credits of Complementary Courses are selected as follows:

3 credits from the list below

12 credits from the Sports Nutrition set

3 credits, one of the following courses:

ANSC 330	(3)	Fundamentals of Nutrition
NUTR 307	(3)	Human Nutrition

**Sports Nutrition**

12 credits selected as follows:

Note: Students select either ANAT 214 or EDKP 205.

ANAT 214	(3)	Systemic Human Anatomy
EDKP 205	(3)	Structural Anatomy
EDKP 391	(3)	Physiology in Sport and Exercise
EDKP 495	(3)	Scientific Principles of Training

(3) Bioenergetics and the Lifespan







ENTO 352	(3)	Control of Insect Pests
ENTO 446	(3)	Apiculture
MICR 331	(3)	Microbial Ecology
NUTR 512	(3)	Herbs, Foods and Phytochemicals
PLNT 302	(3)	Forage Crops and Pastures
PLNT 312*	(3)	Urban Horticulture
PLNT 315*	(3)	Herbs and Medicinal Plants
PLNT 434	(3)	Weed Biology and Control
PLNT 460	(3)	Plant Ecology
SOIL 326	(3)	Soils in a Changing Environment
SOIL 335*	(3)	Soil Ecology and Management
SOIL 445*	(3)	Agroenvironmental Fertilizer Use

#### 24.6.6.5 Minor in Entrepreneurship



**Note:** Students will no longer be admitted into the Minor in Entrepreneurship as it is being suspended. For additional information on the Minor in Entrepreneurship, consult the *2007-2008 Undergraduate Programs Calendar* available at [www.mcgill.ca/students/courses/calendars](http://www.mcgill.ca/students/courses/calendars).

#### 24.6.6.6 Minor in Environmental Engineering (27 credits)

The Minor program consists of 27 credits in courses that are environment related. By means of a judicious choice of complementary and elective courses, Bioresource Engineering students may obtain this Minor with a minimum of 12 additional credits.

The Environmental Engineering Minor is administered by the Faculty of Engineering, Department of Civil Engineering and Applied Mechanics (see *Faculty of Engineering > Environmental Engineering Minor*).

**Required Courses (6 credits)**

NUTR 337	(3)	Nutrition Through Life
NUTR 450	(3)	Research Methods: Human Nutrition

**Complementary Courses (18 credits)**

18 credits are selected as follows:

3 credits in biochemistry, one of:

ANSC 234	(3)	Biochemistry 2
BIOC 311	(3)	Metabolic Biochemistry

3 credits in physiology, one of:

ANSC 323	(3)	Mammalian Physiology
PHGY 202	(3)	Human Physiology: Body Functions
PHGY 210	(3)	Mammalian Physiology 2

3 credits in nutrition, one of:

ANSC 330	(3)	Fundamentals of Nutrition
NUTR 307	(3)	Human Nutrition

9 credits are selected as follows:

ANSC 551	(3)	Carbohydrate and Lipid Metabolism
ANSC 552	(3)	Protein Metabolism and Nutrition
NUTR 403	(3)	Nutrition in Society
NUTR 420	(3)	Toxicology and Health Risks
NUTR 436	(2)	Nutritional Assessment
NUTR 501	(3)	Nutrition in Developing Countries
NUTR 512	(3)	Herbs, Foods and Phytochemicals
NUTR 551	(3)	Analysis of Nutrition Data
PATH 300	(3)	Human Disease

One of:

MIMM 314	(3)	Immunology
PARA 438	(3)	Immunology

One of:

NUTR 430	(3)	Directed Studies: Dietetics and Nutrition 1
NUTR 431	(3)	Directed Studies: Dietetics and Nutrition 2

## **24.6.7 Post-Baccalaureate Certificate Programs**

The Faculty offers the following 30-credit post-baccalaureate certificate programs.

### **24.6.7.1 Certificate in Ecological Agriculture (30 credits)**

This 30-credit certificate program is very similar to the minor program and is designed to focus on the principles underlying the practice of ecological agriculture. The Certificate may be of special interest to professional agrologists who wish further training, as well as formal recognition that they have completed a coherent program of courses beyond their B.Sc. studies.

Students holding a B.Sc. in agriculture or a related area are eligible to register for this program provided that they are otherwise acceptable for admission to the University. Students who have completed the Minor or Specialization in Ecological Agriculture are not permitted to register for this program.

Academic

PLNT 460	(3)	Plant Ecology
WILD 311	(3)	Ethology

#### **24.6.7.2 Certificate in Entrepreneurship**

The Certificate in Entrepreneurship is no longer being offered. For Information on this program, refer to the *2006-2007 Undergr*

9 credits from the following:

AGRI 510	(3)	Professional Practice
FDSC 515	(3)	Enzyme Thermodynamics/Kinetics
	(3)	Advanced Food Processing



FMTF 021	(2)	Water and Soil Conservation (152-021-MC)
FMTF 024	(1.67)	Farm Building Planning (152-024-MC)
FMTF 027	(1.33)	Precision Farming (152-027-MC)

**Agricultural Economics**

FMTF 002	(1.33)	Introduction to Economics (152-002-MC)
FMTF 025	(2)	Farm Project (152-025-MC)
FMTF 038	(2)	Financial and Managerial Accounting (152-038-MC)
FMTF 039	(1.67)	Agri-Marketing (152-039-MC)
FMTF 042	(2.33)	Budgeting, Finance and Policies (152-042-MC)
FMTF 043	(2.67)	Entrepreneurship 2 (152-043-MC)
FMTF 044	(1.33)	Management of Human Resources (152-044-MC)

**Animal Science**

FMTF 005	(1.33)	Animal Anatomy and Physiology
FMTF 008	(2.33)	Introduction to Animal Science (152-008-MC)

**English**

FMTF 077	()	
FMTF 080	(2)	English Upgrading
FMTF 082	(2.33)	Literary Genres (603-102-04)
FMTF 083	(2.33)	Literary Themes (603-103-04)
FMTF 084	(2)	English for FMT (603-VSA-04)

**Français**

FMTF 075	(2)	Langue française et communication (602-101-03)
FMTF 098	(2)	Français agricole (602-VSG-MC)

**Humanities**

FMTF 085	(2.33)	Humanities 1: Knowledge (345-103-04)
FMTF 086	(2)	Humanities 2: World Views (345-102-03)
FMTF 087	(2)	Humanities 3: Env. & Org. Issues (345-VSH-MC)

**Natural Resource Sciences**

FMTF 009	(2.67)	Soil Fertilization (152-009-MC)
FMTF 040	(1.67)	Nutrient Management Plan 1 (152-040-MC)
FMTF 041	(1.33)	Nutrient Management Plan 2 (152-041-MC)

**Physical Education**

FMTF 090	()	
FMTF 094	(1)	Physical Activity (109-104-02)





5. We strongly encourage incoming students to acquire their driver's permit (both for cars **and** farm equipment) before coming to Macdonald Campus. This is first for safety reasons, given that students work with farm equipment (Soil Preparation) very early on as they arrive at Macdonald. As well, most farmers require that their employees and stagiaires know how to drive and possess the appropriate driver's license.

#### **24.8.5 Registration – FMT**

Students in the Farm Management and Technology Program must register online using Minerva at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva) for each semester at McGill.

**Note:** The University reserves the right to mak

## **24.8.7 Fees and Expenses – FMT**

### **24.8.7.1 Fees**

Tuition fees for all full-time students who are eligible for the Farm Management and Technology Program are paid by the *Ministère de l'Agriculture, des Pêcheries et de l'Alimentation du Québec*





### Adjunct Professors

Clément Vigneault

Ning Wang

### Faculty Lecturers

Alice Cherestes

Marcia Knutt

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## 24.11 Department of Food Science and Agricultural Chemistry

### 24.11.1 Location

Macdonald Stewart Building – Room MS1-034  
McGill University, Macdonald Campus  
21,111 Lakeshore Road  
Sainte-Anne-de-Bellevue, Quebec H9X 3V9  
Canada

Telephone: 514-398-7898

Fax: 514-398-7977

Email: [foodscience@mcgill.ca](mailto:foodscience@mcgill.ca)

W

## Assistant Professors

Martin Chénier

Salwa Karboune

---

## 24.12 Department of Natural Resource Sciences

### 24.12.1 Location

Macdonald Stewart Building – Room MS3-040  
McGill Univ Uni

**Associate Professors**

Christopher Buddle

Benoît Côté

Mark A. Curtis

Brian T. Driscoll

Gary B. Dunphy

John Henning

Murray Humphries

David J. Lewis

Donald F. Niven

Manfred E. Rau

Ian Strachan

Paul Thomassin

Joann Whalen

Terry A. Wheeler

Lyle Whyte

**Assistant Professors**

Elena Bennett (*joint appoint. with McGill School of Environment*)

Gordon Hickey

Anwar Naseem

**Curators**

Stephanie Boucher

Christina Idziak

**Associate Members**

Colin A. Chapman (*Anthropology*)

Lauren J. Chapman (*Biology*)

David Green (*Redpath Museum*)

William D. Marshall (*Dept. of Food Science and Agricultural Chemistry*)

Donald L. Smith (*Dept. of Plant Science*)

Marilyn Scott (*Institute of Parasitology*)

**Adjunct Professors**

Denis Angers

Suzanne Beauchemin

Dominique Berteaux

Guy Boivin

Michel Bouchard

Kimberly Fernie

Charles W. Greer

Daniel Houle

Carlos Miguez





## Professors

Alan K. Watson

## Associate Professors

Jacqueline C. Bede

Sylvie de Blois

Danielle J. Donnelly

Marc Fortin

Suha Jabaji

Ajjamada C. Kushalappa

Philippe Seguin

Katrine A. Stewart

Martina V. Stromvik

Marcia J. Waterway

## Assistant Professors

Jean-Benoit Charron

Jaswinder Singh

## Faculty Lecturers

Caroline Begg

Serge Lussier

David Wees

## Associate Members

Gregory Brown (*Department of Biology*)

Timothy A. Johns (*School of Dietetics and Human Nutrition*)

## Adjunct Professors

Marc Fortin

Sylvie Jenni

Shahrokh Khanizadeh

Jean-François Laliberté

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## 24.14 School of Dietetics and Human Nutrition

### 24.14.1 Location

Macdonald Stewart Building – Room MS2-039  
McGill University, Macdonald Campus  
21,111 Lakeshore Road  
Sainte-Anne-de-Bellevue, Quebec H9X 3V9

Website: [www.mcgill.ca/dietetics](http://www.mcgill.ca/dietetics)

## 24.14.2 About the School of Dietetics and Human Nutrition

Health and well-being of individuals in relation to food choices and physiological status prevails as the unifying theme of the programs in the School of Dietetics and Human Nutrition. The availability of food, normal metabolism and clinical nutrition, community nutrition at the local and international level, the evaluation of nutritional products and their use in nutrition, and the communication of information about food and health form the core of academic programs.

## 24.14.3 School of Dietetics and Human Nutrition Faculty

### Director

Kristine G. Koski

### Professor Emerita

Harriet V. Kuhnlein

### Professors

Luis B. Agellon

Timothy A. Johns

### Associate Professors

Grace Egeland (*Canada Research Chair*)

Katherine Gray-Donald

Kristine G. Koski

Stan Kubow

Louise Thibault

Hope Weiler (*Canada Research Chair*)

Linda Wykes (*William Dawson Scholar*)

Grace S. Marquis (*Canada Research Chair*)

### Lecturers

Peter Bender (PT)

Lynda Fraser (PT)

Mary Hendrickson

Linda Jacobs Starkey

Maureen Rose

Joane Routhier

Sandy Phillips

Hugues Plourde

Heidi Ritter

### Adjunct Professors

Mary l'Abbé

Kevin A. Cockell

### Cross-A

**Cross-Appointed Staff**

Medicine: Louis Beaumier, Franco Carli, Stephanie Chevalier, Réjeanne Gougeon, L. John Hoffer

## Associate Members

Brian Ward

## Adjunct Professors

Sean Forrester

David Marcogliese

Terence Spithill

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## 24.16 Instructional Staff

Adamowski, Jan; B.Eng.(RMC), M.Phil.(Camb./MIT), M.B.A.(Warsaw/HEC-Paris/London Business School/Norwegian School of Economics and Business Administration), Ph.D.(Warsaw); Assistant Professor of Bioresource Engineering

Agellon, Luis B.; B.Sc., Ph.D.(McM.); Professor of Human Nutrition (*Canada Research Chair*)

Alli, Inteaz; B.Sc.(Guyana), M.Sc., Ph.D.(McG.); Professor of Food Science and Agricultural Chemistry

Barrington, Suzelle; B.Sc.(Agr.Eng.), Ph.D.(McG.); Professor of Bioresource Engineering

Bede, Jacqueline; B.Sc.(Calg.), M.Sc., Ph.D.(Tor.); Associate Professor of Plant Science

Beech, Robin N.; B.Sc.(Nott.), Ph.D.(Edin.); Associate Professor of Parasitology

Begg, Caroline; B.Sc.(Agr.)(McG.), M.Sc.(Sask.), Ph.D.(McG.); Faculty Lecturer, Department of Plant Science

Bennett, Elena; B.A.(Oberlin), M.Sc., Ph.D.(Wis.); Assistant Professor of Ecosystem Ecology and McGill School of Environment

Bird, David M.; B.Sc.(Guelph), M.Sc., Ph.D.(McG.); Fellow A.O.U., Professor of Wildlife Biology and Director, Avian Science and Conservation Centre

Bordignon, Vilceu; Ag.Tec.(EAPC), M.Sc., D.V.M.(Universidade da Região da Campanha (Brazil)), Ph.D.(Montr.); Associate Professor of Animal Science

Brown, Peter G.; B.A.(Haver.), M.A., Ph.D.(Col.); Professor of Natural Resource Sciences (*joint appoint. with Geography and McGill School of Environment*)

Buddle, Christopher; B.Sc.(Guelph), Ph.D.(Alta.); Associate Professor of Forest Insect Ecology

Charron, Jean-Benoit; B.Sc.(Montr.), M.Sc., Ph.D.(UQAM); Assistant Professor of Plant Science

Chenier, Martin R.; B.Sc., M.Sc.(Laval), Ph.D.(McG.); Assistant Professor of Food Safety

Cherestes, Alice; B.A., M.A., Ph.D.(CUNY); Faculty Lecturer, Faculty of Agricultural and Environmental Sciences

Clark, Grant; B.Sc.(Agr.Eng.)(Alta.), Ph.D.(McG.); Assistant Professor of Bioresource Engineering

Côté, Benoît; B.Sc., Ph.D.(Laval); Associate Professor of Woodland Resources, Chair of Department of Natural Resource Sciences

Cue, Roger I.; B.Sc.(Newcastle, UK), Ph.D.(Edin.); Associate Professor of Animal Science

Geary, Timothy G.; B.Sc.(Notre Dame), Ph.D.(Mich.); Professor of Parasitology, Director, Institute of Parasitology, (*Canada Research Chair in Parasite Biotechnology*)

Georges, Elias; B.Sc., Ph.D.(McG.); Associate Professor of Parasitology

Raghavan, G.S. V

coursework. In addition to the Arts Building, the Faculty of Arts is housed in 24 other buildings – including historic houses and former apartment buildings – across campus.

The Faculty of Arts, the faculty that lies both literally and figuratively at the heart of the University, has enjoyed steady growth since it was established in 1843 and remains by far the largest faculty at McGill with over 280 tenured or tenure-track scholars, over 6,000 undergraduates, over 1,000 graduate students and several hundred courses. Despite the numbers, the majority of classes in Arts are smaller than those offered by any other large research university in Canada. The Faculty also maintains bilateral exchange programs with many universities around the world and encourages students to spend a term or two studying abroad, either through an e

McGill Arts graduates are valued for their ability to think critically and communicate effectively, often in more than one language. Their skills in research and analysis are applicable in a wide spectrum of professional fields, such as law, education, business, government, and public service.

The Faculty of Arts offers programs leading to the degrees of B.A. and B.S.W. Admission is selective; fulfilment of the minimum requirements does not guarantee acceptance. Admission criteria are described in the *Undergraduate Admissions Guide*, found at [www.mcgill.ca/applying/undergrad](http://www.mcgill.ca/applying/undergrad).

The Faculty of Arts also offers a Diploma in Environment under the McGill School of Environment, a 30-credit program available to holders of a B.Sc. or B.A. or equivalent. All credits for the Diploma must be completed at McGill. For more information, see *McGill School of Environment > Diploma in Environment*.

Finally, the Faculties of Arts and of Science jointly offer programs leading to the degree of the Bachelor of Arts and Science (B.A. & Sc.), which is described under the *Bachelor of Arts and Science* section of this publication.

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## 25.4 About the Faculty of Arts (Undergraduate)

The McGill campus is an oasis in the heart of the business, cultural, and entertainment centres of downtown Montreal. At the centre of the downtown campus is the Arts Building, the oldest building on campus and the University's flagship. It houses classrooms, administrative offices, and Moyse Hall, an eleg 0 0 1 550.017i





### **25.6.3 Time and Credit Limit for Completion of Degree**

If you need 96 or fewer credits to complete your degree requirements, you are expected to complete your degree in no more than eight terms after your initial registration for the degree. If you are a student in the Freshman Program, you become subject to these regulations one year after your initial registration. If you need or want to exceed this time limit, you must apply to the Associate Dean (Student Affairs) for permission to continue your studies.

If you want to exceed the minimum credit requirement for your degree, you must also seek permission of the Associate Dean (Student Affairs) to continue your studies.

Permission for exceeding the time and/or credit limit will normally be granted only for valid academic reasons, such as a change of program (subject to departmental approval) and part-time status. Elective credits over the credit limit will be fl

ANTH 210	(3)	Archaeology of Early Cities
ANTH 212	(3)	Anthropology of Development
ANTH 214	(3)	Violence, Warfare, Culture
ANTH 222	(3)	Legal Anthropology
ANTH 227	(3)	Medical Anthropology
CANS 200	(3)	Introduction to the Study of Canada
CANS 202	(3)	Canadian Cultures: Context and Issues
ECON 199	(3)	FYS: Aspects of Globalization
ECON 205	(3)	An Introduction to Political Economy
ECON 208	(3)	Microeconomic Analysis and Applications
ECON 209	(3)	Macroeconomic Analysis and Applications
ECON 219	(3)	Current Economic Problems: Topics
ECON 223	(3)	Political Economy of Trade Policy
ECON 225	(3)	Economics of the Environment
GEOG 199	(3)	FYS: Geo-Environments
GEOG 200	(3)	Geographical Perspectives: World Environmental Problems
GEOG 201	(3)	Introductory Geo-Information Science
GEOG 205	(3)	Global Change: Past, Present and Future
GEOG 210	(3)	Global Places and Peoples
GEOG 216	(3)	Geography of the World Economy
GEOG 217	(3)	Cities in the Modern World
GEOG 221	(3)	Environment and Health
	(3)	FYS: Topics in History



**Approved Courses - Humanites**

Note: Some of the courses listed belo

## Society and Community in K

JWST 199	(3)	FYS: Images - Jewish Identities
JWST 201	(3)	Jewish Law
JWST 206	(3)	Introduction to Yiddish Literature
JWST 211	(3)	Jewish Studies 1: Biblical Period
JWST 217	(3)	Jewish Studies 3: 1000 - 2000
JWST 225	(3)	Literature and Society
JWST 240	(3)	The Holocaust
JWST 252	(3)	Interdisciplinary Lectures
JWST 254	(3)	The Jewish Holy Days
JWST 261	(3)	History of Jewish Philosophy & Thought
MUAR 201	(3)	Basic Materials: Western Music
MUAR 202	(3)	Basic Materials: Western Music 2
MUAR 211	(3)	The Art of Listening
MUAR 384	(3)	Romanticism and the Piano
MUAR 389	(3)	The Symphony and Concerto
MUAR 392	(3)	Popular Music after 1945
MUAR 393	(3)	Introduction to Jazz
MUHL 184	(3)	History Survey Before 1750
MUHL 185	(3)	History Survey After 1750
MUHL 220	(3)	Women in Music
MUTH 110	(3)	Melody and Counterpoint
MUTH 111	(3)	Elementary Harmony and Analysis
PHIL 198	(3)	FYS: Knowledge and Ideas in Early Modern Philosophy
PHIL 199	(3)	FYS: Minds, Brain, and Machines
PHIL 200	(3)	Introduction to Philosophy 1
PHIL 201	(3)	Introduction to Philosophy 2
PHIL 210	(3)	Introduction to Deductive Logic 1
PHIL 220	(3)	Introduction to History and Philosophy of Science 1
PHIL 221	(3)	Introduction to History and Philosophy of Science 2
PHIL 230	(3)	Introduction to Moral Philosophy 1
PHIL 237	(3)	Contemporary Moral Issues
PHIL 240	(3)	Political Philosophy 1
PHIL 242	(3)	Introduction to Feminist Theory
RELG 201	(3)	Religions of the Ancient Near East
RELG 202	(3)	Religion of Ancient Israel
RELG 203	(3)	Bible and Western Culture
RELG 204	(3)	Judaism, Christianity and Islam
RELG 207	(3)	The Study of World Religions 1
RELG 210	(3)	Jesus of Nazareth
RELG 252	(3)	Hinduism and Buddhism
RELG 253	(3)	Religions of East Asia
RELG 256	(3)	Women in Judaism and Islam
RELG 270	(3)	Religious Ethics and the Environment

RELG 271	(3)	Sexual Ethics
RUSS 199	(3)	FYS: Russia - Past and Present
RUSS 217	(3)	Russia's Eternal Questions
RUSS 218	(3)	Russian Literature in Revolution
RUSS 219	(3)	Russian Literature in Recovery
RUSS 223	(3)	Russian 19th Century: Literary Giants 1
RUSS 224	(3)	From War to Revolution
WMST 200	(3)	Introduction to Women's Studies

**Approved Courses - Languages**

Note: No more than one language should be tak



FREN 245

(3)

Grammaire avancée

FREN 252

(3)

Littérature québécoise

FRSL 101D1

(3)

Beginners' French

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ISLA 552D2	(3)	Intermediate Urdu
ITAL 205D1	(3)	Italian for Beginners'
ITAL 205D2	(3)	Italian for Beginners'
ITAL 206	(6)	Beginners' Italian Intensive
ITAL 210D1	(3)	Elementary Italian
ITAL 210D2	(3)	Elementary Italian
ITAL 215D1	(3)	Intermediate Italian
ITAL 215D2	(3)	Intermediate Italian
ITAL 216	(6)	Intermediate Italian Intensive
JWST 200	(12)	Hebrew Language (Intensive)
JWST 220D1	(3)	Introductory Hebrew
JWST 220D2	(3)	Introductory Hebrew
JWST 280D1	(3)	Introductory Yiddish
JWST 280D2	(3)	Introductory Yiddish
JWST 320D1	(3)	Intermediate Hebrew
JWST 320D2	(3)	Intermediate Hebrew
JWST 340D1	(3)	Advanced Hebrew
JWST 340D2	(3)	Advanced Hebrew
JWST 367	(3)	Studies in Hebrew Language and Literature
JWST 368	(3)	Studies in Hebrew Language and Literature
JWST 369	(3)	Studies in Hebrew Language and Literature
JWST 370	(3)	Studies in Hebrew Language and Literature
RELG 257D1	(3)	Introductory Sanskrit
RELG 257D2	(3)	Introductory Sanskrit
RELG 264	(3)	Introductory Tibetan 1
RELG 265	(3)	Introductory Tibetan 2
RELG 280D1	(3)	Elementary New Testament Greek
RELG 280D2	(3)	Elementary New Testament Greek
RUSS 210	(3)	Elementary Russian Language 1
RUSS 211	(3)	Elementary Russian Language 2
RUSS 215	(6)	Elementary Russian Language Intensive 1

### Approved Courses - Mathematics and Sciences

Note: Some of the courses listed below are not suitable for first term as they require university-level prerequisites. Please check the course entries for further information about appropriate background before registering.

Note: GEOG 205 is listed as a Mathematics and Sciences course as well as a Social Sciences course.

ATOC 181	(3)	Introduction to Atmospheric Science
ATOC 182	(3)	Introduction to Oceanic Sciences
ATOC 183	(3)	Climate and Climate Change
ATOC 184	(3)	Science of Storms
ATOC 185	(3)	Natural Disasters
BIOL 111	(3)	Principles: Organismal Biology
BIOL 112	(3)	Cell and Molecular Biology

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BIOL 115	(3)	Essential Biology
BIOL 200	(3)	Molecular Biology
BIOL 201	(3)	Cell Biology and Metabolism
BIOL 202	(3)	Basic Genetics
BIOL 205	(3)	Biology of Organisms
BIOL 206	(3)	Methods in Biology of Organisms
BIOL 240	(3)	Monteregian Flora
CHEM 110	(4)	General Chemistry 1
CHEM 115	(4)	Accelerated General Chemistry: Giants in Science
CHEM 120	(4)	General Chemistry 2
CHEM 180	(3)	World of Chemistry: Environment
CHEM 181	(3)	World of Chemistry: Food
CHEM 182	(3)	World of Chemistry: Technology
CHEM 183	(3)	World of Chemistry: Drugs
CHEM 199	(3)	FYS: Why Chemistry?
CHEM 203	(3)	Survey of Physical Chemistry
CHEM 204	(3)	Physical Chemistry/Biological Sciences 1
CHEM 212	(4)	Introductory Organic Chemistry 1
CHEM 214	(3)	Physical Chemistry/Biological Sciences 2
CHEM 217	(1)	General Analytical Chemistry Lab 1
CHEM 219	(3)	Introduction to Atmospheric Chemistry
CHEM 222	(4)	Introductory Organic Chemistry 2
CHEM 223	(2)	Introductory Physical Chemistry 1
CHEM 243	(2)	Introductory Physical Chemistry 2
CHEM 253	(1)	Introductory Physical Chemistry 1 Laboratory
CHEM 263	(1)	Introductory Physical Chemistry 2 Laboratory
CHEM 281	(3)	Inorganic Chemistry 1
CHEM 287	(2)	Introductory Analytical Chemistry
CHEM 297	(1)	Introductory Analytical Chemistry Laboratory
COMP 102	(3)	Computers and Computing
COMP 199	(3)	FYS: Excursions in Computer Science
COMP 202	(3)	Introduction to Computing 1
COMP 203	(3)	Introduction to Computing 2
COMP 206	(3)	Introduction to Software Systems
COMP 230	(3)	Logic and Computability
COMP 250	(3)	Introduction to Computer Science
COMP 280	(3)	History and Philosophy of Computing
EPSC 180	(3)	The Terrestrial Planets
EPSC 181	(3)	Environmental Geology
EPSC 182	(3)	Astrobiology
EPSC 185	(3)	Natural Disasters
EPSC 199	(3)	FYS: Earth & Planetary Exploration
EPSC 201	(3)	Understanding Planet Earth

EPSC 233	(3)	Earth and Life History
EPSC 334	(3)	Invertebrate Paleontology
ESYS 104	(3)	The Earth System
GEOG 199	(3)	FYS: Geo-Environments
GEOG 201	(3)	Introductory Geo-Information Science
GEOG 205	(3)	Global Change: Past, Present and Future
GEOG 221	(3)	Environment and Health
MATH 112	(3)	Fundamentals of Mathematics Linear

ARLE 104 (6) Global Modern Worlds

### Remaining Credits (6 credits)

Students select 6 additional credits, preferably from the areas of language or of mathematics and science to complete the 30 credits for the Freshman year. For appropriate courses, students may consult the list of "Approved Courses" for the Freshman Program - General option.

#### 25.6.4.1.3 Bachelor of Arts (B.A.) - Freshman Program - French (30 credits)

The Bachelor of Arts Freshman Program is designed to ensure that students gain a broad foundation for the three-year degree program. It is comprised of 24-30 credits in one of three program options. In Option 3 "En français" or French, students choose up to 18 credits from a variety of courses conducted in French. These credits may be comprised wholly of language courses, wholly of substantive content courses conducted in French, or a combination of the two.

### Core Requirement (18 credits)

Based on their proficiency in French, students select 18 credits from the courses below in French Language and Literature and French as a Second Language.

#### French Language and Literature Courses (FREN)

FREN 199	(3)	FYS: Littérature française
FREN 201	(3)	Composition 1
FREN 203	(3)	Composition 2
FREN 231	(3)	Linguistique française
FREN 239	(3)	Stylistique comparée
FREN 245	(3)	Grammaire avancée

#### French as a Second Language (FRSL)

Depending on their level of proficiency, students may include a maximum of 12 credits of intensive French language courses. An intensive language course is a 6 credit term course. Students at the introductory level must take at least 6 credits in French in their Freshman year but may be permitted to complete the remaining core requirement credits in year U1.

FRSL 101D1	(3)	Beginners' French
FRSL 101D2	(3)	Beginners' French
FRSL 105	(6)	Intensive Beginners' French
FRSL 206	(3)	Elementary French
FRSL 207D1	(3)	Elementary French 01
FRSL 207D2	(3)	Elementary French 01
FRSL 208	(6)	Intensive Elementary French
FRSL 211D1	(3)	Oral and Written French 1
FRSL 211D2	(3)	Oral and Written French 1
FRSL 212	(3)	Oral and Written French 1
FRSL 215	(6)	Oral and Written French 1 - Intensive
FRSL 216	(3)	Découvrons Montréal en français
FRSL 302	(3)	Listening Comprehension and Oral Expression 1
FRSL 303	(3)	Listening Comprehension and Oral Expression 2
FRSL 321D1	(3)	Oral and Written French 2
FRSL 321D2	(3)	Oral and Written French 2
FRSL 322	(3)	Oral and Written French 2
FRSL 325	(6)	Oral and Written French 2 - Intensive
FRSL 326	(3)	Découvrons le Québec en français
FRSL 332	(3)	Intermediate French: Grammar 01

FRSL 333	(3)	Intermediate French: Grammar 02
FRSL 407	(3)	Compréhension et expression orales
FRSL 408	(3)	Français oral: Textes et expressions
FRSL 431D1	(3)	Français fonctionnel avancé
FRSL 431D2	(3)	Français fonctionnel avancé
FRSL 432	(3)	Français fonctionnel
FRSL 445	(3)	Français fonctionnel, écrit 1
FRSL 446	(3)	Français fonctionnel, écrit 2
FRSL 449	(3)	Le Français des médias

### Substantive Content Courses Taught in French

Some subject area courses or "substantive content courses" are taught in French. Some courses may be offered in French and English in alternate years. POLI 226 listed below is such a course. When taught in French, such courses may be counted toward this program.

POLI 226	(3)	La vie politique québécoise
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### Remaining Credits (12 credits)

Students select the remaining credits (normally 12) for their Freshman year from the list of "Approved Courses" for Arts Freshman students. This list is found with requirements for the Freshman Program - General option.

#### 25.6.4.2 Departmental Programs

If you need 96 or fewer credits to complete your degree requirements you are required to have an approved program (Multi-track, Honours, Faculty), and to select your courses in each term with a view to timely completion of your degree and program requirements. No course may fulfil the requirements for more than one program or Concentration requirement. You must complete one of the following program streams:

##### 25.6.4.2.1 Bachelor of Arts Degree: Multi-Track System

To recognize the diversity of student backgrounds and interests and the multiple routes to understanding provided by a modern university, the Faculty of Arts offers a 90-credit multi-track system that includes a Major Concentration complemented by at least a Minor Concentration and that may be completed in one of the following ways:

#### Options

- A Major Concentration (36) + Minor Concentration (18) + 36 credits of electives
- B Major Concentration (36) + Major Concentration (36) + 18 credits of electives
- C Major Concentration (36) + Minor Concentration (18) + Minor Concentration (18) + 18 credits of electives

#### Regulations

- Within option A and option B, all Concentrations must be in different academic units. (if you are completing a second degree in the Faculty of Arts, this regulation is waived.)
- Within option C, one of the Minor Concentrations may be in the same unit as the Major Concentration. If you pursue a same-unit Minor Concentration, you will substitute additional complementary (non-required) courses to a total of 18 credits for any courses completed as a part of your Major Concentration within that unit.
- You will include within the 36 or 18 credits of your Major or Minor Concentration any university-level (200 or above) prerequisites to required courses within their Concentrations.

#### Definitions

- *Units*: academic departments or administrative equivalents.
- *Programs*: lists of required and complementary courses (including prerequisites for required courses) prepared and maintained by units.
- *Major Concentration*: a program of 36 credits taken from a unit's course offerings.
- *Minor Concentration*: a program of 18 credits taken from a unit's course offerings. Expandable Minor Concentrations are those which can, on the completion of 18 additional approved credits, be expanded into a Major Concentration within the appropriate unit.

#### **25.6.4.2.2 Bachelor of Arts Degree: Honours Program**

Honours programs demand a high degree of specialisation, and require you to satisfy specific departmental and Faculty Honours requirements while maintaining a good academic standing. They are designed to prepare you for graduate study.

##### **Regulations**

- To be registered in an Honours program after the first year, you must have attained a GPA and CGPA of at least 3.00 in the previous year, unless you have special permission from the department and the Associate Dean (Student Affairs).
- To complete an Honours degree, you must achieve a minimum CGPA of 3.00. The program GPA (the GPA of all required and complementary courses taken at McGill which constitute the Honours program) must be a minimum of 3.00, although academic units may set higher requirements for their program GPA.
- In addition to the completion of the Honours requirements, you must complete at least a Minor Concentration in an academic unit other than the one in which the Honours requirements are satisfied. (If you complete a second de





- If you combine any two or more of the programs listed above, you may not exceed 40 credits outside the Faculties of Arts and of Science.
- Any courses taught at McGill University may be used towards the maximum allowed with the following exceptions:
  - Continuing Education: Continuing Education courses with a teaching unit that starts with C are not for credit (except for CHEM).
  - Distance Education: Refer to [section 25.6.5.6: Policy on Distance Education Courses](#) in this publication.
- For the purpose of this policy, courses taught in other faculties and specifically listed in the Arts or Science section of this publication are considered as courses taught in the Faculties of Arts and of Science.
- For the purpose of this policy, all courses taken to fulfil the requirements for an approved field semester will be considered as courses in Arts or Science.
- The maximum number of credits allowed will be strictly enforced.

#### **25.6.5.4 Inter-University Transfer Credit Policy for Courses Taken Outside the Faculties of Arts and of Science**

If you transfer from a faculty outside the Faculties of Arts and of Science at another institution, you may transfer up to a maximum of 30 credits under the following conditions:

- Only courses passed with a grade of C or better will be transferred. Grades of C-, P or S are not acceptable. The letter grades applied by your former home institution take precedence over the numerical grades if provided.
- Decisions on whether a course is outside the Faculties of Arts and of Science will be based on the original faculty in which your course was taken.
- Refer to [section 25.6.5.6: Policy on Distance Education Courses](#).
- Transfer credits for Continuing Education courses will be granted only if the courses can be used towards a degree program in a faculty other than Continuing Education at your former home university.
- You will be allowed to take courses outside the Faculties of Arts and of Science at McGill only if you have transferred fewer than 12 credits, and then only up to a maximum of 12 credits.
- If you register for a Faculty of Arts program that requires additional credits outside the Faculties of Arts and of Science, you will be allowed to take only the number of credits outside the Faculties of Arts and of Science required to complete your program. These programs are listed under [section 25.6.5.3: Courses Outside the Faculties of Arts and of Science](#).

#### **25.6.5.5 Inter-Faculty Transfer Credit Policy for Courses Taken Outside the Faculties of Arts and of Science**

You will normally have counted for credit (for grades of D or better) and/or GPA (regardless of the grade) all courses in Arts and Science, and up to a maximum of 30 credits of courses outside of Arts and of Science.

- You will be allowed to take courses outside the Faculties of Arts and of Science at McGill only if you have transferred fewer than 12 credits, and then only up to a maximum of 12 credits.
- If you register for a Faculty of Arts program that requires additional credits outside the Faculties of Arts and of Science, you will be allowed to take only the number of credits outside the Faculties of Arts and of Science required to complete your program. These programs are listed under [section 25.6.5.3: Courses Outside the Faculties of Arts and of Science](#).

#### **25.6.5.6 Policy on Distance Education Courses**

A maximum of 6 credits of elective courses taught through distance education may be used towards your degree at McGill. Courses taught through distance education from institutions other than McGill will be approved as transfer credits under the following conditions:

- the course is given by a government-accredited, degree-granting institution acceptable to McGill;
- the course counts for credit towards degrees granted at the institution giving the course;
- prior approval for the course is obtained from Arts OASIS.

The combined total of regular course credits and distance education course credits may not exceed the permitted maximum number of credits per term according to Faculty regulations. Courses taught through distance education may not be used to complete program requirements, except on an individual basis when serious, documented circumstances warrant it. In such cases, prior approval must be obtained from your departmental academic adviser and the Associate Dean (Student Affairs).

#### **25.6.5.7 Internship Courses**

The Faculty of Arts offers internship courses for credit. For more information, refer to [section 25.10.2: Faculty of Arts Internship Program](#).

#### **25.6.5.8 Courses in English as a Second Language (ESL)**

Up to a maximum of 12 credits of ESL courses, including academic writing courses for non-anglophones, are open to you if your primary language is not English and you have studied for fewer than five years in an English-language secondary institution.

Placement tests are required for all courses offered through the English and French Language Centre. Soon after the tests are evaluated, you will be issued a departmental approval for course registration.

#### **25.6.5.9 First-Year Seminar Courses**

Registration for First-Year Seminars is limited to students in their first year of study at McGill, i.e., newly admitted students in U0 or U1. These courses are designed to provide a closer interaction with professors and better working relations with peers than is available in large introductory courses. These seminars endeavour to teach the latest scholarly developments and expose participants to advanced research methods. Registration is on a first-come, first-served basis. The maximum number of students in any seminar is 25, although some are limited to even fewer than that.

You may take only one First-Year Seminar. If you register for more than one, you will be obliged to withdraw from all but one of them. For a complete listing, see [section 25.10.1: First-Year Seminars](#).

The First-Year Seminars offered by the Faculty of Science are also open to Arts students. For a complete listing, see *Faculty of Science > Registration for First-Year Seminars* in this publication.

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## **25.7 Advising**

If you need 96 or fewer credits to complete your degree requirements, you must consult an academic adviser in your proposed department of study to obtain advice and approval of your course selection. To facilitate program planning, you must present your transcript(s) and letter of admission. For a detailed description of advising and registration procedures, you should refer to *Welcome to McGill*, which you receive from Enrolment Services upon your acceptance, as well as refer to the Arts OASIS website, [www.mcgill.ca/oasis](http://www.mcgill.ca/oasis) and departmental websites.

If you need 97-120 credits to complete your degree requirements, you will normally be registered in a Freshman Program until you complete your first year. You must consult a faculty adviser in Arts OASIS to obtain advice and approval of your course selection. For a detailed description of advising and registration

The Faculty of Arts at McGill is especially proud of its major and minor concentration programs known as the multi-track system. The multi-track system encourages flexibility, independence, and knowledge in a diversity of disciplines. It provides students with an unprecedented opportunity to tailor a unique academic profile suited to their specific interests and career ambitions. Students also hav



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**International Development Studies**, *section 25.10.30.6: Bachelor of Arts (B.A.) - Honours International Development Studies (57 credits)*

**Italian Studies (Literature)**, *section 25.10.32.6: Bachelor of Arts (B.A.) - Honours Italian Studies (54 credits)*

**Jewish Studies**, *section 25.10.33.7: Bachelor of Arts (B.A.) - Honours Jewish Studies (60 credits)*

**Langue et littérature françaises - Études et pratiques littéraires**, *section 25.10.22.12: Bachelor of Arts (B.A.) - Spécialisation en langue et littérature françaises - Études et pratiques littéraires (54 crédits)*

**Langue et littérature françaises - Traduction**, *section 25.10.22.13: Bachelor of Arts (B.A.) - Spécialisation en langue et littérature françaises - Traduction (54 crédits)*

**Latin American and Caribbean Studies - Area**, *section 25.10.34.6: Bachelor of Arts (B.A.) - Honours Latin American and Caribbean Studies - Area (60 credits)*

**Latin American and Caribbean Studies - Thematic**, *section 25.10.34.7: Bachelor of Arts (B.A.) - Honours Latin American and Caribbean Studies - Thematic (60 credits)*

**Linguistics**, *section 25.10.35.8: Bachelor of Arts (B.A.) - Honours Linguistics (60 credits)*

**Mathematics**

- Geography**, *section 25.10.23.11: Bachelor of Arts (B.A.) - Joint Honours Component Geography (36 credits)*
- German Studies**, *section 25.10.24.13: Bachelor of Arts (B.A.) - Joint Honours Component German Studies (36 credits)*
- Hispanic Studies**, *section 25.10.25.10: Bachelor of Arts (B.A.) - Joint Honours Component Hispanic Studies (36 credits)*
- History**, *section 25.10.26.8: Bachelor of Arts (B.A.) - Joint Honours Component History (36 credits)*
- International Development Studies**, *section 25.10.30.7: Bachelor of Arts (B.A.) - Joint Honours Component International Development Studies (36 credits)*
- Italian Studies**, *section 25.10.32.7: Bachelor of Arts (B.A.) - Joint Honours Component Italian Studies (36 credits)*
- Jewish Studies**, *section 25.10.33.8: Bachelor of Arts (B.A.) - Joint Honours Component Jewish Studies (36 credits)*
- Langue et littérature françaises - Études et pratiques littéraires**, *section 25.10.22.14: Bachelor of Arts (B.A.) - Double Spécialisation en langue et littérature françaises - Études et pratiques littéraires (36 crédits)*
- Langue et littérature françaises - Traduction**, *section 25.10.22.15: Bachelor of Arts (B.A.) - Double Spécialisation en langue et littérature françaises - Traduction (36 crédits)*
- Linguistics**, *section 25.10.35.9: Bachelor of Arts (B.A.) - Joint Honours Component Linguistics (36 credits)*
- Mathematics**, *section 25.10.36.7: Bachelor of Arts (B.A.) - Joint Honours Component Mathematics (36 credits)*
- Middle East Studies**, *section 25.10.37.8: Bachelor of Arts (B.A.) - Joint Honours Component Middle East Studies (36 credits)*
- Philosophy**, *section 25.10.40.7: Bachelor of Arts (B.A.) - Joint Honours Component Philosophy (36 credits)*
- Philosophy and Western Religions**, *section 25.10.41.7: Bachelor of Arts (B.A.) - Joint Honours Component Philosophy and Western Religions (36 credits)*
- Political Science**, *section 25.10.42.16: Bachelor of Arts (B.A.) - Joint Honours Component Political Science (36 credits)*
- Psychology**, *section 25.10.43.8: Bachelor of Arts (B.A.) - Joint Honours Component Psychology (36 credits)*
- Religious Studies - Asian Religions**, *section 25.10.45.11: Bachelor of Arts (B.A.) - Joint Honours Component Religious Studies - Asian Religions (36 credits)*
- Religious Studies - Western Religions**, *section 25.10.45.12: Bachelor of Arts (B.A.) - Joint Honours Component Religious Studies - Western Religions (36 credits)*
- Russian**, *section 25.10.46.8: Bachelor of Arts (B.A.) - Joint Honours Component Russian (36 credits)*
- Sociology**, *section 25.10.51.8: Bachelor of Arts (B.A.) - Joint Honours Component Sociology (36 credits)*
- Women's Studies**, *section 25.10.52.7: Bachelor of Arts (B.A.) - Joint Honours Component Women's Studies (36 credits)*

## 25.9.7 Minor Concentrations

- African Studies**, *section 25.10.4.4: Bachelor of Arts (B.A.) - Minor Concentration African Studies (18 credits)*
- Anthropology**, *section 25.10.5.6: Bachelor of Arts (B.A.) - Minor Concentration Anthropology (18 credits)*
- Art History**, *section 25.10.6.5: Bachelor of Arts (B.A.) - Minor Concentration Art History (18 credits)*
- Behavioural Science** - see Psychology, *section 25.10.43.5: Bachelor of Arts (B.A.) - Minor Concentration Behavioural Science (18 credits)*
- Canadian Ethnic and Racial Studies**, *section 25.10.7.4: Bachelor of Arts (B.A.) - Minor Concentration Canadian Ethnic and Racial Studies (18 credits)*
- Canadian Studies**, *section 25.10.8.4: Bachelor of Arts (B.A.) - Minor Concentration Canadian Studies (18 credits)*
- Catholic Studies**, *section 25.10.9.4: Bachelor of Arts (B.A.) - Minor Concentration Catholic Studies (18 credits)*
- Classics**, *section 25.10.10.4: Bachelor of Arts (B.A.) - Minor Concentration Classics (18 credits)*
- Communication Studies**, *section 25.10.6.9: Bachelor of Arts (B.A.) - Minor Concentration Communication Studies (18 credits)*
- Comparative Politics** - see Political Science, *section 25.10.42.8: Bachelor of Arts (B.A.) - Minor Concentration Comparative Politics (18 credits)*
- Computer Science**, *section 25.10.12.3: Bachelor of Arts (B.A.) - Minor Concentration Computer Science (18 credits)*
- Computer Science, Supplementary**, *section 25.10.12.4: Bachelor of Arts (B.A.) - Supplementary Minor Concentration in Computer Science (18 credits)*
- East Asian Language and Literature**, *section 25.10.13.4: Bachelor of Arts (B.A.) - Minor Concentration East Asian Language and Literature (18 credits)*
- East Asian Cultural Studies**, *section 25.10.13.5: Bachelor of Arts (B.A.) - Minor Concentration East Asian Cultural Studies (18 credits)*

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**East Asian Language, Supplementary**, *section 25.10.13.6: Bachelor of Arts (B.A.) - Minor Concentration Supplementary East Asian Language (18 credits)*

**Economics**, *section 25.10.14.4: Bachelor of Arts (B.A.) - Minor Concentration Economics (18 credits)*

**Educational Psychology**, *section 25.10.16.3: Bachelor of Arts (B.A.) - Minor Concentration Educational Psychology (18 credits)*

**Education for Arts Students**, *section 25.10.15.3: Bachelor of Arts (B.A.) - Minor Concentration Education for Arts Students (18 credits)*

**English - Literature**, *section 25.10.17.6: Bachelor of Arts (B.A.) - Minor Concentration English - Literature (18 credits)*

**English - Drama and Theatre**, *section 25.10.17.7: Bachelor of Arts (B.A.) - Minor Concentration English - Drama and Theatre (18 credits)*

**English - Cultural Studies**, *section 25.10.17.8: Bachelor of Arts (B.A.) - Minor Concentration English - Cultural Studies (18 credits)*

**Environment** - see *McGill School of Environment > section 33.7.1: Bachelor of Arts (B.A.) - Minor Concentration Environment (18 credits)*

**Finance for Non-Management Students** - see *Desautels Faculty of Management > section 29.8.7.1: Minor Finance (For Non-Management Students) (18 credits)*

**Geographic Information Systems**, *section 25.10.23.5: Bachelor of Arts (B.A.) - Minor Concentration Geographic Information Systems (18 credits)*

**Geography**, *section 25.10.23.4: Bachelor of Arts (B.A.) - Minor Concentration Geography (18 credits)*

**Geography (Urban Systems)**, *section 25.10.23.6: Bachelor of Arts (B.A.) - Minor Concentration Geography (Urban Systems) (18 credits)*

**German Language**, *section 25.10.24.6: Bachelor of Arts (B.A.) - Minor Concentration German Language (18 credits) (18 cr*

**Middle East Languages**, *section 25.10.37.5: Bachelor of Arts (B.A.) - Minor Concentration Middle East Languages (18 credits)*

**Music**, *section 25.10.38.6: Bachelor of Arts (B.A.) - Minor Concentration Music (18 credits)*

**Musical Applications of Technology** - see *Schulich School of Music > section 30.8.1.7: Bachelor of Music (B.Mus.) - Minor Musical Applications of Technology (18 credits)*

**Musical Science and Technology** - see *Schulich School of Music > section 30.8.1.8: Bachelor of Music (B.Mus.) - Minor Musical Science and Technology (18 credits)*

**North American Studies**, *section 25.10.39.4: Bachelor of Arts (B.A.) - Minor Concentration North American Studies (18 credits)*

**Operations Management for Non-Management Students** - see *Desautels Faculty of Management > section 29.8.7.7: Minor Operations Management (For Non-Management Students) (18 credits)*

**Philosophy**, *section 25.10.40.4: Bachelor of Arts (B.A.) - Minor Concentration Philosophy (18 credits)*

**Philosophy and Western Religions**, *section 25.10.41.4: Bachelor of Arts (B.A.) - Minor Concentration Philosophy and Western Religions (18 credits)*

**Political Science**, *section 25.10.42.6: Bachelor of Arts (B.A.) - Minor Concentration Political Science (18 credits)*

**Political Science: Canada/Québec**, *section 25.10.42.7: Bachelor of Arts (B.A.) - Minor Concentration Political Science: Canada/Québec (18 credits)*

**Political Theory** - see *Political Science, section 25.10.42.10: Bachelor of Arts (B.A.) - Minor Concentration Political Theory (18 credits)*

**Political Economy** - see *Political Science, section 25.10.42.11: Bachelor of Arts (B.A.) - Minor Concentration Political Economy (18 credits)*

**Politics, Law and Society** - see *Political Science, section 25.10.42.12: Bachelor of Arts (B.A.) - Minor Concentration Politics, Law and Society (18 credits)*

**Psychology**, *section 25.10.43.4: Bachelor of Arts (B.A.) - Minor Concentration Psychology (18 credits)*

**Quebec Studies**, *section 25.10.44.5: Bachelor of Arts (B.A.) - Minor Concentration Quebec Studies / La concentration Mineur en Études sur le Québec (18 credits)*

**Russian**, *section 25.10.46.4: Bachelor of Arts (B.A.) - Minor Concentration Russian (18 credits)*

**Russian Culture**, *section 25.10.46.5: Bachelor of Arts (B.A.) - Minor Concentration Russian Culture (18 credits)*

**Science for Arts Students**, *section 25.10.47.4: Bachelor of Arts (B.A.) - Minor Concentration Science for Arts Students (18 credits)*

**Scriptural Languages** - see *Religious Studies (Arts), section 25.10.45.6: Bachelor of Arts (B.A.) - Minor Concentration Scriptural Languages (18 credits)*

**Sexual Diversity Studies**, *section 25.10.48.4: Bachelor of Arts (B.A.) - Minor Concentration Se*



ECON 199	FYS: Aspects of Globalization
FREN 198	FYS: Introduction to French and Quebec Literature
FREN 199	FYS: Littérature française
HIST 195	FYS: Sources of World History
HIST 197	FYS: Race in Latin America
ISLA 199	FYS: Narrations of the Middle East
JWST 199	FYS: Images - Jewish Identities
LING 199	FYS: Language, Cognition and Brain
PHIL 198	FYS: Knowledge and Ideas in Early Modern Philosophy
PHIL 199	FYS: Minds, Brain, and Machines

### 25.10.2 Faculty of Arts Internship Program

Most departments in the Faculty of Arts offer undergraduate students the opportunity to earn university credit while gaining experience in areas relevant to their fields of study. Open to U2 and U3 students, normally after completing 30 credits of a 90-credit program or 45 credits of a 96- to 120-credit program, normally with a minimum CGPA of 2.7, and permission of the departmental Internship Advisor. Arts internships involve a minimum of 150 hours of work with an approved host institution or organization. Students are required to submit a major topical paper that discusses an aspect of the internship from an academic perspective.

For more information about the Faculty of Arts Internship Program, please refer to [www.mcgill.ca/arts-internships](http://www.mcgill.ca/arts-internships).

### 25.10.3 Field Studies and Study Abroad Programs

The Faculty of Arts offers students many field studies and study abroad opportunities. For more information, please refer to the *Field Studies and Study Abroad* section of this publication.

### 25.10.4 African Studies (AFRI)

#### 25.10.4.1 Location

General Inquiries:  
 Institute for the Study of International Development  
 Peterson Hall  
 3460 McTavish Street, Room 126  
 Montreal, Quebec H3A 1X9

Telephone: 514-398-4804

Fax: 514-398-2786

Email: [ids@mcgill.ca](mailto:ids@mcgill.ca)

Website: [www.mcgill.ca/africanstudies](http://www.mcgill.ca/africanstudies)

Adviser:

Lisa Stanischewski

#### 25.10.4.2 About African Studies

The African Studies Program was established in 1969 and was the first of its kind in Canada. It offers interdisciplinary courses leading to a Minor or Major Concentration for students seeking to acquire a deeper understanding of the African continent and its diverse peoples. Students will acquire an appreciation of the contributions of Africa to world culture and civilization, and an awareness of the continent's current struggle to achieve development.

#### 25.10.4.3 African Studies (AFRI) Faculty

**Program Committee**

- G. Campbell (*History*)  
 C. Chapman (*Anthropology/ MSE*)  
 K. Fallon (*Sociology*)  
 J. Jorgensen (*Desautels Faculty of Management*)  
 M. Lange (*Sociology*)  
 K. Medani (*Political Science*)  
 T. Meredith (*Geography*)  
 M. Popescu (*English*)  
 J. Unruh (*Geography*)

**25.10.4.4 Bachelor of Arts (B.A.) - Minor Concentration African Studies (18 credits)**

A Minor Concentration African Studies is available for those students majoring in a discipline of the Faculty of Arts who wish to acquire interdisciplinary knowledge of Africa.

This program may be expanded to the Major Concentration African Studies.

**Required Courses (6 credits)**

- |          |     |                                     |
|----------|-----|-------------------------------------|
| AFRI 200 | (3) | Introduction to African Studies     |
| AFRI 598 | (3) | Research Seminar in African Studies |

**Complementary Courses (12 credits)**

12 credits selected as follows:

3 credits from the Group A or "core" course list and

9 credits from the Group B course list drawn from at least 2 disciplines with no more than 6 credits from any one discipline.

If courses listed below are not available in any particular year, modifications to the program may be made with the approval of the program adviser.

Students who wish to obtain program credit for other courses with African content should seek approval from the program adviser. African content may be found in certain courses offered in Islamic Studies and Religious Studies.

**Group A**

3 credits from:

- |          |     |                                 |
|----------|-----|---------------------------------|
| ANTH 322 | (3) | Social Change in Modern Africa  |
| HIST 200 | (3) | Introduction to African History |
| HIST 201 | (3) | Modern African History          |
| POLI 324 | (3) | Developing Areas/Africa         |

**Group B**

9 credits from the Group B course lists below drawn from at least 2 disciplines with no more than 6 credits from any one discipline.

**African Studies**

- |          |     |                                   |
|----------|-----|-----------------------------------|
| AFRI 401 | (3) | Swahili Language and Culture      |
| AFRI 480 | (3) | Special Topics 01                 |
| AFRI 481 | (3) | Special Topics 02                 |
| AFRI 499 | (3) | Arts Internships: African Studies |

**Anthropology**

ANTH 212	(3)	Anthropology of Development
ANTH 301	(3)	Nomadic Pastoralists
ANTH 321	(3)	Peoples and Cultures of Africa
ANTH 322	(3)	Social Change in Modern Africa
ANTH 335	(3)	Ancient Egyptian Civilization
ANTH 345	(3)	Prehistory of Africa
ANTH 411	(3)	Primate Studies & Conservation
ANTH 416	(3)	Environment/Development: Africa
ANTH 445	(3)	Property and Land Tenure

### **Economics**

ECON 208	(3)	Microeconomic Analysis and Applications
ECON 313	(3)	Economic Development 1
ECON 416	(3)	Topics in Economic Development 2

### **English**

\*Note: Course is counted only when African materials are taught.

ENGL 320*	(3)	Postcolonial Literature
ENGL 352*	(3)	Theories of Difference
ENGL 421	(3)	African Literature

### **Geography**

GEOG 216	(3)	Geography of the World Economy
GEOG 403	(3)	Global Health and Environmental Change
GEOG 404	(3)	Environmental Management 2
GEOG 408	(3)	Geography of Development
GEOG 410	(3)	Geography of Underdevelopment: Current Problems
GEOG 416	(3)	Africa South of the Sahara

### **History**

HIST 200	(3)	Introduction to African History
HIST 201	(3)	Modern African History
HIST 374	(3)	West Africa since 1800 Colonial Africa: Health/Diseashe

ISLA 360	(3)	Islam and Politics
ISLA 410	(3)	History: Middle-East 1798-1918
ISLA 521D1	(4.5)	Introductory Arabic
ISLA 521D2	(4.5)	Introductory Arabic

### Political Science

\*Note: Course is counted only when African materials are taught.

POLI 227	(3)	Developing Areas/Introduction
POLI 324	(3)	Developing Areas/Africa
POLI 472	(3)	Developing Areas/Social Movements
POLI 522*	(3)	Seminar: Developing Areas

### Sociology

SOCI 365	(3)	Health and Development
SOCI 370	(3)	Sociology: Gender and Development
SOCI 446	(3)	Colonialism and Society
SOCI 484	(3)	Emerging Democratic States
SOCI 513	(3)	Social Aspects HIV/AIDS in Africa
SOCI 550	(3)	Developing Societies

### 25.10.4.5 Bachelor of Arts (B.A.) - Major Concentration African Studies (36 credits)

The Major Concentration African Studies provides students with an interdisciplinary approach to the study of the African continent.

Students wishing to major in African Studies should consult the program adviser at the beginning of their first academic year. In the African Studies Major Concentration, students will be encouraged to identify an area within a discipline of the Faculty, taking as many relevant courses as possible in that field.

### Required Courses (6 credits)

AFRI 200 (3) Introduction to African Studies

AFRI 59867.52 340.149 Tm(Required Com(v) Research Seminar in African Studies 340.149 Tm(se É.12d.tntifAty.04 340.149 Tm(se7.52 372.942 T873ty.04 340.141

**Group B**

21 credits from the Group B course lists below drawn from at least 3 disciplines with no more than 9 credits from any one discipline.

**African Studies**

(3) Swahili Language and Culture

HIST 374	(3)	West Africa since 1800
HIST 381	(3)	Colonial Africa: Health/Disease
HIST 382	(3)	History of South Africa
HIST 396	(3)	Disease in Africa Since 1960
HIST 413	(3)	Independent Reading
HIST 486D1	(3)	Topics: African Social History
HIST 486D2	(3)	Topics: African Social History
HIST 528	(3)	Indian Ocean World Slave Trade

### **Islamic Studies**

ISLA 360	(3)	Islam and Politics
ISLA 410	(3)	History: Middle-East 1798-1918
ISLA 521D1	(4.5)	Introductory Arabic
ISLA 521D2	(4.5)	Introductory Arabic

### **Political Science**



### Assistant Professors

Setrag Manoukian; B.A.(Venice), M.A., Ph.D.(Mich.) (*joint appoint. with Islamic Studies*)

Margaret E. Stevenson; B.A.(N. Carolina), Ph.D.(Calif., Berk.)

Ismael Vaccaro; M.A., Ph.D.(Wash.) (*joint appoint. with MSE*)

### Associate Member

Tobias Rees; M.A.(Eberhard Karls-Universitat Tubingen), Diploma in Neuropharmacology(Inst. Pasteur, Paris, France), Ph.D.(Calif., Berk.)

### Adjunct Members

Vinh-Kim Nguyen; B.Sc.(McG.), M.D.(Montr.), M.A., Ph.D.(McG.)

Nadia Ferrara; B.A.(C'dia), M.A.(Vermont College), M.Sc.(McG.), Ph.D.(Montr.)

Deborah Sick; Ph.D.(McG.)

### 25.10.5.6 Bachelor of Arts (B.A.) - Minor Concentration Anthropology (18 credits)

The Minor Concentration Anthropology permits students to explore the development and diversity of human beings and human society and culture through courses in human evolution, prehistoric archaeology and socio-cultural anthropology. Students may include courses in all of these fields, or may focus on one or two.

This program may be expanded to the Major Concentration Anthropology.

### Complementary Courses (18 credits)

#### 200-Level

3 to 9 credits selected from the following list:

ANTH 201	(3)	Prehistoric Archaeology
ANTH 202	(3)	Comparative Cultures
ANTH 203	(3)	Human Evolution
ANTH 204	(3)	Anthropology of Meaning
ANTH 205	(3)	Cultures of the World
ANTH 206	(3)	Environment and Culture
ANTH 207	(3)	Ethnography Through Film
ANTH 208	(3)	Evolutionary Anthropology
ANTH 209	(3)	Anthropology of Religion
ANTH 212	(3)	Anthropology of Development
ANTH 214	(3)	Violence, Warfare, Culture
ANTH 221	(3)	Introduction to Urban Anthropology
ANTH 222	(3)	Legal Anthropology
ANTH 227	(3)	Medical Anthropology

#### Areas

3 credits from either one of the following area groups:

#### Ethnography

ANTH 304	(3)	Chinese Culture in Ethnography and Film
ANTH 306	(3)	Native Peoples' History in Canada
ANTH 309	(3)	Prehistory of Northern Europe
ANTH 315	(3)	Society/Culture: East Africa



ANTH 321

(3)

Peoples and Cultures of Africa  
Social Change in Modern

ANTH 204	(3)	Anthropology of Meaning
ANTH 205	(3)	Cultures of the World
ANTH 206	(3)	Environment and Culture
	(3)	Ethnography Through Film

ANTH 500 (3) Chinese Diversity and Diaspora

**Archaeology**

ANTH 305 (3) Arctic Prehistory

ANTH 307 (3) Andean Prehistory  
Prehistory of Ntt43)

ANTH 227	(3)	Medical Anthropology
ANTH 301	(3)	Nomadic Pastoralists
ANTH 302	(3)	New Horizons in Medical Anthropology

ANTH 383 (3) Special Topic 4

**Core (350-Level)**

A minimum of 9 credits of core courses at the 350-level selected from:

ANTH 352 (3) History of Anthropological Theory

ANTH 355 (3) Theories of Culture and Society

ANTH 357 (3) Archaeological Methods

The Process of Anthropological Research (The Process of ANTH 357) 1.00 0.45 1.00 1.22 1.94 9 628.86 1.5g

ANTH 540	(3)	Topics in Anthropological Theory
ANTH 551	(3)	Advanced Topics: Archaeological Research
ANTH 555	(3)	Advanced Topics in Ethnology
ANTH 575	(3)	Concepts of Race

### Honours Thesis

6 credits of honours thesis courses selected from:

ANTH 490	(6)	Honours Thesis 1
ANTH 491	(6)	Honours Thesis 2
ANTH 492	(6)	Honours Thesis
ANTH 492D1	(3)	Honours Thesis
ANTH 492D2	(3)	Honours Thesis
ANTH 492N1	(3)	Honours Thesis
ANTH 492N2	(3)	Honours Thesis

### 25.10.5.9 Bachelor of Arts (B.A.) - Joint Honours Component Anthropology (36 credits)

Students wishing to study at the Honours level in two disciplines can combine Joint Honours Program components in any two Arts disciplines. For a list of available Joint Honours programs, see "Overview of Programs Offered" and "Joint Honours Programs".

Students interested in Joint Honours should consult an adviser in the other department for specific course requirements. A form will be supplied by the Anthropology Department to keep track of courses required by both departments for the joint honours components.

The Joint Honours thesis topic should be arranged by consultation with an adviser in Anthropology and the other discipline, and supervisors should be appointed in each department who will work together to guide the student.

Joint Honours students must maintain a GPA of 3.30 in their program courses and, according to Faculty regulations, a minimum CGPA of 3.00 in general.

### Complementary (36 credits)

Joint Honours students select their courses as specified below.

#### 200-Level

A maximum of 12 credits of 200-level courses selected from:

ANTH 201	(3)	Prehistoric Archaeology
ANTH 202	(3)	Comparative Cultures
ANTH 203	(3)	Human Evolution
ANTH 204	(3)	Anthropology of Meaning
ANTH 205	(3)	Cultures of the World
ANTH 206	(3)	Environment and Culture
	(3)	Ethnography Through Film

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ANTH 302	(3)	New Horizons in Medical Anthropology
ANTH 303	(3)	Ethnographies of Post-socialism
ANTH 305	(3)	Arctic Prehistory
ANTH 306	(3)	Native Peoples' History in Canada
ANTH 308	(3)	Political Anthropology 01
ANTH 309	(3)	Prehistory of Northern Europe
ANTH 310	(3)	Anthropology of the Arts
ANTH 311	(3)	Primate Behaviour and Ecology
ANTH 312	(3)	Zooarchaeology
ANTH 313	(3)	Early Civilizations
ANTH 314	(3)	Psychological Anthropology 01
ANTH 315	(3)	Society/Culture: East Africa
ANTH 316	(3)	Anthropology of Complex Societies
ANTH 317	(3)	Prehistory of North America
ANTH 319	(3)	Inka Archaeology & Ethnohistory
ANTH 320	(3)	Social Evolution
ANTH 321	(3)	Peoples and Cultures of Africa
ANTH 322	(3)	Social Change in Modern Africa
ANTH 324	(3)	Economic Anthropology 01
ANTH 326	(3)	Anthropology of Latin America
ANTH 327	(3)	Peoples of South Asia
ANTH 329	(3)	Modern Chinese Society and Change
ANTH 331	(3)	Prehistory of East Asia
ANTH 333	(3)	Class and Ethnicity
ANTH 334	(3)	Kinship and Social Structure
ANTH 335	(3)	Ancient Egyptian Civilization
ANTH 336	(3)	Ethnohistory: North Eastern North America
ANTH 337	(3)	Mediterranean Society and Culture
ANTH 338	(3)	Native Peoples of North America
ANTH 339	(3)	Ecological Anthropology
ANTH 340	(3)	Middle Eastern Society and Culture
ANTH 341	(3)	Women in Cross-cultural Perspective
ANTH 342	(3)	Gender, Inequality and the State
ANTH 344	(3)	Quantitative Approaches to Anthropology
ANTH 345	(3)	Prehistory of Africa
ANTH 346	(3)	Development in Agrarian Societies
ANTH 347	(3)	Paleolithic Cultures
ANTH 348	(3)	Early Prehistory: New World
ANTH 380	(3)	Special Topic 1
ANTH 381	(3)	Special Topic 2
ANTH 382	(3)	Special Topic 3
ANTH 383	(3)	Special Topic 4

**Core (350-Level)**

A minimum of 9 credits of core courses at the 350-level selected from:

ANTH 352	(3)	History of Anthropological Theory
ANTH 355	(3)	Theories of Culture and Society
ANTH 357	(3)	Archaeological Methods
ANTH 358	(3)	The Process of Anthropological Research
ANTH 359	(3)	History of Archaeological Theory

**400-/500-Level**

A minimum of 6 credits of 400- or 500-level courses selected from:

ANTH 401	(3)	Comparative Anthropology
ANTH 402	(3)	Topics in Ethnography 1
ANTH 403	(3)	Current Issues in Archaeology
ANTH 404	(3)	Topics in Psychological Anthropology
ANTH 405	(3)	Topics in Ethnography 2
ANTH 407	(3)	Anthropology of the Body
ANTH 412	(3)	Topics: Anthropological Theory
ANTH 413	(3)	Gender in Archaeology
ANTH 416	(3)	Environment/Development: Africa
ANTH 418	(3)	Environment and Development
ANTH 419	(3)	Archaeology of Hunter-Gatherers
ANTH 420	(3)	Lithic Technology and Analysis
ANTH 422	(3)	Contemporary Latin American Culture & Society
ANTH 430	(3)	Symbolic Anthropology 01
ANTH 431	(3)	Problems in East Asian Archaeology
ANTH 436	(3)	North American Native Peoples
ANTH 438	(3)	Topics in Medical Anthropology
ANTH 439	(3)	Theories of Development
ANTH 440	(3)	Cognitive Anthropology
ANTH 443	(3)	Medical Anthropological Theory
ANTH 445	(3)	Property and Land Tenure
ANTH 461	(3)	Research Techniques
ANTH 480	(3)	Special Topic 5
ANTH 481	(3)	Special Topic 6
ANTH 482	(3)	Special Topic 7
ANTH 483	(3)	Special Topic 8
ANTH 484	(3)	Special Topic 9
ANTH 485	(3)	Special Topic 10
ANTH 500	(3)	Chinese Diversity and Diaspora
ANTH 511	(3)	Computational Approaches to Prehistory
ANTH 540	(3)	Topics in Anthropological Theory
ANTH 551	(3)	Advanced Topics: Archaeological Research



ANTH 555	(3)	Advanced Topics in Ethnology
ANTH 575	(3)	Concepts of Race

### Joint Honours Project

The joint honours thesis or project topic should be determined in consultation with advisers from both the student's joint honours components. Normally, the project is 6 credits of course work with 3 credits applying to each joint honours component. The 3-credit Anthropology course is selected from:

ANTH 480	(3)	Special Topic 5
ANTH 481	(3)	Special Topic 6
ANTH 482	(3)	Special Topic 7
ANTH 483	(3)	Special Topic 8
ANTH 484	(3)	Special Topic 9
ANTH 485	(3)	Special Topic 10

### 25.10.5.10 Anthropology (ANTH) Related Programs and Study Semesters

#### 25.10.5.10.1 African Field Study Semester

The Department of Geography, Faculty of Science, coordinates the 15-credit interdisciplinary African Field Study Semester; see *Field Studies and Study Abroad > African Field Study Semester*.

## 25.10.6 Art History and Communication Studies (ARTH and COMS)

### 25.10.6.1 Location

Arts Building, W-225 (West Wing, top floor)  
853 Sherbrooke Street West  
Montreal, Quebec H3A 2T6

Telephone: 514-398-1828

Fax: 514-398-7247

Website: [www.mcgill.ca/ahcs](http://www.mcgill.ca/ahcs)

### 25.10.6.2 About Art History and Communication Studies

In the field of Art History, the Department offers comprehensive programs of courses and seminars on the history of the visual arts, material culture, and architecture from antiquity to the present, focusing primarily on Europe and North America. The works of art and architecture are discussed within their cultural, political, historical, religious, philosophical and social context.

Major and Minor Concentrations, and Honours, Joint Honours and graduate programs are available in Art History. For the most up-to-date information on

**Director of Graduate Programs in Communication Studies**

TBA

**Director of Graduate Programs in Art History**

TBA

**Director of Undergraduate Programs in Art History**

Cecily Hilsdale

**Director of Undergraduate Programs in Communication Studies**

Becky Lentz

**Emeritus Professors**

John M. Fossey; B.A.(Birm.), Des L.(Lyon II), F.S.A., R.P.A., F.R.S.C.

George Szanto; B.A.(Dart.), Ph.D.(Harv.)

**Professors**

Amelia Jones; B.A.(Harv.), M.A.(Penn.), Ph.D.(Calif.)

Marc Raboy; B.Sc., M.A., Ph.D.(McG.)

Christine Ross; M.A.(C'dia), Ph.D.(Paris I)

Will Straw; B.A.(Car.), M.A., Ph.D.(McG.)

**Associate Professors**

Darin Barney; B.A., M.A.(S. Fraser), Ph.D.(Tor.)

Charmaine Nelson; B.F.A., M.A.(C'dia), Ph.D.(Manc.)

Jonathan Sterne; B.A.(Minn.), A.M., Ph.D.(Ill.-Urbana-Champaign)

Angela Vanhaelen; B.A.(W. Ont.), M.A., Ph.D.(Br. Col.)

**Assistant Professors**

Jennifer Burman; B.A.(C'dia), M.A., Ph.D.(York)

Cecily Hilsdale; B.F.A.(C'dia), M.A., Ph.D.(Chic.)

Mary Hunter; B.A.(Qu.), M.A., Ph.D.(Lond.)

Becky Lentz; B.A.(Arkansas), M.A.(Southern Ill.), M.A.(NYU Tisch School)

Hajime Nakatani; B.L.A.(Tokyo), M.A.(Lond.), Ph.D.(Chic.)

Carrie Rentschler; B.A.(Minn.), M.A., Ph.D.(Ill., Urbana-Champaign)

Richard Taws; B.A., M.A., Ph.D.(Lond.)

**Adjunct Professors**

Cornelius Borck; M.A., M.D.(Free Univ., Berlin), Ph.D.(Lond.)

Johanne Lamoureux; B.A., M.A.(Montr.), Ph.D.(E.H.E.S.S., Paris)

Charles Levin; B.A., M.A.(McG.), Ph.D.(C'dia)

Bronwen Wilson; B.A., M.A.(Br. Col.), Ph.D.(N'western)

**25.10.6.5 Bachelor of Arts (B.A.) - Minor Concentration Art History (18 credits)**

This program may be expanded to the Major Concentration Art History.

**Required Course (3 credits)**

ARTH 305                      (3)                      Methods in Art History 01

**Complementary Courses (15 credits)**

Students select their complementary courses as follows:

3 credits in Art History at the 200-level.

12 credits in Art History at the 300-level or above, selected in consultation with the departmental adviser.

Note: Courses in studio practice cannot be counted towards the minor concentration.

**Bachelor of Arts (B.A.) - Major Concentration Art History (36 credits)**

ARTH 333	(3)	Italian Baroque Architecture
ARTH 343	(3)	Northern Renaissance Art 01
ARTH 358	(3)	Later Chinese Art (960-1911)
ARTH 367	(3)	Italian Renaissance Art 2
ARTH 435	(3)	Early Modern Visual Culture
ARTH 473	(3)	Studies in 17th and Early 18th Century Art 04

#### **IV. 1700 - 1945**

Introduction to Modern 0 0

Selected T

ARTH 209	(3)	Introduction to Ancient Art and Architecture
ARTH 215	(3)	Introduction to East Asian Art
ARTH 312	<del>(3)</del>	Medieval Art
ARTH 314	(3)	The Medieval City
ARTH 340	(3)	The Gothic Cathedral
ARTH 341	(3)	Romanesque Architecture

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ARTH 510 (3) The Body and Visual Culture

#### VI. Sites of Visual Culture

ARTH 300 (3) Canadian Art to 1914  
 ARTH 301 (3) Canadian Art 1914 - Present  
 ARTH 302 (3) Aspects of Canadian Art  
 ARTH 321 (3) Visual Culture of the Dutch Republic  
 ARTH 325 (3) Visual Culture Renaissance Venice  
 ARTH 406 (3) German Architecture

#### VII. Medium and Media

ARTH 326 (3) Print Culture and the City  
 ARTH 360 (3) Photography and Art  
 ARTH 457 (3) Brushwork in Chinese Painting

#### VIII. Selected Topics

ARTH 353 (3) Selected Topics in Art History 1  
 ARTH 354 (3) Selected Topics Art History 2  
 ARTH 420 (3) Selected Topics in Art and Architecture 1  
 ARTH 421 (3) Selected Topics in Art and Architecture 2  
 ARTH 422 (3) Selected Topics in Art and Architecture 3  
 ARTH 447 (3) Independent Research Course  
 ARTH 460 (3) Studies in Architectural History 1  
 ARTH 461 (3) Studies in Architectural History 2  
 ARTH 490 (3) Museum Internship

Note: In addition to architectural courses given by the Department, program students are encouraged to consider courses given in the School of Architecture and the Departments of East Asian Studies and Philosophy which may, upon consultation with the Department, be regarded as fulfilling part of the requirements.

ARCH 250 (3) Architectural History 1  
 ARCH 251 (3) Architectural History 2  
 EAST 303 (3) Current Topics: Chinese Studies 1  
 PHIL 336 (3) Aesthetics  
 PHIL 436 (3) Aesthetics 2

#### 25.10.6.8 Bachelor of Arts (B.A.) - Joint Honours Component Art History (36 credits)

Students wishing to study at the Honours level in two disciplines can combine Joint Honours Program components in any two Arts disciplines. For a list of available Joint Honours programs, see "Overview of Programs Offered" and "Joint Honours Programs".

Prior to registering for each Joint Honours Component, students should consult an adviser in each department for approval of their course selection.

Students are encouraged to apply for admission to the Joint Honours program after their first year of study at the University and after completion of no less than 12 credits in Art History. Admission is on a competitive basis. While the Faculty of Arts regulations require a minimum CGPA of 3.0 for Honours programs, the department requires in addition a program GPA of 3.30 for admission into the program and the awarding of Honours.

#### Required Courses (9 credits)

ARTH 305	(3)	Methods in Art History 01
ARTH 400	(3)	Selected Methods in Art History
ARTH 401	(3)	Honours Research Paper

### **Complementary Courses (27 credits)**

Students select their complementary courses as follows:

A maximum of 9 credits may be at the 200-level.

A minimum of 3 credits must be at the 400-level or above.

27 credits should be selected from at least six of the eight Art History course fields.

#### **I. Theories and Methods**

ARTH 310	(3)	Postcolonialism
ARTH 351	(3)	Vision and Visuality in Art History
ARTH 352	(3)	Feminism in Art and Art History

#### **II. Ancient to Medieval**

ARTH 204	(3)	Introduction to Medieval Art and Architecture
ARTH 209	(3)	Introduction to Ancient Art and Architecture
ARTH 215	(3)	Introduction to East Asian Art
ARTH 312	(3)	Medieval Art
ARTH 314	(3)	The Medieval City
ARTH 340	(3)	The Gothic Cathedral
ARTH 341	(3)	Romanesque Architecture
ARTH 357	(3)	Early Chinese Art
ARTH 415	(3)	Late Medieval & Renaissance Architecture in Northern Europe
ARTH 416	(3)	English Architecture

#### **III. 1400 - 1700 (Early Modern)**

ARTH 207	(3)	Early Modern Art (1400-1700)
ARTH 223	(3)	Introduction to Italian Renaissance Art
ARTH 320	(3)	Seventeenth Century Art of Court and Church
ARTH 324	(3)	Sixteenth-Century Art in Italy
ARTH 332	(3)	Italian Renaissance Architecture
ARTH 333	(3)	Italian Baroque Architecture
ARTH 343	(3)	Northern Renaissance Art 01
ARTH 358	(3)	Later Chinese Art (960-1911)
ARTH 367	(3)	Italian Renaissance Art 2
ARTH 435	(3)	Early Modern Visual Culture
ARTH 473	(3)	Studies in 17th and Early 18th Century Art 04

#### **IV. 1700 - 1945**

ARTH 205	(3)	Introduction to Modern Art
ARTH 226	(3)	Introduction to Eighteenth-Century Art and Architecture

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ARTH 323	(3)	Realism and Impressionism
ARTH 334	(3)	Eighteenth Century European Art
ARTH 335	(3)	Art in the Age of Revolution
ARTH 337	(3)	Modern Painting and Sculpture, Post-Impress to WWI
ARTH 338	(3)	Modern Art and Theory: WWI - WWII
ARTH 347	(3)	19th Century Architecture
ARTH 348	(3)	20th Century Architecture
ARTH 374	(3)	Studies in Later 18th and 19th Century Art 01
ARTH 379	(3)	Studies: Modern Art and Theoretical Problems 02
ARTH 474	(3)	Studies in Later 18th and 19th Century Art 03
ARTH 479	(3)	Studies: Modern Art and Theoretical Problems 04

#### **V. Contemporary Art (1945 to Present)**

ARTH 336	(3)	Art Now
ARTH 339	(3)	Critical Issues - Contemporary Art
ARTH 356	(3)	Modern & Contemporary Chinese Art
ARTH 510	(3)	The Body and Visual Culture

#### **VI. Sites of Visual Culture**

ARTH 300	(3)	Canadian Art to 1914
ARTH 301	(3)	Canadian Art 1914 - Present
ARTH 302	(3)	Aspects of Canadian Art
ARTH 321	(3)	Visual Culture of the Dutch Republic
ARTH 325	(3)	Visual Culture Renaissance Venice
ARTH 406	(3)	German Architecture

#### **VII. Medium and Media**

ARTH 326	(3)	Print Culture and the City
ARTH 360	(3)	Photography and Art
ARTH 457	(3)	Brushwork in Chinese Painting

#### **VIII. Selected Topics**

ARTH 353	(3)	Selected Topics in Art History 1
ARTH 354	(3)	Selected Topics Art History 2
ARTH 420	(3)	Selected Topics in Art and Architecture 1
ARTH 421	(3)	Selected Topics in Art and Architecture 2
ARTH 422	(3)	Selected Topics in Art and Architecture 3
ARTH 447	(3)	Independent Research Course
ARTH 460	(3)	Studies in Architectural History 1
ARTH 461	(3)	Studies in Architectural History 2
ARTH 490	(3)	Museum Internship

Note: In addition to architectural courses given by the Department, program students are encouraged to consider courses given in the School of Architecture and the Departments of East Asian Studies and Philosophy which may, upon consultation with the Department, be regarded as fulfilling part of the requirements.

ARCH 250	(3)	Architectural History 1
ARCH 251	(3)	Architectural History 2
EAST 303	(3)	Current Topics: Chinese Studies 1
PHIL 336	(3)	Aesthetics
PHIL 436	(3)	Aesthetics 2

**25.10.6.9 Bachelor of Arts (B.A.) - Minor Concentration Communication Studies (18 credits)**

The Minor Concentration Communication Studies provides undergraduate students with a critical understanding of the role that communications media and communication technologies play in a society. It offers students intellectually challenging and innovative instruction in key traditions of Communications and Media Studies and new theoretical and methodological practices being developed in the field. The courses included in the program focus on issues of the relationship between communication, democracy and urban life, the social life of communication technologies, the historical development and transformation of media and communication forms, institutions, practices and technologies, and the mass media representation and mobilization of social difference.

**Required Course (3 credits)**

COMS 210	(3)	Introduction to Communication Studies
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**Complementary Courses (15 credits)**

5 courses in Communication Studies selected from:

COMS 200	(3)	History of Communication
COMS 230	(3)	Communication and Democracy
COMS 300	(3)	Media and Modernity in the 20th Century
COMS 310	(3)	Media and Feminist Studies
COMS 320	(3)	Media and Empire
COMS 330	(3)	Media in Cultural Life
COMS 340	(3)	New Media
COMS 350	(3)	Sound Culture
COMS 354	(3)	Media Studies of Crime
COMS 361	(3)	Selected Topics Communication Studies 1
COMS 362	(3)	Selected Topics Communication Studies 2
COMS 400	(3)	Critical Theory Seminar
COMS 410	(3)	Cultures in Visualization
COMS 425	(3)	Urban Culture & Everyday Life
COMS 490	(3)	History and Theory of Media
COMS 491	(3)	Media, Communication & Culture
COMS 492	(3)	Power, Difference and Justice
COMS 495	(3)	Directed Reading
COMS 497	(3)	Independent Study
COMS 510	(3)	Canadian Broadcasting Policy

## **25.10.7 Canadian Ethnic and Racial Studies Minor Concentration**

### **25.10.7.1 Location**

Department of Sociology  
Leacock 714

Telephone: 514-398-6853

Email: [morton.weinfeld@mcgill.ca](mailto:morton.weinfeld@mcgill.ca)

ANTH 202	(3)	Comparative Cultures
ANTH 205	(3)	Cultures of the World
ANTH 306	(3)	Native Peoples' History in Canada
ANTH 320	(3)	Social Evolution
ANTH 333	(3)	Class and Ethnicity
ANTH 338	(3)	Native Peoples of North America
ANTH 436	(3)	North American Native Peoples

**Geography**

GEOG 301	(3)	Geography of Nunavut
GEOG 331	(3)	Urban Social Geography
GEOG 424	(3)	Europe: Places and Peoples

**History**

HIST 203	(3)	Survey: Canada since 1867
HIST 371	(3)	American Civil Rights 1877-1940
HIST 408	(3)	Colonialism and Native Peoples
HIST 423	(3)	Topics: Migration and Ethnicity
HIST 442	(3)	Asian Diaspora: Chinese Overseas
HIST 471D1	(3)	Canadian Immigration History
HIST 471D2	(3)	Canadian Immigration History

**Political Science**

POLI 226	(3)	La vie politique québécoise
POLI 321	(3)	Issues: Canadian Public Policy
POLI 336	(3)	Le Québec et le Canada
POLI 411	(3)	Immigration and Multiculturalism in Canada
POLI 412	(3)	Canadian Voting/Public Opinion
POLI 431	(3)	Nations and States/Developed World
POLI 478	(3)	The Canadian Constitution

**Sociology**

SOCI 234	(3)	Population and Society
SOCI 327	(3)	Jews in North America
SOCI 333	(3)	Social Stratification
SOCI 353	(3)	Inequality and Social Conflict
SOCI 519	(3)	Gender and Globalization
SOCI 520	(3)	Migration and Immigrant Groups
SOCI 529	(3)	Political Sociology 1

**Social Work**

SWRK 400	(3)	Policy and Practice for Refugees
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## **25.10.8 Canadian Studies (CANS)**

### **25.10.8.1 Location**

McGill Institute for the Study of Canada  
3463 Peel Street  
Montreal, Quebec H3A 1W7

Telephone: 514-398-8346

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POLI 222	(3)	Political Process and Behaviour in Canada
SOCI 230	(3)	Sociology of Ethnic Relations

**Canadian Studies (CANS)**

6 credits in interdisciplinary Canadian Studies courses with the subject code CANS.

**Canadian Studies (Other Departments)**

3 credits chosen from the complementary course list at the 300-level or higher. The courses chosen must have relevance to the program.

**Anthropology**

ANTH 222	(3)	Legal Anthropology
ANTH 305	(3)	Arctic Prehistory
ANTH 306	(3)	Native Peoples' History in Canada
ANTH 317	(3)	Prehistory of North America
ANTH 333	(3)	Class and Ethnicity
ANTH 336	(3)	Ethnohistory: North Eastern North America
ANTH 338	(3)	Native Peoples of North America
ANTH 436	(3)	North American Native Peoples

**Art History**

ARTH 300	(3)	Canadian Art to 1914
ARTH 301	(3)	Canadian Art 1914 - Present
ARTH 302	(3)	Aspects of Canadian Art
ARTH 479	(3)	Studies: Modern Art and Theoretical Problems 04

**Biology**

BIOL 240	(3)	Monteregian Flora
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**Economics**

ECON 219	(3)	Current Economic Problems: Topics
ECON 223	(3)	Political Economy of Trade Policy
ECON 303	(3)	Canadian Economic Policy
ECON 305	(3)	Industrial Organization
ECON 306D1	(3)	Labour Economics and Institutions
ECON 306D2	(3)	Labour Economics and Institutions
ECON 308	(3)	Governmental Policy Towards Business
ECON 405	(3)	Natural Resource Economics
ECON 406	(3)	Topics in Economic Policy
ECON 408	(3)	Public Sector Economics 1
ECON 409	(3)	Public Sector Economics 2
ECON 434	(3)	Current Economic Problems
ECON 440	(3)	Health Economics
ECON 480	(3)	Research Project

ECON 481 (3) Research Project

### English

ENGL 228 (3) Canadian Literature 1  
ENGL 229 (3) Canadian Literature 2  
ENGL 327 (3) Canadian Prose Fiction 1  
ENGL 328 (3) Development of Canadian Poetry 1  
ENGL 333 (3) Development of Canadian Poetry 2  
ENGL 339 (3) Canadian Prose Fiction 2  
ENGL 341 (3) Canadian Radio and Television  
ENGL 345 (3) Literature and Society  
ENGL 393 (3) Canadian Cinema  
ENGL 409 (3) Studies in a Canadian Author  
ENGL 410 (3) Theme or Movement Canadian Literature  
ENGL 411 (3) Studies in Canadian Fiction  
ENGL 415 (3) Studies in 20th Century Literature 2  
ENGL 419 (3) Studies in 20th Century Literature  
ENGL 499 (3) Departmental Seminar  
ENGL 527 (3) Canadian Literature  
ENGL 528 (3) Canadian Literature

### French as a Second Language

FRSL 101 (6) Beginners' French  
FRSL 101D1 (3) Beginners' French  
FRSL 101D2 (3) Beginners' French  
FRSL 103 (3) Near Beginners' French  
FRSL 105 (6) Intensive Beginners' French  
FRSL 206 (3) Elementary French  
FRSL 207 (6) Elementary French 01  
FRSL 207D1 (3) Elementary French 01  
FRSL 207D2 (3) Elementary French 01  
FRSL 208 (6) Intensive Elementary French  
FRSL 211 (6) Oral and Written French 1  
(3) Oral and Written French 1

FRSL 321D2	(3)	Oral and Written French 2
FRSL 322	(3)	Oral and Written French 2
FRSL 325	(6)	Oral and Written French 2 - Intensive
FRSL 326	(3)	Découvrons le Québec en français
FRSL 332	(3)	Intermediate French: Grammar 01
FRSL 333	(3)	Intermediate French: Grammar 02
FRSL 407	(3)	Compréhension et expression orales
	(3)	Français oral: Textes et expressions





LING 350	(3)	Linguistic Aspects of Bilingualism
LING 520	(3)	Sociolinguistics 2
LING 521	(3)	Dialectology

### **Music**

MUHL 391	(3)	Canadian Music
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### **Political Science**

POLI 221	(3)	Government of Canada
POLI 222	(3)	Political Process and Behaviour in Canada
POLI 226	(3)	La vie politique québécoise
POLI 320	(3)	Issues in Canadian Democracy
POLI 321	(3)	Issues: Canadian Public Policy
POLI 326	(3)	Provincial Politics
POLI 336	(3)	Le Québec et le Canada
POLI 337	(3)	Canadian Public Administration
POLI 342	(3)	Canadian Foreign Policy
POLI 371	(3)	Challenge of Canadian Federalism
POLI 372	(3)	Aboriginal Politics in Canada
POLI 378	(3)	The Canadian Judicial Process
POLI 379	(3)	Topics in Canadian Politics
POLI 410	(3)	Canadian Political Parties
POLI 411	(3)	Immigration and Multiculturalism in Canada
POLI 412	(3)	Canadian Voting/Public Opinion
POLI 417	(3)	Health Care in Canada
POLI 427	(3)	Selected Topics: Canadian Politics
POLI 431	(3)	Nations and States/Developed World
POLI 446	(3)	Les politiques publiques au Québec
POLI 447	(3)	Canadian Constitutional Politics
POLI 469	(3)	Politics of Regulation
POLI 478	(3)	The Canadian Constitution

### **Québec, Études sur le**

QCST 300	(3)	Quebec Culture and Society
QCST 440	(3)	Contemporary Issues in Quebec

### **Sociology**

SOCI 210	(3)	Sociological Perspectives
SOCI 225	(3)	Medicine and Health in Modern Society

SOCI 475 (3) Canadian Ethnic Studies Seminar

### **25.10.8.5 Bachelor of Arts (B.A.) - Major Concentration Canadian Studies (36 credits)**

#### **Required Courses (6 credits)**

CANS 200 (3) Introduction to the Study of Canada  
CANS 501 (3) Interdisciplinarity & Canadian Studies

Normally students will complete CANS 200 and at least 6 credits of core courses in their U1 year, will complete all core courses and at least 3 credits of CANS courses by the end of their U2 year, and will complete CANS 501 in their U3 year.

#### **Complementary Courses (30 credits)**

30 credits selected as specified below.

Note: Students may not choose more than 9 credits in disciplines of their other major or minor concentrations.

#### **200-Level**

12 credits selected from:

ANTH 222 (3) Legal Anthropology  
ECON 219 (3) Current Economic Problems: Topics  
ENGL 228 (3) Canadian Literature 1  
ENGL 229 (3) Canadian Literature 2  
FREN 252 (3) Littérature québécoise  
HIST 202 (3) Survey: Canada to 1867  
HIST 203 (3) Survey: Canada since 1867  
POLI 221 (3) Government of Canada  
POLI 222 (3) Political Process and Behaviour in Canada  
SOCI 230 (3) Sociology of Ethnic Relations

#### **Canadian Studies (CANS)**

6 - 12 credits in interdisciplinary Canadian Studies courses with the subject code CANS.

#### **Canadian Studies (Other Departments)**

6 - 12 credits chosen from courses in Canadian Studies offered by other departments from the list below with at least 6 credits at the 300-level or higher. The courses chosen must all have relevance to the program.

3 credits must be taken in the French language (including language courses). A maximum of 3 credits may be chosen from French as a Second Language (FRSL).

#### **Anthropology**

ANTH 222 (3) Legal Anthropology  
ANTH 305 (3) Arctic Prehistory  
ANTH 306 (3) Native Peoples' History in Canada  
ANTH 317 (3) Prehistory of North America  
ANTH 333 (3) Class and Ethnicity  
ANTH 336 (3) Ethnohistory: North Eastern North America  
ANTH 338 (3) Native Peoples of North America  
ANTH 436 (3) North American Native Peoples

**Art History**

ARTH 300	(3)	Canadian Art to 1914
ARTH 301	(3)	Canadian Art 1914 - Present
ARTH 302	(3)	Aspects of Canadian Art
ARTH 479	(3)	Studies: Modern Art and Theoretical Problems 04

**Biology**

BIOL 240	(3)	Monteregian Flora
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**Economics**

ECON 219	(3)	Current Economic Problems: Topics
ECON 223	(3)	Political Economy of Trade Policy
ECON 303	(3)	Canadian Economic Policy
ECON 305	(3)	Industrial Organization
ECON 306D1	(3)	Labour Economics and Institutions
ECON 306D2	(3)	Labour Economics and Institutions
ECON 308	(3)	Governmental Policy Towards Business
ECON 405	(3)	Natural Resource Economics
ECON 406	(3)	Topics in Economic Policy
ECON 408	(3)	Public Sector Economics 1
ECON 409	(3)	Public Sector Economics 2
ECON 434	(3)	Current Economic Problems

j94.Tj1 0 0 1 70.52 363.3426064 363(3)Economic Health Economics

ENGL 499	(3)	Departmental Seminar
ENGL 527	(3)	Canadian Literature
ENGL 528	(3)	Canadian Literature

### French as a Second Language

FRSL 101	(6)	Beginners' French
FRSL 101D1	(3)	Beginners' French
FRSL 101D2	(3)	Beginners' French
FRSL 103	(3)	Near Beginners' French
FRSL 105	(6)	Intensive Beginners' French
FRSL 206	(3)	Elementary French
FRSL 207	(6)	Elementary French 01
FRSL 207D1	(3)	Elementary French 01
FRSL 207D2	(3)	Elementary French 01
FRSL 208	(6)	Intensive Elementary French
FRSL 211	(6)	Oral and Written French 1
FRSL 211D1	(3)	Oral and Written French 1
FRSL 211D2	(3)	Oral and Written French 1
FRSL 212	(3)	Oral and Written French 1
FRSL 215	(6)	Oral and Written French 1 - Intensive
FRSL 216	(3)	Découvrons Montréal en français
FRSL 302	(3)	Listening Comprehension and Oral Expression 1
FRSL 303	(3)	Listening Comprehension and Oral Expression 2
FRSL 321	(6)	Oral and Written French 2
FRSL 321D1	(3)	Oral and Written French 2
FRSL 321D2	(3)	Oral and Written French 2
FRSL 322	(3)	Oral and Written French 2
FRSL 325	(6)	Oral and Written French 2 - Intensive
FRSL 326	(3)	Découvrons le Québec en français
FRSL 332	(3)	Intermediate French: Grammar 01
FRSL 333	(3)	Intermediate French: Grammar 02
FRSL 407	(3)	Compréhension et expression orales
FRSL 408	(3)	Français oral: Textes et expressions
FRSL 431	(6)	Français fonctionnel avancé
FRSL 431D1	(3)	Français fonctionnel avancé
FRSL 431D2	(3)	Français fonctionnel avancé
FRSL 432	(3)	Français fonctionnel
FRSL 445	(3)	Français fonctionnel, écrit 1
FRSL 446	(3)	Français fonctionnel, écrit 2
FRSL 449	(3)	Le Français des médias
FRSL 455	(3)	Grammaire et création

### French Language and Literature



HIST 370	(3)	Canadian Party Politics 1867-2000
HIST 373	(3)	Canadian Labour History
HIST 395	(3)	Canadian Military Experience
HIST 397	(3)	Canada: Ethnicity, Migration
HIST 403	(3)	History of Quebec Institutions
HIST 414	(3)	Canadian Cultural History
HIST 416	(3)	British and French Identity
HIST 423	(3)	Topics: Migration and Ethnicity
HIST 429	(3)	Topics: Canadian Family History
HIST 432	(3)	The Atlantic Provinces
HIST 434	(3)	British North America 1760-1867
HIST 462D1	(3)	Topics: Canadian Conservatism
HIST 462D2	(3)	Topics: Canadian Conservatism
HIST 463D1	(3)	Topics: History of Women in Canada
HIST 463D2	(3)	Topics: History of Women in Canada
HIST 469D1	(3)	Topics in Canadian Religious History
HIST 469D2	(3)	Topics in Canadian Religious History
HIST 483D1	(3)	History of Montreal
HIST 483D2	(3)	History of Montreal
HIST 493D1	(3)	Topics: Canadian Social History
HIST 493D2	(3)	Topics: Canadian Social History

### **Linguistics**

LING 320	(3)	Sociolinguistics 1
LING 350	(3)	Linguistic Aspects of Bilingualism
LING 520	(3)	Sociolinguistics 2
LING 521	(3)	Dialectology

### **Music**

MUHL 391	(3)	Canadian Music
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### **Political Science**

<del>POL 1221</del>	(3)	Government of Canada Political Process and Beha05.48 Tm((3))reTm(er6T3))Tj1 0i HisCanada
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POLI 372	(3)	Aboriginal Politics in Canada
POLI 378	(3)	The Canadian Judicial Process
POLI 379	(3)	Topics in Canadian Politics
POLI 410	(3)	Canadian Political Parties
POLI 411	(3)	Immigration and Multiculturalism in Canada
POLI 412	(3)	Canadian Voting/Public Opinion
POLI 417	(3)	Health Care in Canada
POLI 427	(3)	Selected Topics: Canadian Politics
POLI 431	(3)	Nations and States/Developed World
POLI 446	(3)	Les politiques publiques au Québec
POLI 447	(3)	Canadian Constitutional Politics
POLI 469	(3)	Politics of Regulation
POLI 478	(3)	The Canadian Constitution



ANTH 222

(3)

Legal Anthropology

Current Economic Problems: T

ECON 306D1

(3)

Labour Economics and Institutions

Labour Economics and Institutions

FRSL 211	(6)	Oral and Written French 1
FRSL 211D1	(3)	Oral and Written French 1
FRSL 211D2	(3)	Oral and Written French 1
FRSL 212	(3)	Oral and Written French 1
FRSL 215	(6)	Oral and Written French 1 - Intensive
FRSL 216	(3)	Découvrons Montréal en français
FRSL 302	(3)	Listening Comprehension and Oral Expression 1
FRSL 303	(3)	Listening Comprehension and Oral Expression 2
FRSL 321	(6)	Oral and Written French 2
	(3)	Oral and Written French 2

GEOG 272	(3)	Earth's Changing Surface
GEOG 301	(3)	Geography of Nunavut
GEOG 309	(3)	Geography of Canada

HIST 463D2	(3)	Topics: History of Women in Canada
HIST 469D1	(3)	Topics in Canadian Religious History
HIST 469D2	(3)	Topics in Canadian Religious History
HIST 483D1	(3)	History of Montreal
HIST 483D2	(3)	History of Montreal
HIST 493D1	(3)	Topics: Canadian Social History
HIST 493D2	(3)	Topics: Canadian Social History

### Linguistics

LING 320	(3)	Sociolinguistics 1
LING 350	(3)	Linguistic Aspects of Bilingualism
LING 520	(3)	Sociolinguistics 2
LING 521	(3)	Dialectology

### Music

MUHL 391	(3)	Canadian Music
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### Political Science

POLI 221	(3)	Government of Canada
POLI 222	(3)	Political Process and Behaviour in Canada
POLI 226	(3)	La vie politique québécoise
POLI 320	(3)	Issues in Canadian Democracy
POLI 321	(3)	Issues: Canadian Public Policy
POLI 326	(3)	Provincial Politics
POLI 336	(3)	Le Québec et le Canada
POLI 337	(3)	Canadian Public Administration
POLI 342	(3)	Canadian Foreign Policy
POLI 371	(3)	Challenge of Canadian Federalism
POLI 372	(3)	Aboriginal Politics in Canada
POLI 378	(3)	The Canadian Judicial Process
POLI 379	(3)	Topics in Canadian Politics
POLI 410	(3)	Canadian Political Parties
POLI 411	(3)	Immigration and Multiculturalism in Canada
POLI 412	(3)	Canadian Voting/Public Opinion
POLI 417	(3)	Health Care in Canada
POLI 427	(3)	Selected Topics: Canadian Politics
POLI 431	(3)	Nations and States/Developed World
POLI 446	(3)	Les politiques publiques au Québec
POLI 447	(3)	Canadian Constitutional Politics
POLI 469	(3)	Politics of Regulation
POLI 478	(3)	The Canadian Constitution

**Québec, Études sur le**

QCST 300	(3)	Quebec Culture and Society
QCST 440	(3)	Contemporary Issues in Quebec

**Sociology**

SOCI 210	(3)	Sociological Perspectives
SOCI 225	(3)	Medicine and Health in Modern Society
SOCI 230	(3)	Sociology of Ethnic Relations
SOCI 318	(3)	Television in Society
SOCI 327	(3)	Jews in North America
SOCI 475	(3)	Canadian Ethnic Studies Seminar

**25.10.8.7 Bachelor of Arts (B.A.) - Joint Honours Component Canadian Studies (36 credits)**

Students who wish to study at the Honours level in two disciplines can combine Joint Honours Components from any two Arts disciplines.

Students with a minimum program GPA of 3.30 in their program courses and, in keeping with Faculty regulations, a minimum CGPA of 3.00 in general, are eligible to apply to the Joint Honours. Application deadlines are December 15 and May 15. Forms are available from the McGill Institute for the Study of Canada (MISC) Office.

Joint Honours students must maintain a GPA of 3.30 in their program courses and, according to Faculty regulations, a minimum CGPA of 3.00 in general.

Joint Honours students should consult an adviser in each department to discuss their course selection and their interdisciplinary research project (if applicable).

**Required Courses (9are Decembery, a minecembery, a m department toouraculty re**

**Canadian Studies (Other Departments)**

6 - 9 credits chosen from courses in Canadian Studies offered by other departments from the list below with at least 6 credits at the 400-level or higher.

3 credits must be taken in the French language (including language courses). A maximum of 3 credits may be chosen from French as a Second Language (FRSL).

**Anthropology**

ANTH 222	(3)	Legal Anthropology
ANTH 305	(3)	Arctic Prehistory
ANTH 306	(3)	Native Peoples' History in Canada
ANTH 317	(3)	Prehistory of North America
ANTH 333	(3)	Class and Ethnicity
ANTH 336	(3)	Ethnohistory: North Eastern North America
ANTH 338	(3)	Native Peoples of North America
ANTH 436	(3)	North American Native Peoples

**Art History**

ARTH 300	(3)	Canadian Art to 1914
ARTH 301	(3)	Canadian Art 1914 - Present
ARTH 302	(3)	Aspects of Canadian Art
ARTH 479	(3)	Studies: Modern Art and Theoretical Problems 04

**Biology**

BIOL 240	(3)	Monteregian Flora
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**Economics**

ECON 219	(3)	Current Economic Problems: Topics
ECON 223	(3)	Political Economy of Trade Policy
ECON 303	(3)	Canadian Economic Policy
ECON 305	(3)	Industrial Organization
ECON 306D1	(3)	Labour Economics and Institutions
ECON 306D2	(3)	Labour Economics and Institutions
ECON 308	(3)	Governmental Policy Towards Business
ECON 405	(3)	Natural Resource Economics
ECON 406	(3)	Topics in Economic Policy
ECON 408	(3)	Public Sector Economics 1
ECON 409	(3)	Public Sector Economics 2
ECON 434	(3)	Current Economic Problems
ECON 440	(3)	Health Economics
ECON 480	(3)	Research Project
ECON 481	(3)	Research Project

**English**





FRSL 326	(3)	Découvrons le Québec en français
FRSL 332	(3)	Intermediate French: Grammar 01
FRSL 333	(3)	Intermediate French: Grammar 02
FRSL 407	(3)	Compréhension et expression orales
FRSL 408	(3)	Français oral: Textes et expressions
FRSL 431	(6)	Français fonctionnel avancé
FRSL 431D1	(3)	Français fonctionnel avancé
FRSL 431D2	(3)	Français fonctionnel avancé
FRSL 432	(3)	Français fonctionnel
FRSL 445	(3)	Français fonctionnel, écrit 1
FRSL 446	(3)	Français fonctionnel, écrit 2
FRSL 449	(3)	Le Français des médias
FRSL 455	(3)	Grammaire et création

### French Language and Literature

FREN 245	(3)	Grammaire avancée
FREN 252	(3)	Littérature québécoise
FREN 315	(3)	Cinéma québécois
FREN 329	(3)	Civilisation québécoise
FREN 336	(3)	La langue française
FREN 372	(3)	Littérature québécoise 1
FREN 375	(3)	Théâtre québécois
FREN 382	(3)	Littérature québécoise 2
FREN 470	(3)	Poésie québécoise
FREN 480	(3)	Littérature québécoise contemporaine
FREN 487	(3)	L'essai québécois

### Geography

GEOG 217	(3)	Cities in the Modern World
GEOG 272	(3)	Earth's Changing Surface
GEOG 301	(3)	Geography of Nunavut
GEOG 309	(3)	Geography of Canada
GEOG 311	(3)	Economic Geography
GEOG 494	(3)	Urban Field Studies
GEOG 495	(3)	Field Studies - Physical Geography
GEOG 497	(3)	Ecology of Coastal Waters
GEOG 499	(3)	Subarctic Field Studies
GEOG 502	(3)	Geography of Northern Development

### History

HIST 202	(3)	Survey: Canada to 1867
HIST 203	(3)	Survey: Canada since 1867

HIST 300	(3)	Nationalisms in Canada
HIST 303	(3)	History of Quebec
HIST 322	(3)	CanadaAmerican Presence since 1939
HIST 333	(3)	Natives and French
HIST 334	(3)	History of New France
HIST 335	(3)	Science and Medicine in Canada
HIST 342	(3)	Canada: External Relations since 1867
HIST 343	(3)	Women in Post-Confederation Canada
HIST 353	(3)	History of Montreal
HIST 357	(3)	Religion and Canadian Society in Historical Perspective
HIST 361	(3)	The Canadian West to 1905
HIST 362	(3)	The Canadian West since 1905
HIST 363	(3)	Canada 1870-1914
HIST 364	(3)	Canada 1914-1945
HIST 367	(3)	Canada since 1945
HIST 370	(3)	Canadian Party Politics 1867-2000
HIST 373	(3)	Canadian Labour History
HIST 395	(3)	Canadian Military Experience
		Canada: Ethnicity

**Music**

MUHL 391 (3) Canadian Music

**Political Science**

POLI 221 (3) Government of Canada  
POLI 222 (3) Political Process and Behaviour in Canada  
POLI 226 (3) La vie politique québécoise  
POLI 320 (3) Issues in Canadian Democracy  
POLI 321 (3) Issues: Canadian Public Policy  
POLI 326 (3) Provincial Politics  
POLI 336 (3) Le Québec et le Canada  
POLI 337 (3) Canadian Public Administration  
POLI 342 (3) Canadian Foreign Policy  
POLI 371 (3) Challenge of Canadian Federalism  
POLI 372 (3) Aboriginal Politics in Canada  
POLI 378 (3) The Canadian Judicial Process  
POLI 379 (3) Topics in Canadian Politics  
POLI 410 (3) Canadian Political Parties  
POLI 411 (3) Immigration and Multiculturalism in Canada  
POLI 412 (3) Canadian Voting/Public Opinion  
POLI 417 (3) Health Care in Canada  
POLI 427 (3) Selected Topics: Canadian Politics  
POLI 431 (3) Nations and States/Developed World  
POLI 446 (3) Les politiques publiques au Québec  
POLI 447 (3) Canadian Constitutional Politics  
POLI 469 (3) Politics of Regulation  
POLI 478 (3) The Canadian Constitution

**Québec, Études sur le**

QCST 300 (3) Quebec Culture and Society  
QCST 440 (3) Contemporary Issues in Quebec

**Sociology**

SOCI 210 (3) Sociological Perspectives  
Medicine and Health 1 61T6nrS.3L 210

## 25.10.9 Catholic Studies (CATH)

### 25.10.9.1 Location

Office of Advising and Student Information Services (OASIS)  
 Dawson Hall, Room 110  
 853 Sherbrooke Street West  
 Montreal, Quebec H3A 2T6

Telephone: 514-398-4210

Fax: 514-398-7185

Email: [interdisciplinary.arts@mcgill.ca](mailto:interdisciplinary.arts@mcgill.ca)

Website: [www.mcgill.ca/catholicstudies](http://www.mcgill.ca/catholicstudies)

Advisers: Monica Hotter, Des Sitaras, Rosa Colaianni

### 25.10.9.2 About Catholic Studies Program

The Catholic Studies Program was established in 2001. The program aims to offer a systematic and comprehensive exploration of a major religious tradition, with a special focus on its interaction with society and culture.

### 25.10.9.3 Catholic Studies (CATH) Faculty

#### Program Committee Chair

John Zucchi (*History*)

#### Program Committee

D. Farrow (*Faculty of Religious Studies*)

J. Fumo (*English*)

J. Hellman (*History*)

T. Kirby (*Faculty of Religious Studies*)

P. Kirkpatrick (*Faculty of Religious Studies*)

F. Sabetti (*Political Science*)

### 25.10.9.4 Bachelor of Arts (B.A.) - Minor Concentration Catholic Studies (18 credits)

The Minor Concentration in Catholic Studies seeks to enrich the intellectual experience and academic options available to students, to broaden the course offerings across the disciplines, and to complement the visibility given to other programs such as Jewish Studies, Islamic Studies, and North American Studies. Core and complementary courses provide students an opportunity to deepen their understanding of Catholicism in an increasingly pluralistic world. The program offers a systematic and critical exploration of the diverse ways in which the Catholic tradition informs culture, institutions, and identity.

#### Required Course (3 credits)

CATH 200 (3) Introduction to Catholicism

#### Complementary Courses (15 credits)

15 credits selected with the following specifications:

9 credits from Catholic Studies courses with the subject code CATH

3 credits from Group I: Catholicism and the Arts course lists

3 credits from Group II: Catholic Social and Intellectual Traditions course lists

#### Catholic Studies (CATH)

9 credits chosen from the list of Catholic Studies courses below.

CATH 310 (3) Catholic Intellectual Traditions

CATH 315	(3)	Catholicism and Moral Culture
CATH 320	(3)	Scripture and Catholicism

**Music**

MUHL 399 (3) Church Music

**Religious Studies**

RELG 203 (3) Bible and Western Culture  
RELG 210 (3) Jesus of Nazareth  
RELG 311 (3) New Testament Studies 1  
RELG 312 (3) New Testament Studies 2  
RELG 341 (3) Introduction: Philosophy of Religion  
RELG 377 (3) Religious Controversies

**Group II: Catholic Social and Intellectual Traditions**

3 credits in Catholic Social and Intellectual Traditions selected from the lists below.

**East Asian Studies**

EAST 385 (3) Society and Community in Korea

**Education**

EDER 208 (3) Philosophy of Human Nature  
EDER 394 (3) Philosophy of God  
EDER 395 (3) Moral Values and Human Action  
EDER 494 (3) Ethics in Practice

**History**

HIST 319 (3) The Scientific Revolution  
HIST 320 (3) European Thought and Culture 1  
HIST 321 (3) European Thought and Culture 2  
HIST 324 (3) History of Ireland  
HIST 325 (3) Renaissance-Reformation Europe  
HIST 336 (3) France, 1789 to 1914  
HIST 357 (3) Religion and Canadian Society in Historical Perspective  
HIST 360 (3) Latin America since 1825  
HIST 401 (3) Topics: Medieval Culture and Society  
HIST 405 (3) European Cultural History 1

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**Political Science**

POLI 226	(3)	La vie politique québécoise
POLI 318	(3)	Comparative Local Government
POLI 319	(3)	Politics of Latin America
POLI 321	(3)	Issues: Canadian Public Policy
POLI 414	(3)	Society and Politics in Italy

**Religious Studies**

RELG 322	(3)	The Church in History 1
RELG 323	(3)	The Church in History 2
RELG 340	(3)	Religion and the Sciences
RELG 532	(3)	History of Christian Thought 1
RELG 533	(3)	History of Christian Thought 2

**Sociology**

SOCI 315	(3)	Sociology of Religion
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**25.10.10 Classics Program (CLAS)****25.10.10.1 Location**

General Office, Room 608  
 Undergraduate Office, Room 638  
 Sixth Floor, Stephen Leacock Building  
 855 Sherbrooke Street West  
 Montreal, Quebec H3A 2T7

Telephone: 514-398-3975

Fax: 514-398-8365

Email: [undergrad.history@mcgill.ca](mailto:undergrad.history@mcgill.ca)

Website: [www.mcgill.ca/classics](http://www.mcgill.ca/classics)

**25.10.10.2 About Classics Program**

Classical Studies offers an in-depth study of the languages, literature, history and culture of ancient Greece and Rome. Students may complete one of the four standard undergraduate programs (Minor, Major, Honours, Joint Honours Concentration). The Minor and Major concentrations provide a useful complement for students in the arts and sciences. Two separate streams allow students to put emphasis either on the ancient languages or on the culture of the ancient Mediterranean. The Joint Honours and Honours degrees are designed to train students who wish to make Classics a basis for academic careers. They also offer students the prospect of favourable consideration for graduate and other professional schools.

All Classics degree options require students to choose courses from one or more of the following thematic areas:

- Classical Languages
- Classical Literature
- Ancient History
- Philosophy and Religion
- Modern Greek

The current list of courses within each thematic area is available on the Classical Studies website: [www.mcgill.ca/classics/teaching/thematic-areas](http://www.mcgill.ca/classics/teaching/thematic-areas).

### 25.10.10.3 Classics Program (CLAS) Faculty

#### Emeritus Professors

Albert Schachter; B.A.(McG.), D.Phil.(Oxf.)(*Hiram Mills Emeritus Professor of Classics*)

George Michael Woloch; B.A.(Yale), M.A.(Oxf.), Ph.D.(Johns Hop.) (*John MacNaughton Emeritus Professor of Classics*)

#### Professor

Hans Beck, Director of Classical Studies; Ph.D.(Erlangen) (*John MacNaughton Professor of Classics*)

#### Assistant Professors

Michael Fronda; B.A.(C' nell), M.A., Ph.D.(Ohio St.)

Charles W. Gladhill; B.A.(Mich.), M.A.(Georgia South.), Ph.D.(Stan.)

Lynn Kozak; B.A.(Barnard), M.A.(Lond.), Ph.D.(Nott.)

#### Visiting Assistant Professor

Nikolaos Pouloupoulos; Ph.D.(Harv.) (*Papachristidis Assistant Professor in Modern Greek Studies*)

#### Faculty Lecturers

Donald W. Baronowski; B.A.(McG.), M.A.(Br. Col.), Ph.D.(Tor.)

Margaret Palczynski; B.Sc.(McG.), M.A.(C' dia)

### 25.10.10.4 Bachelor of Arts (B.A.) - Minor Concentration Classics (18 credits)

Two separate streams allow students to put emphasis either on the ancient languages or on the culture of the ancient Mediterranean.

This program may be expanded to the Major Concentration Classics.

#### Complementary Courses (18 credits)

Students select one of the following two streams of study:

- Classical Language Stream
- Classical Studies Stream

##### Classical Language Stream

18 credits taken from the five thematic areas of Classics: Classical Languages, Classical Literature, Ancient History, Philosophy and Religion, Modern Greek with the specifications described below. For course choices, see the course lists provided for each area.

12 credits minimum in Classical Languages

a minimum of 3 credits at the 300-level or higher of CLAS courses

a maximum of 12 credits of 200-level courses.

##### Classical Studies Stream

18 credits taken from the five thematic areas of Classics: Classical Languages, Classical Literature, Ancient History, Philosophy and Religion, Modern Greek with the specifications described below. For course choices, see the course lists provided for each area.

6 credits minimum in Classical Languages

a minimum of 6 credits in one of the following areas:

- Classical Literature
- Ancient History
- Philosophy and Religion
- Modern Greek

a minimum of 3 credits of 300-level or higher of CLAS courses

a maximum of 12 credits of 200-level courses.

Note: The same course may not count to



**Classical Lingua**

CLAS 200	(3)	Introduction to Ancient Greek Literature
CLAS 203	(3)	Greek Mythology
CLAS 208	(3)	Roman Literature and Society
CLAS 300	(3)	Greek Drama and the Theatre
CLAS 309	(3)	The Greek and Roman Novel
CLAS 311	(3)	Catullus/Ovid
CLAS 312	(3)	Intermediate Latin: Poetry
CLAS 313	(3)	Intermediate Latin: Cicero
CLAS 314	(3)	Intermediate Latin: Historians
CLAS 315	(3)	Intermediate Latin: Selections
CLAS 320	(3)	Reading Ancient Greek
CLAS 321	(3)	Intermediate Greek: Plato/Xenophon
CLAS 322	(3)	Intermediate Greek: Orators
CLAS 323	(3)	Intermediate Greek: Homer
CLAS 324	(3)	Intermediate Greek: Poetry
CLAS 325	(3)	Intermediate Greek: Later Prose
CLAS 326	(3)	Intermediate Greek: Selections
CLAS 370	(3)	Women in Greek Drama
CLAS 380	(3)	Ancient Greek Religion
CLAS 411	(3)	Advanced Latin: Epic
CLAS 412	(3)	Advanced Latin: Lyric
CLAS 413	(3)	Advanced Latin: Satire
CLAS 414	(3)	Advanced Latin: History
CLAS 415	(3)	Advanced Latin: Oratory
CLAS 416	(3)	Advanced Latin: Philosophy
CLAS 418	(3)	Advanced Latin: Special Topics
CLAS 421	(3)	Advanced Ancient Greek: Epic
CLAS 422	(3)	Advanced Ancient Greek: Lyric
CLAS 423	(3)	Advanced Ancient Greek: Drama
CLAS 424	(3)	Advanced Greek: History
CLAS 425	(3)	Advanced Greek: Oratory
CLAS 426	(3)	Advanced Greek: Philosophy
CLAS 428	(3)	Advanced Ancient Greek: Special Topics
CLAS 490	(3)	Greek and Roman Historiography
CLAS 515D1	(3)	Latin Authors and Texts
CLAS 515D2	(3)	Latin Authors and Texts
		Ancient Greek Authors & 1 165.864 678.4 LAS 515D2

ENGL 447	(3)	Crosscurrents/English Literature and European Literature 1
FREN 481	(3)	Littérature et Antiquité
PHIL 354	(3)	Plato
PHIL 355	(3)	Aristotle

**Ancient History - All Departments**

Ancient History courses are taught under several subject codes including: Anthropology (ANTH), Art History (AR

CLAS 323	(3)	Intermediate Greek: Homer
CLAS 380	(3)	Ancient Greek Religion
CLAS 416	(3)	Advanced Latin: Philosophy
CLAS 421	(3)	Advanced Ancient Greek: Epic
CLAS 426	(3)	Advanced Greek: Philosophy
PHIL 345	(3)	Greek Political Theory
PHIL 350	(3)	History and Philosophy of Ancient Science
PHIL 353	(3)	The Presocratic Philosophers
PHIL 354	(3)	Plato
PHIL 355	(3)	Aristotle
PHIL 452	(3)	Later Greek Philosophy
PHIL 453	(3)	Ancient Metaphysics and Natural Philosophy

**Complementary Courses (36 credits)**

Students select one of the following two streams of study:

- Classical Language Stream

- Classical Studies Stream

**Classical Language Stream**

36 credits taken from the five thematic areas of Classics: Classical Languages, Classical Literature, Ancient History, Philosophy and Religion, Modern Greek with the specifications described below. For course choices, see the course lists provided for each area.

18 credits minimum in Classical Languages

a minimum of 6 credits in each of two of the following areas:

- Classical Literature

- Ancient History

- Philosophy and Religion

- Modern Greek

a maximum of 12 credits of 200-level courses.

**Classical Studies Stream**

36 credits taken from the five thematic areas of Classics: Classical Languages, Classical Literature, Ancient History, Philosophy and Religion, Modern Greek with the specifications described below. For course choices, see the course lists provided for each area.

9 credits minimum in Classical Languages

a minimum of 12 credits in one of the following areas:

- Classical Literature

- Ancient History

- Philosophy and Religion

- Modern Greek

a minimum of 3 credits in at least three different areas

a minimum of 3 credits of 300-level or higher of CLAS courses

a maximum of 12 credits of 200-level courses.

Note: The same course may not count toward more than one thematic area requirement.

**Classical Languages - Latin**

CLAS 210	(6)	Introductory Latin 1
CLAS 210D1	(3)	Introductory Latin 1
CLAS 210D2	(3)	Introductory Latin 1
CLAS 310	(3)	Reading Latin
CLAS 311	(3)	Catullus/Ovid
CLAS 312	(3)	Intermediate Latin: Poetry
CLAS 313	(3)	Intermediate Latin: Cicero
CLAS 314	(3)	Intermediate Latin: Historians
CLAS 315	(3)	Intermediate Latin: Selections
CLAS 411	(3)	Advanced Latin: Epic
CLAS 412	(3)	Advanced Latin: Lyric
CLAS 413	(3)	Advanced Latin: Satire
CLAS 414	(3)	Advanced Latin: History
CLAS 415	(3)	Advanced Latin: Oratory
CLAS 416	(3)	Advanced Latin: Philosophy
CLAS 418	(3)	Advanced Latin: Special Topics

CLAS 515D1	(3)	Latin Authors and Texts
CLAS 515D2	(3)	Latin Authors and Texts

### Classical Languages - Ancient Greek

CLAS 220D1	(3)	Introductory Ancient Greek
CLAS 220D2	(3)	Introductory Ancient Greek
CLAS 320	(3)	Reading Ancient Greek
CLAS 321	(3)	Intermediate Greek: Plato/Xenophon
CLAS 322	(3)	Intermediate Greek: Orators
CLAS 323	(3)	Intermediate Greek: Homer
CLAS 324	(3)	Intermediate Greek: Poetry
CLAS 325	(3)	Intermediate Greek: Later Prose
CLAS 326	(3)	Intermediate Greek: Selections
CLAS 421	(3)	Advanced Ancient Greek: Epic
CLAS 422	(3)	Advanced Ancient Greek: Lyric
CLAS 423	(3)	Advanced Ancient Greek: Drama
CLAS 424	(3)	Advanced Greek: History
CLAS 425	(3)	Advanced Greek: Oratory
CLAS 426	(3)	Advanced Greek: Philosophy
CLAS 427	(3)	Advanced Ancient Greek: Documents
CLAS 428	(3)	Advanced Ancient Greek: Special Topics
CLAS 525D1	(3)	Ancient Greek Authors & Texts
CLAS 525D2	(3)	Ancient Greek Authors & Texts

### Classical Literature - Classics (CLAS)

CLAS 200	(3)	Introduction to Ancient Greek Literature
CLAS 203	(3)	Greek Mythology
CLAS 208	(3)	Roman Literature and Society
CLAS 300	(3)	Greek Drama and the Theatre
CLAS 309	(3)	The Greek and Roman Novel
CLAS 311	(3)	Catullus/Ovid
CLAS 312	(3)	Intermediate Latin: Poetry
CLAS 313	(3)	Intermediate Latin: Cicero
CLAS 314	(3)	Intermediate Latin: Historians
CLAS 315	(3)	Intermediate Latin: Selections
		ent Greek Reading Ancient Greek

CLAS 370	(3)	Women in Greek Drama
CLAS 380	(3)	Ancient Greek Religion
CLAS 411	(3)	Advanced Latin: Epic
CLAS 412	(3)	Advanced Latin: Lyric
CLAS 413	(3)	Advanced Latin: Satire
CLAS 414	(3)	Advanced Latin: History
CLAS 415	(3)	Advanced Latin: Oratory
CLAS 416	(3)	Advanced Latin: Philosophy
CLAS 418	(3)	Advanced Latin: Special Topics
CLAS 421	(3)	Advanced Ancient Greek: Epic
CLAS 422	(3)	Advanced Ancient Greek: Lyric
CLAS 423	(3)	Advanced Ancient Greek: Drama
CLAS 424	(3)	Advanced Greek: History
CLAS 425	(3)	Advanced Greek: Oratory
CLAS 426	(3)	Advanced Greek: Philosophy
CLAS 428	(3)	Advanced Ancient Greek: Special Topics
CLAS 490	(3)	Greek and Roman Historiography
CLAS 515D1	(3)	Latin Authors and Texts
CLAS 515D2	(3)	Latin Authors and Texts
CLAS 525D1	(3)	Ancient Greek Authors & Texts
CLAS 525D2	(3)	Ancient Greek Authors & Texts

### Classical Literature - Other Departments

Classical literature courses are also taught under the subject codes of English (ENGL), French (FREN), and Philosophy (PHIL).

ENGL 347	(3)	Great Writings of Europe 1
ENGL 370	(3)	Theatre History: The Long Eighteenth Century
ENGL 447	(3)	Crosscurrents/English Literature and European Literature 1
FREN 481	(3)	Littérature et Antiquité
PHIL 354	(3)	Plato
PHIL 355	(3)	Aristotle

### Ancient History - All Departments

Ancient History courses are taught under several subject codes including: Anthropology (ANTH), Art History (ARTH), Classics (CLAS), History (HIST), and Religious Studies (RELG).

ANTH 335	(3)	Ancient Egyptian Civilization
ARTH 209	(3)	Introduction to Ancient Art and Architecture
CLAS 203	(3)	Greek Mythology
CLAS 314	(3)	Intermediate Latin: Historians
CLAS 323	(3)	Intermediate Greek: Homer
CLAS 380	(3)	Ancient Greek Religion
CLAS 404	(3)	Classical Tradition
CLAS 414	(3)	Advanced Latin: History
CLAS 424	(3)	Advanced Greek: History

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RELG 202	(3)	Religion of Ancient Israel
RELG 210	(3)	Jesus of Nazareth
RELG 280	(6)	Elementary New Testament Greek
RELG 326	(3)	Ancient Christian Church AD54 - AD604
RELG 381	(3)	Advanced New Testament Greek
RELG 482	(3)	Exegesis of Greek New Testament
RELG 502	(3)	Greco-Roman Judaism
RELG 583	(3)	Hellenistic Religious Texts

### Modern Greek

CLAS 230D1	(3)	Introductory Modern Greek
CLAS 230D2	(3)	Introductory Modern Greek
CLAS 331	(3)	Intermediate Modern Greek Language
CLAS 332	(3)	The Modern Greek Novel
CLAS 333	(3)	Modern Greek Poetry
CLAS 335	(3)	Language and Civilization/Modern Greece 2
CLAS 404	(3)	Classical Tradition

### Classics Topics Courses

The following Classics topics courses change topic each time they are taught. Consult the course instructor and Classics Advisor to verify toward which thematic area(s) the course may count for the term in which it is taken.

CLAS 347	(3)	Special Topics in Classics
CLAS 348	(3)	Greek and Roman Topography

### 25.10.10.6 Bachelor of Arts (B.A.) - Honours Classics (60 credits)

According to Faculty regulations, Honours students must maintain a minimum CGPA of 3.00 and maintain a minimum program GPA of 3.00.

#### Required Courses (6 credits)

CLAS 200	(3)	Introduction to Ancient Greek Literature
CLAS 208	(3)	Roman Literature and Society

#### Complementary Courses (54 credits)

54 credits taken from the five thematic areas of Classics: Classical Languages, Classical Literature, Ancient History, Philosophy and Religion, Modern Greek with the specifications described below. For course choices, see the course lists provided for each area.

6 credits minimum from Honours Reading list courses.

30 credits minimum in Classical Languages at the 200-, 300-, 400-levels chosen as follows:

18 credits minimum in one Classical language, ancient Greek or Latin and

12 credits minimum in the other language

minimum of 6 credits of Classical languages at the 400-level

A minimum of 6 credits in each of two of the following areas:

- Classical Literature
- Ancient History
- Philosophy and Religion
- Modern Greek

A maximum of 18 credits of 200-level courses.

Note: The same course may not count toward more than one thematic area requirement.

### **Honours Reading Courses**

CLAS 326	(3)	Intermediate Greek: Selections
CLAS 421	(3)	Advanced Ancient Greek: Epic
CLAS 422	(3)	Advanced Ancient Greek: Lyric
CLAS 423	(3)	Advanced Ancient Greek: Drama
CLAS 424	(3)	Advanced Greek: History
CLAS 425	(3)	Advanced Greek: Oratory
CLAS 426	(3)	Advanced Greek: Philosophy
CLAS 427	(3)	Advanced Ancient Greek: Documents
CLAS 428	(3)	Advanced Ancient Greek: Special Topics
CLAS 525D1	(3)	Ancient Greek Authors & Texts
CLAS 525D2	(3)	Ancient Greek Authors & Texts

### **Classical Literature - Classics (CLAS)**

CLAS 200	(3)	Introduction to Ancient Greek Literature
CLAS 203	(3)	Greek Mythology
CLAS 208	(3)	Roman Literature and Society
CLAS 300	(3)	Greek Drama and the Theatre
CLAS 309	(3)	The Greek and Roman Novel
CLAS 311	(3)	Catullus/Ovid
CLAS 312	(3)	Intermediate Latin: Poetry
CLAS 313	(3)	Intermediate Latin: Cicero
CLAS 314	(3)	Intermediate Latin: Historians
CLAS 315	(3)	Intermediate Latin: Selections
CLAS 320	(3)	Reading Ancient Greek
CLAS 321	(3)	Intermediate Greek: Plato/Xenophon
CLAS 322	(3)	Intermediate Greek: Orators
CLAS 323	(3)	Intermediate Greek: Homer
CLAS 324	(3)	Intermediate Greek: Poetry
CLAS 325	(3)	Intermediate Greek: Later Prose
CLAS 326	(3)	Intermediate Greek: Selections
CLAS 370	(3)	Women in Greek Drama
CLAS 380	(3)	Ancient Greek Religion
CLAS 411	(3)	Advanced Latin: Epic
CLAS 412	(3)	Advanced Latin: Lyric
CLAS 413	(3)	Advanced Latin: Satire
CLAS 414	(3)	Advanced Latin: History
CLAS 415	(3)	Advanced Latin: Oratory
CLAS 416	(3)	Advanced Latin: Philosophy
CLAS 418	(3)	Advanced Latin: Special Topics
CLAS 421	(3)	Advanced Ancient Greek: Epic
CLAS 422	(3)	Advanced Ancient Greek: Lyric
CLAS 423	(3)	Advanced Ancient Greek: Drama

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CLAS 424	(3)	Advanced Greek: History
CLAS 425	(3)	Advanced Greek: Oratory
CLAS 426	(3)	Advanced Greek: Philosophy
CLAS 428	(3)	Advanced Ancient Greek: Special Topics
CLAS 490	(3)	Greek and Roman Historiography
CLAS 515D1	(3)	Latin Authors and Texts
CLAS 515D2	(3)	Latin Authors and Texts
		Ancient Greek Authors & TeCLAS 515D2CLAS reek CLASors &

HIST 391	(3)	Roman History: Republic
HIST 400	(3)	Ancient Greece, Rome and China
HIST 407	(3)	Topics in Ancient History
HIST 449	(3)	Medicine in the Ancient World
HIST 450	(3)	Ancient History Methods
HIST 451	(3)	The Ancient Mediterranean City
HIST 550	(3)	Ancient History: Seminar
HIST 551	(3)	Ancient History: Research
RELG 326	(3)	Ancient Christian Church AD54 - AD604

### Philosophy and Religion

Philosophy and Religion courses are taught under several subject codes including: Classics (CLAS), Philosophy (PHIL), Political Science (POLI), and Religious Studies (RELG).

CLAS 203	(3)	Greek Mythology
CLAS 323	(3)	Intermediate Greek: Homer
CLAS 380	(3)	Ancient Greek Religion
CLAS 416	(3)	Advanced Latin: Philosophy
CLAS 421	(3)	Advanced Ancient Greek: Epic
CLAS 426	(3)	Advanced Greek: Philosophy
PHIL 345	(3)	Greek Political Theory
PHIL 350	(3)	History and Philosophy of Ancient Science
PHIL 353	(3)	The Presocratic Philosophers
PHIL 354	(3)	Plato
PHIL 355	(3)	Aristotle
PHIL 452	(3)	Later Greek Philosophy
PHIL 453	(3)	Ancient Metaphysics and Natural Philosophy
PHIL 454	(3)	Ancient Moral Theory
PHIL 550	(3)	Seminar: Ancient Philosophy 1
PHIL 551	(3)	Seminar: Ancient Philosophy 2
POLI 333	(3)	Western Political Theory 1
	(3)	Religions of the Ancient Near East

CLAS 331	(3)	Intermediate Modern Greek Language
CLAS 332	(3)	The Modern Greek Novel
CLAS 333	(3)	Modern Greek Poetry
CLAS 335	(3)	Language and Civilization/Modern Greece 2
CLAS 404	(3)	Classical Tradition

**Classics Topics Courses**

The following Classics topics courses change topic each time they are taught. Consult the course instructor and Classics Advisor to verify toward which thematic area(s) the course may count for the term in which it is taken.

CLAS 416	(3)	Advanced Latin: Philosophy
CLAS 418	(3)	Advanced Latin: Special Topics
CLAS 515D1	(3)	Latin Authors and Texts
CLAS 515D2	(3)	Latin Authors and Texts

### Classical Languages - Ancient Greek

CLAS 220D1	(3)	Introductory Ancient Greek
CLAS 220D2	(3)	Introductory Ancient Greek
CLAS 320	(3)	Reading Ancient Greek
CLAS 321	(3)	Intermediate Greek: Plato/Xenophon
CLAS 322	(3)	Intermediate Greek: Orators
CLAS 323	(3)	Intermediate Greek: Homer
CLAS 324	(3)	Intermediate Greek: Poetry
CLAS 325	(3)	Intermediate Greek: Later Prose
CLAS 326	(3)	Intermediate Greek: Selections
CLAS 421	(3)	Advanced Ancient Greek: Epic
CLAS 422	(3)	Advanced Ancient Greek: Lyric
CLAS 423	(3)	Advanced Ancient Greek: Drama
CLAS 424	(3)	Advanced Greek: History
CLAS 425	(3)	Advanced Greek: Oratory
CLAS 426	(3)	Advanced Greek: Philosophy
CLAS 427	(3)	Advanced Ancient Greek: Documents
CLAS 428	(3)	Advanced Ancient Greek: Special Topics
CLAS 525D1	(3)	Ancient Greek Authors & Texts
CLAS 525D2	(3)	Ancient Greek Authors & Texts

### Classical Literature - Classics (CLAS)

CLAS 200	(3)	Introduction to Ancient Greek Literature
CLAS 203	(3)	Greek Mythology
CLAS 208	(3)	Roman Literature and Society
CLAS 300	(3)	Greek Drama and the Theatre
CLAS 309	(3)	The Greek and Roman Novel
CLAS 311	(3)	Catullus/Ovid
CLAS 312	(3)	Intermediate Latin: Poetry
CLAS 313	(3)	Intermediate Latin: Cicero
CLAS 314	(3)	Intermediate Latin: Historians
CLAS 315	(3)	Intermediate Latin: Selections
CLAS 320	(3)	Reading Ancient Greek
CLAS 321	(3)	Intermediate Greek: Plato/Xenophon
CLAS 322	(3)	Intermediate Greek: Orators
CLAS 323	(3)	Intermediate Greek: Homer
CLAS 324	(3)	Intermediate Greek: Poetry

CLAS 325	(3)	Intermediate Greek: Later Prose
CLAS 326	(3)	Intermediate Greek: Selections
CLAS 370	(3)	Women in Greek Drama
CLAS 380	(3)	Ancient Greek Religion
CLAS 411	(3)	Advanced Latin: Epic
CLAS 412	(3)	Advanced Latin: Lyric
CLAS 413	(3)	Advanced Latin: Satire
CLAS 414	(3)	Advanced Latin: History
CLAS 415	(3)	Advanced Latin: Oratory
CLAS 416	(3)	Advanced Latin: Philosophy
CLAS 418	(3)	Advanced Latin: Special Topics
CLAS 421	(3)	Advanced Ancient Greek: Epic
CLAS 422	(3)	Advanced Ancient Greek: Lyric
CLAS 423	(3)	Advanced Ancient Greek: Drama
CLAS 424	(3)	Advanced Greek: History
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CLAS 414	(3)	Advanced Latin: History
CLAS 424	(3)	Advanced Greek: History
CLAS 427	(3)	Advanced Ancient Greek: Documents
CLAS 490	(3)	Greek and Roman Historiography
HIST 205	(3)	Ancient Mediterranean History
HIST 231	(3)	Archaeology of the Ancient World
HIST 305	(3)	Ancient Warfare and Imperialism
HIST 323	(3)	History and Sexuality 1
HIST 368	(3)	Greek History: Classical Period
HIST 369	(3)	Greek History: Early Greece
HIST 375	(3)	Roman History: Early Empire
HIST 376	(3)	Roman History: Later Empire
HIST 378	(3)	Roman & Greek Social History
HIST 379	(3)	Greek History: Hellenistic Period
HIST 391	(3)	Roman History: Republic
HIST 400	(3)	Ancient Greece, Rome and China
HIST 407	(3)	Topics in Ancient History
HIST 449	(3)	Medicine in the Ancient World
HIST 450	(3)	Ancient History Methods
HIST 451	(3)	The Ancient Mediterranean City
HIST 550	(3)	Ancient History: Seminar
HIST 551	(3)	Ancient History: Research
RELG 326	(3)	Ancient Christian Church AD54 - AD604

### Philosophy and Religion

Philosophy and Religion courses are taught under several subject codes including: Classics (CLAS), Philosophy (PHIL), Political Science (POLI), and Religious Studies (RELG).

CLAS 203	(3)	Greek Mythology
CLAS 323	(3)	Intermediate Greek: Homer
CLAS 380	(3)	Ancient Greek Religion
CLAS 416	(3)	Advanced Latin: Philosophy
CLAS 421	(3)	Advanced Ancient Greek: Epic
CLAS 426	(3)	Advanced Greek: Philosophy
PHIL 345	(3)	Greek Political Theory
PHIL 350	(3)	History and Philosophy of Ancient Science
PHIL 353	(3)	The Presocratic Philosophers
PHIL 354	(3)	Plato
PHIL 355	(3)	Aristotle
PHIL 452	(3)	Later Greek Philosophy
PHIL 453	(3)	Ancient Metaphysics and Natural Philosophy
PHIL 454	(3)	Ancient Moral Theory
PHIL 550	(3)	Seminar: Ancient Philosophy 1
PHIL 551	(3)	Seminar: Ancient Philosophy 2

Western Political

### **25.10.12.2 About Computer Science**

For a list of teaching staff, an outline of the nature of computer science and the opportunities for study in this discipline, see

MATH 318	(3)	Mathematical Logic
MATH 323	(3)	Probability
MATH 324	(3)	Statistics
MATH 340	(3)	Discrete Structures 2

**25.10.12.5 Bachelor of Arts (B.A.) - Major Concentration Computer Science (36 credits)**

This major concentration represents an in-depth introduction to computer science and its sub-areas. Students that are interested in further study in Computer Science can combine the Major Concentration Computer Science with the Supplementary Minor in Computer Science to constitute a program very close to the Major Computer Science offered by the Faculty of Science. For further information, please consult the program adviser.

Students with two programs in the same department/unit must have a third program in a different department/unit to be eligible to graduate. Please refer to the Faculty of Arts regulations for "Faculty Degree Requirements", "About Program Requirements" and "Departmental Programs" for the Multi-track System options.

**Required Courses (21 credits)**

MATH 133, MATH 140 and MATH 141 (or their equivalents) must be completed prior to taking courses in this program.

COMP 302	(3)	Programming Languages and Paradigms
COMP 303	(3)	Software Development

The remaining credits are selected from computer science (COMP) courses at the 300-level or above excluding COMP 364, COMP 396, COMP 400, and COMP 431. The following courses may also be taken:

COMP 230	(3)	Logic and Computability
ECSE 508	(3)	Multi-Agent Systems

### 25.10.12.6 Bachelor of Arts (B.A.) - Major Concentration Software Engineering (36 credits)

The Major Concentration Software Engineering is a 36 to 37 credit program that focuses on the techniques and methodology required to design and develop complex software systems and covers the subject commonly known as "Software Engineering". The program may be used to satisfy part of the requirements for a B.A. degree.

MATH 133, MATH 140 and MATH 141 (or their equivalents) must be completed prior to taking courses in this program.

Note: This program does not lead to certification as a Professional Engineer.

#### Required Courses (30 credits)

Note: \* Students who have sufficient knowledge in a programming language do not need to take COMP 202 but can replace it with an additional Computer Science complementary course.

COMP 202*	(3)	Introduction to Computing 1
COMP 206	(3)	Introduction to Software Systems
COMP 250	(3)	Introduction to Computer Science
COMP 251	(3)	Data Structures and Algorithms
COMP 302	(3)	Programming Languages and Paradigms
COMP 303	(3)	Software Development
COMP 304	(3)	Object-Oriented Design
COMP 421	(3)	Database Systems
MATH 223	(3)	Linear Algebra
MATH 240	(3)	Discrete Structures 1

#### Complementary Courses (6 credits)

6 - 7 credits selected from the following list or from Computer Science (COMP) courses at the 300-level or above excluding COMP 364, COMP 396, and COMP 431.

Note: \* Students may take either COMP 335 or ECSE 321 but not both.

COMP 322	(1)	Introduction to C++
COMP 335*	(3)	Software Engineering Methods
COMP 361D1	(3)	Software Engineering Project
COMP 361D2	(3)	Software Engineering Project
COMP 529	(4)	Software Architecture
COMP 533	(3)	Object-Oriented Software Development
ECSE 321*	(3)	Introduction to Software Engineering

### 25.10.12.7 Computer Science (COMP) Related Programs

#### 25.10.12.7.1 Joint Honours in Mathematics and Computer Science

For more information, see *Faculty of Science > Mathematics and Statistics (MATH)*. Admission to the program is based on a strong performance in CEGEP-level mathematics courses. Students must consult an Honours adviser in both departments.



## Associate Members

Lara Braitstein (*Religious Studies*)

Christopher Green (*Economics*)

Victor Hori (*Religious Studies*)

Sandra Hyde (*Anthropology*)

Erik Kuhonta (*Political Science*)

John Kurien (*Economics*)

Catherine Lu (*Political Science*)

Lorenz Lüthi (*History*)

Yuzo Ota (*History*)

Junko Shimoyama (*Linguistics*)

Sarah Turner (*Geography*)

### **25.10.13.4 Bachelor of Arts (B.A.) - Minor Concentration East Asian Language and Literature (18 credits)**

This program may be expanded to the Major Concentration East Asian Studies.

#### **Complementary Courses (18 credits)**

18 credits selected as specified below.

#### **Introduction to East Asian Culture**

3 credits, one of the following courses: AS 101, AS 102, AS 103, AS 104, AS 105, AS 106, AS 107, AS 108, AS 109, AS 110, AS 111, AS 112, AS 113, AS 114, AS 115, AS 116, AS 117, AS 118, AS 119, AS 120, AS 121, AS 122, AS 123, AS 124, AS 125, AS 126, AS 127, AS 128, AS 129, AS 130, AS 131, AS 132, AS 133, AS 134, AS 135, AS 136, AS 137, AS 138, AS 139, AS 140, AS 141, AS 142, AS 143, AS 144, AS 145, AS 146, AS 147, AS 148, AS 149, AS 150, AS 151, AS 152, AS 153, AS 154, AS 155, AS 156, AS 157, AS 158, AS 159, AS 160, AS 161, AS 162, AS 163, AS 164, AS 165, AS 166, AS 167, AS 168, AS 169, AS 170, AS 171, AS 172, AS 173, AS 174, AS 175, AS 176, AS 177, AS 178, AS 179, AS 180, AS 181, AS 182, AS 183, AS 184, AS 185, AS 186, AS 187, AS 188, AS 189, AS 190, AS 191, AS 192, AS 193, AS 194, AS 195, AS 196, AS 197, AS 198, AS 199, AS 200, AS 201, AS 202, AS 203, AS 204, AS 205, AS 206, AS 207, AS 208, AS 209, AS 210, AS 211, AS 212, AS 213, AS 214, AS 215, AS 216, AS 217, AS 218, AS 219, AS 220, 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EAST 330D2	(4.5)	Second Level Chinese
EAST 340	(9)	Second Level Japanese
EAST 340D1	(4.5)	Second Level Japanese
EAST 340D2	(4.5)	Second Level Japanese
EAST 420	(3)	Third Level Korean 1
EAST 421	(3)	Third Level Korean 2
EAST 430	(6)	Third Level Chinese
EAST 430D1	(3)	Third Level Chinese
EAST 430D2	(3)	Third Level Chinese
EAST 440	(6)	Third Level Japanese
EAST 440D1	(3)	Third Level Japanese
EAST 440D2	(3)	Third Level Japanese
EAST 520	(3)	Fourth Level Korean 1
EAST 521	(3)	Fourth Level Korean 2
EAST 530	(6)	Fourth Level Chinese
EAST 530D1	(3)	Fourth Level Chinese
EAST 530D2	(3)	Fourth Level Chinese
EAST 533	(3)	Classical Chinese 1
EAST 534	(3)	Classical Chinese 2
EAST 535	(3)	Chinese for Business 1
EAST 536	(3)	Chinese for Business 2
EAST 537D1	(3)	China Today Through Translation
EAST 537D2	(3)	China Today Through Translation
EAST 540D1	(3)	Fourth Level Japanese
EAST 540D2	(3)	Fourth Level Japanese
EAST 543	(3)	Classical Japanese 1
EAST 544	(3)	Classical Japanese 2

### **East Asian Studies (EAST)**

6 credits at the 300-level or above in East Asian Studies (EAST) courses selected from:

EAST 303	(3)	Current Topics: Chinese Studies 1
EAST 304	(3)	Current Topics: Chinese Studies 2
EAST 305	(3)	Current Topics: Japanese Studies 1
EAST 306	(3)	Current Topics: Japanese Studies 2
EAST 307	(3)	Topics: Chinese Language and Literature 1
EAST 308	(3)	Topics: Chinese Language and Literature 2
EAST 313	(3)	Current Topics: Korean Studies 1
EAST 314	(3)	Current Topics: Korean Studies 2
EAST 315	(3)	Survey: Modern Korean Literature in Translation Gender and 5.821 Tm Studies 2



EAST 354	(3)	Taoist and Buddhist Apocalypses
EAST 356	(3)	Modern & Contemporary Chinese Art
EAST 362	(3)	Japanese Cinema
EAST 363	(3)	Aesthetics and Politics of Vision Premodern Japan
EAST 364	(3)	Mass Culture and Postwar Japan
EAST 370	(3)	History of Sexuality in Japan
EAST 385	(3)	Society and Community in Korea
EAST 390	(3)	The Chinese Family in History
EAST 453	(3)	Topics: Chinese Literature
EAST 454	(3)	Topics: Chinese Cinema
EAST 456	(3)	Chinese Drama and Popular Culture
EAST 457	(3)	Brushwork in Chinese Painting
EAST 461	(3)	Inventing Modern Japanese Novel
EAST 462	(3)	Japan in Asia
EAST 464	(3)	Image, Text, Performance
EAST 466	(3)	Feminism and Japan
EAST 467	(3)	Topics: Japanese Cinema
EAST 490	(3)	Confucius and the Classics
EAST 491	(3)	Tutorial: East Asian Languages and Literatures 1
EAST 492	(3)	Tutorial: East Asian Languages and Literatures 2
EAST 493	(3)	Special Topics: East Asian Studies 1
EAST 494	(3)	Special Topics: East Asian Studies 2
EAST 501	(3)	Advanced Topics in Japanese Studies 1
EAST 502	(3)	Advanced Topics in Japanese Studies 2
EAST 503	(3)	Advanced Topics in Chinese Studies 1
EAST 504	(3)	Advanced Topics in Chinese Studies 2
EAST 515	(3)	Seminar: Beyond Orientalism
EAST 550	(3)	Classical Chinese Poetry Themes and Genres
EAST 551	(3)	Technologies of Self in Early China
EAST 552	(3)	The Yijing (Book of Changes)
EAST 559	(3)	Advanced Topics: Chinese Literature
EAST 562	(3)	Japanese Literary Theory and Practice
EAST 563	(3)	Images, Ideograms, Aesthetics
EAST 564	(3)	Structures of Modernity: Japan
EAST 569	(3)	Advanced Topics: Japanese Literature
EAST 582	(3)	Japanese Culture and Society

### **25.10.13.5 Bachelor of Arts (B.A.) - Minor Concentration East Asian Cultural Studies (18 credits)**

This program may be expanded to the Major Concentration East Asian Studies.

#### **Introduction to East Asian Culture**

6 credits, two of the following courses:

EAST 211	(3)	Introduction: East Asian Culture: China
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EAST 212	(3)	Introduction: East Asian Culture: Japan
EAST 213	(3)	Introduction: East Asian Culture: Korea

**East Asian Literature, Culture and Society**

12 credits of courses in East Asian Literature, Culture and Society selected from the list below.

**East Asian Studies (EAST)**

EAST 214	(3)	Japanese Animation & New Media
EAST 215	(3)	Introduction to East Asian Art
EAST 303	(3)	Current Topics: Chinese Studies 1
EAST 304	(3)	Current Topics: Chinese Studies 2
EAST 305	(3)	Current Topics: Japanese Studies 1
EAST 306	(3)	Current Topics: Japanese Studies 2
EAST 307	(3)	Topics: Chinese Language and Literature 1
EAST 308	(3)	Topics: Chinese Language and Literature 2
EAST 313	(3)	Current Topics: Korean Studies 1
EAST 314	(3)	Current Topics: Korean Studies 2
EAST 315	(3)	Survey: Modern Korean Literature in Translation
EAST 350	(3)	Gender and Sexuality in Chinese Literature
EAST 351	(3)	Women Writers of China
		Critical

EAST 494	(3)	Special Topics: East Asian Studies 2
EAST 501	(3)	Advanced Topics in Japanese Studies 1
EAST 502	(3)	Advanced Topics in Japanese Studies 2
EAST 503	(3)	Advanced Topics in Chinese Studies 1
EAST 504	(3)	Advanced Topics in Chinese Studies 2
EAST 515	(3)	Seminar: Beyond Orientalism Classical Chinese Poetry Themes and Genres Poetry

HIST 445	(3)	Late Imperial China
HIST 485D1	(3)	Seminar in Japanese History
HIST 485D2	(3)	Seminar in Japanese History
HIST 497D1	(3)	Topics in Chinese History
HIST 497D2	(3)	Topics in Chinese History
HIST 579	(3)	The Arts of Healing in China
HIST 581	(3)	The Art of War in China

**Management (ORGB)**

ORGB 380	(3)	Cross Cultural Management
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**Political Science (POLI)**

POLI 323	(3)	Developing Areas/China and Japan Foreign Policy:
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2) 15 credits in a single East Asian language at advanced levels, including the classical language, and 3 credits at the 300-level or above in East Asian culture, literature, or society courses related to the East Asian language of study chosen in consultation with the departmental program adviser.

**25.10.13.7 Bachelor of Arts (B.A.) - Major Concentration East Asian Studies (36 credits)**

**Complementary Courses (36 credits)**

36 credits selected as specified below.

**Introduction to East Asian Culture**

6 credits, two of the following courses:

EAST 211	(3)	Introduction: East Asian Culture: China
EAST 212	(3)	Introduction: East Asian Culture: Japan
EAST 213	(3)	Introduction: East Asian Culture: Korea

**East Asian Language**

6 F0 1 8.d: Japan

EAST 521	(3)	Fourth Level Korean 2
EAST 530	(6)	Fourth Level Chinese
EAST 530D1	(3)	Fourth Level Chinese
EAST 530D2	(3)	Fourth Level Chinese
EAST 533	(3)	Classical Chinese 1
EAST 534	(3)	Classical Chinese 2
EAST 535	(3)	Chinese for Business 1
EAST 536	(3)	Chinese for Business 2
EAST 537D1	(3)	China Today Through Translation
EAST 537D2	(3)	China Today Through Translation
EAST 540D1	(3)	Fourth Level Japanese
EAST 540D2	(3)	Fourth Level Japanese
EAST 543	(3)	Classical Japanese 1
EAST 544	(3)	Classical Japanese 2
EAST 547	(3)	Advanced Translation in Japanese

### East Asian Literature, Culture and Society

21 to 24 credits of courses in East Asian Literature, Culture and Society selected from the list below. At least 6 credits must be taken at the 400- or 500-level.

#### East Asian Studies (EAST)

EAST 214	(3)	Japanese Animation & New Media
EAST 215	(3)	Introduction to East Asian Art
EAST 303	(3)	Current Topics: Chinese Studies 1
EAST 304	(3)	Current Topics: Chinese Studies 2
EAST 305	(3)	Current Topics: Japanese Studies 1
EAST 306	(3)	Current Topics: Japanese Studies 2
EAST 307	(3)	Topics: Chinese Language and Literature 1
EAST 308	(3)	Topics: Chinese Language and Literature 2
EAST 313	(3)	Current Topics: Korean Studies 1
EAST 314	(3)	Current Topics: Korean Studies 2
EAST 315	(3)	Survey: Modern Korean Literature in Translation
EAST 350	(3)	Gender and Sexuality in Chinese Literature
EAST 351	(3)	Women Writers of China
EAST 352	(3)	Critical Approaches to Chinese Literature
EAST 353	(3)	Approaches to Chinese Cinema
EAST 354	(3)	Taoist and Buddhist Apocalypses
EAST 356	(3)	Modern & Contemporary Chinese Art
EAST 362	(3)	Japanese Cinema
EAST 363	(3)	Aesthetics and Politics of Vision Premodern Japan
EAST 364	(3)	Mass Culture and Postwar Japan
EAST 370	(3)	History of Sexuality in Japan
EAST 385	(3)	Society and Community in Korea
EAST 390	(3)	The Chinese Family in History

EAST 453	(3)	Topics: Chinese Literature
EAST 454	(3)	Topics: Chinese Cinema
EAST 456	(3)	Chinese Drama and Popular Culture
EAST 457	(3)	Brushwork in Chinese Painting
EAST 461	(3)	Inventing Modern Japanese Novel
EAST 462	(3)	Japan in Asia
EAST 464	(3)	Image, Text, Performance
EAST 466	(3)	Feminism and Japan
EAST 467	(3)	Topics: Japanese Cinema
EAST 490	(3)	Confucius and the Classics
EAST 491	(3)	Tutorial: East Asian Languages and Literatures 1
EAST 492	(3)	Tutorial: East Asian Languages and Literatures 2
EAST 493	(3)	Special Topics: East Asian Studies 1
EAST 494	(3)	Special Topics: East Asian Studies 2
EAST 501	(3)	Advanced Topics in Japanese Studies 1
EAST 502	(3)	Advanced Topics in Japanese Studies 2
EAST 503	(3)	Advanced Topics in Chinese Studies 1
EAST 504	(3)	Advanced Topics in Chinese Studies 2
EAST 515	(3)	Seminar: Beyond Orientalism
EAST 550	(3)	Classical Chinese Poetry Themes and Genres
EAST 551	(3)	Technologies of Self in Early China
EAST 552	(3)	The Yijing (Book of Changes)
EAST 559	(3)	Advanced Topics: Chinese Literature
EAST 562	(3)	Japanese Literary Theory and Practice
EAST 563	(3)	Images, Ideograms, Aesthetics
EAST 564	(3)	Structures of Modernity: Japan
EAST 569	(3)	Advanced Topics: Japanese Literature
EAST 582	(3)	Japanese Culture and Society

**Anthropology (ANTH)**

ANTH 329	(3)	Modern Chinese Society and Change
ANTH 331	(3)	Prehistory of East Asia
ANTH 431	(3)	Problems in East Asian Archaeology
ANTH 500	(3)	Chinese Diversity and Diaspora

**Economics (ECON)**

ECON 335	(3)	The Japanese Economy
ECON 411	(3)	Economic Development: A World Area

**Geography (GEOG)**

GEOG 408	(3)	Geography of Development
GEOG 508	(3)	Resources, People and Power







EAST 440	(6)	Third Level Japanese
EAST 440D1	(3)	Third Level Japanese
EAST 440D2	(3)	Third Level Japanese
EAST 520	(3)	Fourth Level Korean 1
EAST 521	(3)	Fourth Level Korean 2
EAST 530	(6)	Fourth Level Chinese
EAST 530D1	(3)	Fourth Level Chinese
EAST 530D2	(3)	Fourth Level Chinese
EAST 533	(3)	Classical Chinese 1
EAST 534	(3)	Classical Chinese 2
EAST 535	(3)	Chinese for Business 1
EAST 536	(3)	Chinese for Business 2
EAST 537D1	(3)	China Today Through Translation
EAST 537D2	(3)	China Today Through Translation
EAST 540D1	(3)	Fourth Level Japanese
EAST 540D2	(3)	Fourth Level Japanese
EAST 543	(3)	Classical Japanese 1
EAST 544	(3)	Classical Japanese 2
EAST 547	(3)	Advanced Translation in Japanese

**East Asian Literature, Culture and Society (30 credits)**

30 credits of courses in East Asian Literature, Culture and Society.

6 credits of introductory courses in East

EAST 352	(3)	Critical Approaches to Chinese Literature
EAST 353	(3)	Approaches to Chinese Cinema
EAST 354	(3)	Taoist and Buddhist Apocalypses
EAST 356	(3)	Modern & Contemporary Chinese Art
EAST 362	(3)	Japanese Cinema
EAST 363	(3)	Aesthetics and Politics of Vision Premodern Japan
EAST 364	(3)	Mass Culture and Postwar Japan
EAST 370	(3)	History of Sexuality in Japan
EAST 385	(3)	Society and Community in Korea
EAST 390	(3)	The Chinese Family in History
EAST 453	(3)	Topics: Chinese Literature
EAST 454	(3)	Topics: Chinese Cinema
EAST 456	(3)	Chinese Drama and Popular Culture
EAST 457	(3)	Brushwork in Chinese Painting
EAST 461	(3)	Inventing Modern Japanese Novel
EAST 462	(3)	Japan in Asia
		Image, Te

ANTH 431	(3)	Problems in East Asian Archaeology
ANTH 500	(3)	Chinese Diversity and Diaspora

**Economics (ECON)**

ECON 335	(3)	The Japanese Economy
ECON 411	(3)	Economic Development: A World Area

**Geography (GEOG)**

GEOG 408	(3)	Geography of Development
GEOG 508	(3)	Resources, People and Power

**History (HIST)**

HIST 208	(3)	Introduction to East Asian History
HIST 218	(3)	Modern East Asian History
HIST 308	(3)	Formation of Chinese Tradition
HIST 318	(3)	History of Japan 1
HIST 328	(3)	The Qing Empire
HIST 337	(3)	Japanese Intellectual History 1
HIST 338	(3)	Twentieth-Century China
HIST 348	(3)	China: Science-Medicine-Technology
HIST 352	(3)	Japanese Intellectual History 2
HIST 358	(3)	Medieval to Early Modern China
HIST 359	(3)	History of Japan 2
HIST 439	(3)	History of Women in China

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**Religious Studies (RELG)**

RELG 253	(3)	Religions of East Asia
RELG 264	(3)	Introductory Tibetan 1
RELG 265	(3)	Introductory Tibetan 2
RELG 339	(3)	Gender & Sexuality in Buddhism
RELG 344	(3)	Mahayana Buddhism
RELG 352	(3)	Japanese Religions
RELG 354	(3)	Chinese Religions
RELG 364	(3)	Intermediate Tibetan 1
RELG 365	(3)	Intermediate Tibetan 2
RELG 442	(3)	Pure Land Buddhism
RELG 443	(3)	Japanese Esoteric Buddhism
RELG 451	(3)	Zen: Maxims and Methods
RELG 452	(3)	East Asian Buddhism
RELG 464	(3)	Advanced Tibetan 1
RELG 465	(3)	Advanced Tibetan 2
RELG 549	(3)	Japanese Buddhist Philosophy
RELG 557	(3)	Asian Ethical Systems

**25.10.13.9 Bachelor of Arts (B.A.) - Joint Honours Component East Asian Studies (36 credits)**

Students wishing to study at the Honours level in two disciplines can combine Joint Honours Program components in any two Arts disciplines. For a list of available Joint Honours programs, see "Overview of Programs Offered" and "Joint Honours Programs."

According to Faculty regulations, Joint Honours students must maintain a minimum CGPA of 3.00 and maintain a minimum program GPA of 3.00.

**Required Courses (3 credits)**

EAST 495D1	(1.5)	Joint Honours Thesis: East Asian Studies
EAST 495D2	(1.5)	Joint Honours Thesis: East Asian Studies

**Introduction to East Asian Culture**

6 credits, two of the following courses:

EAST 211	(3)	Introduction: East Asian Culture: China
EAST 212	(3)	Introduction: East Asian Culture: Japan
EAST 213	(3)	Introduction: East Asian Culture: Korea

**Required Course (3 credits)**

EAST 495D1	(1.5)	Joint Honours Thesis: East Asian Studies
EAST 495D2	(1.5)	Joint Honours Thesis: East Asian Studies

**Complementary Courses (33 credits)**

33 credits selected as specified below.

**Introduction to East Asian Culture**

6 credits, two of the following courses:

EAST 211	(3)	Introduction: East Asian Culture: China
EAST 212	(3)	Introduction: East Asian Culture: Japan
EAST 213	(3)	Introduction: East Asian Culture: Korea

**East Asian Language**

18 credits in an East Asian language above the introductory level selected from the foll2.484 646.581

EAST 303	(3)	Current Topics: Chinese Studies 1
EAST 304	(3)	Current Topics: Chinese Studies 2
EAST 305	(3)	Current Topics: Japanese Studies 1
EAST 306	(3)	Current Topics: Japanese Studies 2
EAST 307	(3)	Topics: Chinese Language and Literature 1
EAST 308	(3)	Topics: Chinese Language and Literature 2
EAST 313	(3)	Current Topics: Korean Studies 1
EAST 314	(3)	Current Topics: Korean Studies 2
EAST 315	(3)	Survey: Modern Korean Literature in Translation
EAST 350	(3)	Gender and Sexuality in Chinese Literature
EAST 351	(3)	Women Writers of China
EAST 352	(3)	Critical Approaches to Chinese Literature
EAST 353	(3)	Approaches to Chinese Cinema
EAST 354	(3)	Taoist and Buddhist Apocalypses
EAST 356	(3)	Modern & Contemporary Chinese Art
EAST 362	(3)	Japanese Cinema
EAST 363	(3)	Aesthetics and Politics of Vision Premodern Japan
EAST 364	(3)	Mass Culture and Postwar Japan
EAST 370	(3)	History of Sexuality in Japan
EAST 385	(3)	Society and Community in Korea
EAST 390	(3)	The Chinese Family in History
EAST 453	(3)	Topics: Chinese Literature
EAST 454	(3)	Topics: Chinese Cinema
EAST 456	(3)	Chinese Drama and Popular Culture
EAST 457	(3)	Brushwork in Chinese Painting
EAST 461	(3)	Inventing Modern Japanese Novel
EAST 462	(3)	Japan in Asia
EAST 464	(3)	Image, Text, Performance
EAST 466	(3)	Feminism and Japan
EAST 467	(3)	Topics: Japanese Cinema
EAST 490	(3)	Confucius and the Classics
EAST 491	(3)	Tutorial: East Asian Languages and Literatures 1
EAST 492	(3)	Tutorial: East Asian Languages and Literatures 2
EAST 493	(3)	Special Topics: East Asian Studies 1
EAST 494	(3)	Special Topics: East Asian Studies 2
EAST 501	(3)	Advanced Topics in Japanese Studies 1
EAST 502	(3)	Advanced Topics in Japanese Studies 2
EAST 503	(3)	Advanced Topics in Chinese Studies 1
EAST 504	(3)	Advanced Topics in Chinese Studies 2

EAST 559	(3)	Advanced Topics: Chinese Literature
EAST 562	(3)	Japanese Literary Theory and Practice
EAST 563	(3)	Images, Ideograms, Aesthetics
EAST 564	(3)	Structures of Modernity: Japan
EAST 569	(3)	Advanced Topics: Japanese Literature
EAST 582	(3)	Japanese Culture and Society

## **25.10.14 Economics (ECON)**

### **25.10.14.1 Location**

Room 443, Stephen Leacock Building  
855 Sherbrooke Street West  
Montreal, Quebec H3A 2T7

Telephone: 514-398-4850

Fax: 514-398-4938

Email: [undergraduate.economics@mcgill.ca](mailto:undergraduate.economics@mcgill.ca)

Website: [www.mcgill.ca/economics](http://www.mcgill.ca/economics)

### **25.10.14.2 About Economics**

#### **25.10.14.2.1 General**

For more up-to-date, detailed information about the Department and its programs, please visit our websites as follows:

[www.mcgill.ca/economics/undergraduates/majorminor](http://www.mcgill.ca/economics/undergraduates/majorminor) for information on the Major and Minor programs and [www.mcgill.ca/economics/undergraduates/honours](http://www.mcgill.ca/economics/undergraduates/honours) for information on the Honours programs.

U0 students interested in economics should take ECON 208 and ECON 209. These courses provide good preparation for the Honours and Major programs,



## Professors

Mary E. Mackinnon; B.A.(Qu.), M.Phil., D.Phil.(Oxf.)

Robin Thomas Naylor; B.A.(Tor.), M.Sc.(Lond.), Ph.D.(Cant.)

Victoria Zinde-Walsh; M.A.(Wat.), M.Sc., Ph.D.(Moscow St.)

## Associate Professors

Hassan Bencheekroun; Diplôme d'ingénieur d'état(École Mohamedia des Ingénieurs, Morocco), Ph.D.(Laval)

James Engle-Warnick; B.S.(Akron), M.B.A.(Carnegie), Ph.D.(Pitts.)

Franque Grimard; B.A.(York), Ph.D.(Prin.)

C. John Kurien; B.A.(Kerala), M.A., Ph.D.(Vanderbilt)

Daniel Parent; B.A., M.A.(Laval), Ph.D.(Montr.) (*William Dawson Scholar*)

Christopher T.S. Ragan; B.A.(Vic., BC), M.A.(Qu.), Ph.D.(MIT)

Thomas Velk; M.S., Ph.D.(Wis.)

William Watson; B.A.(McG.), Ph.D.(Yale)

Licun Xue; B.Eng., M.Eng.(Tianjin), M.A., Ph.D.(McG.)

## Assistant Professors

Francisco Alvarez-Cuadrado; B.Sc.(Pontifica Comillas), M.A., Ph.D.(Wash.)

Matthieu Chemin; M.Sc. Eng.(École Centrale de Paris), M.Sc., Ph.D.(LSE)

Takashi Kunimoto; B.A.(Doshisha), M.A.(Kyoto), M.A., Ph.D.(Brown)

Sonia Laszlo; B.A.(Ott.), M.A.(W. Ont.), Ph.D.(Tor.)

Markus Poschke; M.Sc.(Maastricht), M.A.(Institut d'Études Politiques, Paris), M.Res., Ph.D.(European University Institute, Italy)

Maxim Sinitsyn; B.A.(Central Methodist), M.S.(Southern Illinois), M.A., Ph.D.(N'western)

Erin Strumpf; B.A.(Smith), Ph.D.(Harv.)

Dhanoos Sutthiphisal; B.Eng.(Chulalonghorn), M.B.A., M.S.(Lehigh), Ph.D.(Calif.-LA)

## Lecturers

Paul Dickinson

Kenneth MacKenzie

### 25.10.14.4 Bachelor of Arts (B.A.) - Minor Concentration Economics (18 credits)

The Minor Concentration Economics is offered in four streams:

Stream I Expandable

**Stream I - Complementary Courses (12 credits)**

12 credits of courses with the Economics subject code ECON with numbers above 209. At least 6 of these credits must be in 300- or 400-level courses.

**Stream II - Required Courses (6 credits)**

Note: Stream II of the Minor Concentration Economics may not be expanded to the Major Concentration Economics.

ECON 208                   (3)                   Microeconomic Analysis and Applications

ECON 209                   (3)                   Macroeconomic Analysis and Applications

**Stream II - Complementary Courses (12 credits)**

12 credits of courses with the Economics subject code ECON with numbers above 209. At least 6 of these credits must be in 300- or 400-level courses.

**Stream III - Complementary Courses (18 credits)**

Stream III is available only to Management students.

18 credits of courses with the Economics subject code ECON with numbers above 209. At least 6 of these credits must be in 300- or 400-level courses.

Note: ECON 295 will not count as part of this Minor Concentration.

**Complementary Courses (18 credits)**

18 credits in Economics selected from other 200- (with numbers above 209), 300-, 400- and 500-level courses. At least 6 of these credits must be in 400- or 500-level courses. No more than 6 credits may be at the 200 level.

Prerequisites: in general 200-level courses have no prerequisites; 300-level courses have ECON 230D1/ECON 230D2 (or the lower level courses ECON 208 and ECON 209, or the combination of MGCR 293 and ECON 295) as prerequisites; and 400-level courses have ECON 230D1/ECON 230D2 as a prerequisite.

**25.10.14.6 Bachelor of Arts (B.A.) - Honours Economics (42 credits)**

The Honours Economics program (B.A. and B.Com.) consists of 30 specified credits of Honours courses and a further 12 credits of approved Economics

ECON 461	(3)	History of Thought 2 - Honours
ECON 469	(3)	Econometrics 2 - Honours

12 credits of Economics courses at the 300-, 400- or 500-level, approved by an Honours adviser. Normally at least 9 of the 12 will be at the 400- or 500-level. (Note: Honours students are not permitted to register for general Economics courses where an Honours course in the same field is offered.)

### **25.10.14.7 Bachelor of Arts (B.A.) - Joint Honours Component Economics (30 credits)**

Students wishing to study at the Honours level in two disciplines can combine Joint Honours Program components in any two Arts disciplines. For a list of available Joint Honours programs, see "Overview of Programs Offered" and "Joint Honours Programs."

Joint Honours students should consult an adviser in each department to discuss their course selection and their interdisciplinary research project (if applicable) in each year of their program.

All Joint Honours students should consult the handout describing the Honours and Joint Honours Programs available in the Economics Department Office, 443 Leacock Building, and on the website at: <http://www.mcgill.ca/economics/undergraduates/honours>.

According to Faculty of Arts regulations, Joint Honours students must maintain a minimum CGPA of 3.00 and maintain a minimum program GPA of 3.00.

#### **Required Math Prerequisites**

All Joint Honours students must complete three Math prerequisites. A sequence of two calculus courses with a grade of C or higher should be completed prior to entering the Joint Honours Program. Prior to their U2 year, students should complete MATH 133. These requirements can be met by having passed equivalent courses at CEGEP or elsewhere. Joint Honours students are encouraged, but not required, to take MATH 222 Calculus 3.

\* Note: Students without high school calculus take MATH 139; those with high school calculus take MATH 140.

MATH 133	(3)	Linear Algebra and Geometry
MATH 139*	(4)	Calculus 1 with Precalculus
MATH 140*	(3)	Calculus 1
MATH 141	(4)	Calculus 2

#### **Required Courses (27 credits)**

Please refer to the department's document "Rules on Stats Courses for Economics Students" available on the following website: <http://www.mcgill.ca/economics/undergraduates/courses/>.

ECON 250D1	(3)	Introduction to Economic Theory: Honours
ECON 250D2	(3)	Introduction to Economic Theory: Honours
ECON 257D1	(3)	Economic Statistics - Honours
ECON 257D2	(3)	Economic Statistics - Honours
ECON 352D1	(3)	Macroeconomics - Honours
ECON 352D2	(3)	Macroeconomics-Honours
ECON 450D1	(3)	Advanced Economic Theory - Honours
ECON 450D2	(3)	Advanced Economic Theory - Honours
ECON 468	(3)	Econometrics 1 - Honours

#### **Complementary Course (3 credits)**

3 credits from:

ECON 460	(3)	History of Thought 1 - Honours
ECON 461	(3)	History of Thought 2 - Honours
ECON 469	(3)	Econometrics 2 - Honours

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### **25.10.14.8 Bachelor of Arts (B.A.) - Joint Honours Component Economics / Joint Honours Component Accounting (60 credits)**

The B.A. Joint Honours Component Economics / Joint Honours Component Accounting program is offered with the Desautels Faculty of Management and is commonly referred to as the Joint honours in Economics and Accounting.

Students in this Joint Honours program should see an Economics adviser and a Management adviser.

All Joint Honours students should consult the handout describing the Honours and Joint Honours Programs available in the Economics Department Office, 443 Leacock Building, and on the website at: <http://www.mcgill.ca/economics/undergraduates/honours>.

According to Faculty of Arts regulations, Joint Honours students must maintain a minimum CGPA of 3.00 and maintain a minimum program GPA of 3.00.

#### **Required Math Prerequisites**

All Joint Honours students must complete three Math prerequisites. A sequence of two calculus courses with a grade of C or higher should be completed prior to entering the Joint Honours Program. Prior to their U2 year, students should complete MATH 133. These requirements can be met by having passed equivalent courses at CEGEP or elsewhere. Joint Honours students are encouraged, but not required, to take MATH 222 Calculus 3.

\* Note: Students without high school calculus take MATH 139; those with high school calculus take MATH 140.

MATH 133	(3)	Linear Algebra and Geometry
MATH 139*	(4)	Calculus 1 with Precalculus
MATH 140*	(3)	Calculus 1
MATH 141	(4)	Calculus 2

#### **Joint Honours Component Economics Requirements**

Questions about the requirements for the 30-credit Economics component of this joint honours program should be directed to the Honours program adviser in the Department of Economics.

#### **Economics - Required Courses (27 credits)**

Please refer to the department's document "Rules on Stats Courses for Economics Students" available on the following website: <http://www.mcgill.ca/economics/undergraduates/courses/>.

ECON 250D1	(3)	Introduction to Economic Theory: Honours
ECON 250D2	(3)	Introduction to Economic Theory: Honours
ECON 257D1	(3)	Economic Statistics - Honours

ACCT 351	(3)	Intermediate Financial Accounting 1
ACCT 352	(3)	Intermediate Financial Accounting 2
ACCT 361	(3)	Intermediate Management Accounting 1 Development of Accounting Thought

ECON 257D2	(3)	Economic Statistics - Honours
ECON 352D1	(3)	Macroeconomics - Honours
ECON 352D2	(3)	Macroeconomics-Honours
ECON 450D1	(3)	Advanced Economic Theory - Honours
ECON 450D2	(3)	Advanced Economic Theory - Honours
ECON 468	(3)	Econometrics 1 - Honours

**Economics - Complementary Courses (3 credits)**

3 credits selected from the following Economics courses:

ECON 460	(3)	History of Thought 1 - Honours
ECON 461	(3)	History of Thought 2 - Honours
	(3)	Econometrics 2 - Honours

## **25.10.14.11 Economics (ECON) Related Programs**

### **25.10.14.11.1 Minors in Management**

Economics students can also do one of the four minors offered by the Desautels Faculty of Management for non-Management students. Please refer to the *Desautels Faculty of Management* section of this publication for detailed information about program requirements and applying.

Finance for Non-Management Students; see *Desautels Faculty of Management* > [section 29.8.7.1: Minor Finance \(For Non-Management Students\) \(18 credits\)](#).

Management for Non-Management Students; see *Desautels Faculty of Management* > [section 29.8.7.2: Minor Management \(For Non-Management Students\) \(18 credits\)](#).

Marketing for Non-Management Students; see *Desautels Faculty of Management* > [section 29.8.7.6: Minor Marketing \(For Non-Management Students\) \(18 credits\)](#).

Operations Management for Non-Management Students; see *Desautels Faculty of Management* > [section 29.8.7.7: Minor Operations Management \(For Non-Management Students\) \(18 credits\)](#).

## **25.10.15 Education for Arts Students Minor Concentration**

### **25.10.15.1 Location**

*Student Affairs Office*

Faculty of Education, 3700 McTavish Street

Email: [sao.education@mcgill.ca](mailto:sao.education@mcgill.ca)

Website: [www.mcgill.ca/edu-sao/minors](http://www.mcgill.ca/edu-sao/minors)

### **25.10.15.2 About Education for Arts Students Minor Concentration**

This Minor Concentration allows Arts students to develop and explore an interest in education. It will give students a solid footing in the basics of pedagogy and may provide a starting point towards a B.Ed. degree.

Completion of the Minor Concentration does not qualify a student for certification to teach in the province of Quebec. Students interested in a teaching career should consult the *Faculty of Education* > *Overview of Faculty Programs*.

### **25.10.15.3 Bachelor of Arts (B.A.) - Minor Concentration Education for Arts Students (18 credits)**

This Minor Concentration allows Arts students to develop and explore an interest in education. It will give students a solid footing in the basics of pedagogy and may provide a starting point towards a B.Ed. degree.

Completion of this Minor Concentration DOES NOT qualify a student to enter the teaching profession. Students interested in a teaching career should consult the Faculty of Education section of this publication for information about Bachelor of Education programs that lead to teacher certification. See Faculty of Education programs offered by the Department of Integrated Studies in Education.

Students should consult the Faculty of Arts section on "Faculty De



EDEC 248

(3)

Multicultural Education

3 credits, one of:

Students should consult the Faculty of Arts sections on "Faculty Degree Requirements," "Program Requirements," and "Departmental Programs" for information on the "Multi-track System" and "Course Requirements" for information on "Courses Outside the Faculties of Arts and of Science" and other topics such as course restrictions, credit counting, etc.

### Required Course (3 credits)

This required course has a prerequisite of an introductory course in psychology taken at either CEGEP or university level (e.g., PSYC 100 or EDPE 300). Students who do not have this prerequisite prior to entry into the program may take either PSYC 100 or EDPE 300. EDPE 300 may count as one of the complementary courses for the minor concentration.

EDPE 335	(3)	Instructional Psychology
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### Complementary Courses (15 credits)

15 credits to be selected as follows:

3 credits to be taken near the end of program completion, one of:

Note: Students with a background in psychology should normally select EDPE 355. EDPE 355 has a prerequisite, either PSYC 231 or permission of the instructor.

EDPE 355	(3)	Cognition and Education
EDPE 555	(3)	Applied Cognitive Science

12 credits selected from the following list:

\*Note: Students may not receive credit for both EDPE 208 and PSYC 304. EDPE 208 is not open to students registered in a Major or Minor Concentration in Psychology.

EDPE 208*	(3)	Personality and Social Development
EDPE 304	(3)	Measurement and Evaluation
EDPE 355	(3)	Cognition and Education
EDPE 377	(3)	Adolescence and Education
EDPE 510	(3)	Learning and Technology
EDPE 515	(3)	Gender Identity Development
EDPE 535	(3)	Instructional Design
EDPE 555	(3)	Applied Cognitive Science
EDPI 309	(3)	Exceptional Students
EDPI 526	(3)	Talented and Gifted Students
EDPI 527	(3)	Creativity and its Cultivation
EDPI 543	(3)	Family, School and Community

## 25.10.17 English (ENGL)

### 25.10.17.1 Location

Departmental Office: Room 155, Arts Building  
853 Sherbrooke Street West  
Montreal, Quebec H3A 2T6

Telephone: 514-398-6550

Fax: 514-398-8146

Website: [www.mcgill.ca/english](http://www.mcgill.ca/english)



## Associate Professors

A. Hepburn; B.A., M.A.(W. Ont.), Ph.D.(Prin.)

M. Hickman; B.A.(Brown), M.A., Ph.D.(Mich.)

B. Kaite; B.A.(C'dia), M.A.(McM.), Ph.D.(Carl.)

T. Mole; B.A., M.A., Ph.D.(Brist.)

M. Morgan; B.A.(Harv.), Ph.D.(Stan.)

P. Neilson; B.A.(Bishop's), M.F.A.(Calg.)

D. Nystrom; B.A.(Wis.), M.A.(Virg.), Ph.D.(Virg., Charlottesville)

T. Ponech; B.A.(McG.), Ph.D.(N'western)

D. Salter; B.A.(Br. Col.), M.A., Ph.D.(Tor.)

E. Schantz; B.A.(Stan.), M.A., Ph.D.(USC)

M.W. Selkirk; B.A.(Alta.), M.F

ENGL 418	(3)	A Major Modernist Writer
ENGL 516	(3)	Shakespeare

**Pre-1800**

3 credits from a list of pre-1800 literature courses:

ENGL 215	(3)	Introduction to Shakespeare
ENGL 301	(3)	Earlier 18th Century Novel
ENGL 302	(3)	Restoration and 18th C. English Literature 1
ENGL 303	(3)	Restoration and 18th C. English Literature 2
ENGL 304	(3)	Later Eighteenth Century Novel
ENGL 305	(3)	Renaissance English Literature 1
ENGL 307	(3)	Renaissance English Literature 2
ENGL 308	(3)	English Renaissance Drama 1
ENGL 309	(3)	English Renaissance Drama 2
ENGL 315	(3)	Shakespeare
ENGL 316	(3)	Milton
ENGL 340	(3)	History of the English Language
ENGL 342	(3)	Introduction to Old English
ENGL 347	(3)	Great Writings of Europe 1
ENGL 348	(3)	Great Writings of Europe 2
ENGL 349	(3)	English Literature and Folklore 1
ENGL 356	(3)	Middle English
ENGL 357	(3)	Chaucer - Canterbury Tales
ENGL 358	(3)	Chaucer - Troilus and Criseyde
ENGL 400	(3)	Earlier English Renaissance
ENGL 401	(3)	Studies in the 17th Century
ENGL 403	(3)	Studies in the 18th Century
ENGL 416	(3)	Studies in Shakespeare
ENGL 452	(3)	Studies in Old English
ENGL 456	(3)	Middle English

**Additional Literature**

6 additional credits from ENGL offerings in Literature which includes all the courses specifically listed in the Literature categories for the Major Concentration in English - Literature program and the courses listed below. Any ENGL course not on these Literature lists, such as courses in Cultural Studies, may not count.

ENGL 199	(3)	FYS: Literature and Democracy
ENGL 204	(3)	English Literature and the Bible
ENGL 237	(3)	Introduction to Study of a Literary Form
ENGL 238	(3)	Comedy
ENGL 297	(3)	Special Topics of Literary Study
ENGL 321	(3)	Caribbean Fiction
ENGL 338	(3)	Short Story
ENGL 343	(3)	Literature and Science 1

ENGL 345	(3)	Literature and Society
ENGL 353	(3)	Interdisciplinary Approaches to Literary Research
ENGL 354	(3)	Sexuality and Representation
ENGL 364	(3)	Creative Writing: Fiction 2
ENGL 369	(3)	Creative Writing: Playwriting
ENGL 385	(3)	Topics in Literature and Film
ENGL 394	(3)	Popular Literary Forms
ENGL 421	(3)	African Literature
ENGL 424	(3)	Irish Literature
ENGL 437	(3)	Studies in Literary Form
ENGL 438	(3)	Studies in Literary Form
ENGL 440	(3)	First Nations and Inuit Literature and Media
ENGL 447	(3)	Crosscurrents/English Literature and European Literature 1
ENGL 464	(3)	Creative Writing: Poetry
ENGL 530	(3)	Literary Forms
ENGL 531	(3)	Literary Forms
ENGL 533	(3)	Literary Movements
ENGL 535	(3)	Literary Themes
ENGL 540	(3)	Literary Theory 1
ENGL 545	(3)	Topics in Literature & Society

**25.10.17.7 Bachelor of Arts (B.A.) - Minor Concentration English - Drama and Theatre (18 credits)**

The Minor Concentration English - Drama and Theatre may be expanded to the Major Concentration - Drama and Theatre.

For the most up-to-date information on Department requirements and detailed course descriptions, please see the English Department Handbook at <http://www.mcgill.ca/english/>.

**Required Courses (6 credits)**

ENGL 230	(3)	Introduction to Theatre Studies
ENGL 269	(3)	Introduction to Performance

**Complementary Courses (12 credits)**

12 credits selected as described below.

**Theatre History Courses**

3 credits from a list of courses in theatre history:

ENGL 306	(3)	Theatre History: Medieval and Early Modern
ENGL 308	(3)	English Renaissance Drama 1
ENGL 309	(3)	English Renaissance Drama 2
ENGL 310	(3)	Restoration and 18th Century Drama
ENGL 314	(3)	20th Century Drama
ENGL 370	(3)	Theatre History: The Long Eighteenth Century
ENGL 371	(3)	Theatre History: 19th to 21st Centuries
ENGL 416	(3)	Studies in Shakespeare
ENGL 467	(3)	Advanced Studies in Theatre History

ENGL 485	(3)	Special Topics in Theatre History 1700-1900
ENGL 486	(3)	Special Topics in Theatre History After 1900
ENGL 516	(3)	Shakespeare
ENGL 565	(3)	Medieval Drama Workshop

### **Drama and Theatre Courses Before 1900**

3 credits from a list of courses in Drama and Theatre before 1900.

ENGL 306	(3)	Theatre History: Medieval and Early Modern
ENGL 308	(3)	English Renaissance Drama 1
ENGL 309	(3)	English Renaissance Drama 2
ENGL 310	(3)	Restoration and 18th Century Drama
ENGL 370	(3)	Theatre History: The Long Eighteenth Century
ENGL 416	(3)	Studies in Shakespeare
ENGL 485	(3)	Special Topics in Theatre History 1700-1900
ENGL 516	(3)	Shakespeare
ENGL 565	(3)	Medieval Drama Workshop

### **Drama and Theatre Option's Offerings - Additional Courses**

6 additional credits from the option's offerings Co 7210 0 1 60.526254.308 is cat(Medie)Tj1 96 1 7 60.526254.30ge Hiinclud(Stalls frost of corom ed aboGL 516)Tj1 0

PHIL 242	(3)	Introduction to Feminist Theory
PSYC 212	(3)	Perception

### **25.10.17.8 Bachelor of Arts (B.A.) - Minor Concentration English - Cultural Studies (18 credits)**

The Minor Concentration English - Cultural Studies may be expanded to the Major Concentration - Cultural Studies.

For the most up-to-date information on Department requirements and detailed course descriptions, please see the English Department Handbook at <http://www.mcgill.ca/english/>.

#### **Required Courses (6 credits)**

ENGL 275	(3)	Introduction to Cultural Studies
ENGL 276	(3)	Methods of Cultural Analysis

#### **Complementary Courses (12 credits)**

12 credits selected as described below.

Note on Topics Courses: The Department of English offers courses which change topic from academic year to academic year. Depending on the topic in a specific year, these courses may count toward different program requirements. At the time they register for a topics course, students should confirm with their program adviser the program requirement it fulfils for that academic year.

#### **Major Figures**

3 credits from a list of courses on Major Figures in Cultural Studies:

ENGL 315	(3)	Shakespeare
ENGL 381	(3)	A Film-Maker 1
ENGL 418	(3)	A Major Modernist Writer
ENGL 481	(3)	A Film-Maker 2
ENGL 516	(3)	Shakespeare

#### **Historical Dimension**

3 credits from a list of courses in Cultural Studies with an historical dimension:

ENGL 350	(3)	Studies in the History of Film 1
ENGL 351	(3)	Studies in the History of Film 2
ENGL 363	(3)	Studies in the History of Film 3
ENGL 374	(3)	Film Movement or Period
ENGL 451	(3)	A Period in Cinema
ENGL 480	(3)	Studies in History of Film 1

#### **Additional Cultural Studies**

6 additional credits from the option's offerings which includes all the courses specifically listed in the Cultural Studies categories above and the courses listed below. Any ENGL course not on these Cultural Studies lists, such as courses in Literature, may not count toward the Minor Concentration English - Cultural Studies.

ENGL 280	(3)	Introduction to Film as Mass Medium
ENGL 354	(3)	Sexuality and Representation
ENGL 366	(3)	Film Genre
ENGL 378	(3)	Media and Culture
ENGL 379	(3)	Film Theory
ENGL 380	(3)	Non-Fic Media: Cinema, Television, Radio

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ENGL 382	(3)	International Cinema 1
ENGL 383	(3)	Studies in Communications 1
ENGL 384	(3)	Semiotics of Advertising
ENGL 385	(3)	Topics in Literature and Film
ENGL 386	(3)	Fans, Celebrities, Audiences
ENGL 388	(3)	Studies in Popular Culture
ENGL 389	(3)	Studies in Popular Culture
ENGL 390	(3)	Political and Cultural Theory
ENGL 391	(3)	Special Topics: Cultural Studies 1
ENGL 395	(3)	Cultural and Theatre Studies
ENGL 397	(3)	Feminist Approaches to Cultural Studies
ENGL 398	(3)	Psychoanalytic Approaches to Cultural Studies
ENGL 476	(3)	Alternative Approaches to Media 1
ENGL 482	(3)	International Cinema 2
ENGL 585	(3)	Cultural Studies: Film
ENGL 586	(3)	Cultural Studies: Other Media
ENGL 587	(3)	Theoretical Approaches to Cultural Studies

**25.10.17.9 Bachelor of Arts (B.A.) - Major Concentration English - Literature (36 credits)**

The Literature option provides a grounding in the basic texts and methods of the discipline as well as wide acquaintance with substantial areas of the field.

For the most up-to-date information on Department requirements and detailed course descriptions, please see the English Department Handbook at <http://www.mcgill.ca/english/>.

**Required Courses (9 credits)**

These courses should be taken in the first tw



ENGL 309	(3)	English Renaissance Drama 2
ENGL 315	(3)	Shakespeare
ENGL 316	(3)	Milton
ENGL 349	(3)	English Literature and Folklore 1
ENGL 400	(3)	Earlier English Renaissance
ENGL 401	(3)	Studies in the 17th Century
ENGL 416	(3)	Studies in Shakespeare
ENGL 501	(3)	16th Century

### Areas of English Literature

6 credits, 3 credits each from two of the following areas: Restoration, 18th Century, Romantic, Victorian, 19th-Century American:

#### Restoration

ENGL 302	(3)	Restoration and 18th C. English Literature 1
ENGL 303	(3)	Restoration and 18th C. English Literature 2

#### 18 Century

ENGL 301	(3)	Earlier 18th Century Novel
ENGL 302	(3)	Restoration and 18th C. English Literature 1
ENGL 303	(3)	Restoration and 18th C. English Literature 2
ENGL 304	(3)	Later Eighteenth Century Novel
ENGL 403	(3)	Studies in the 18th Century
ENGL 449	(3)	Studies in the Gothic
ENGL 503	(3)	18th Century

#### Romantic

ENGL 331	(3)	Literature Romantic Period 1
ENGL 332	(3)	Literature Romantic Period 2
ENGL 405	(3)	Studies in 19th Century Literature 2
ENGL 504	(3)	19th Century

#### Victorian

ENGL 329	(3)	English Novel: 19th Century 1
ENGL 330	(3)	English Novel: 19th Century 2
ENGL 334	(3)	Victorian Poetry
ENGL 404	(3)	Studies in 19th Century Literature 1
ENGL 405	(3)	Studies in 19th Century Literature 2
ENGL 504	(3)	19th Century

#### 19th-Century American

ENGL 326	(3)	19th Century American Prose
ENGL 422	(3)	Studies in 19th Century American Literature



ENGL 345	(3)	Literature and Society
ENGL 353	(3)	Interdisciplinary Approaches to Literary Research
ENGL 354	(3)	Sexuality and Representation
ENGL 364	(3)	Creative Writing: Fiction 2
ENGL 369	(3)	Creative Writing: Playwriting
ENGL 385	(3)	Topics in Literature and Film
ENGL 394	(3)	Popular Literary Forms
ENGL 421	(3)	African Literature
ENGL 424	(3)	Irish Literature
ENGL 437	(3)	Studies in Literary Form
ENGL 438	(3)	Studies in Literary Form
ENGL 440	(3)	First Nations and Inuit Literature and Media
ENGL 447	(3)	Crosscurrents/English Literature and European Literature 1
ENGL 464	(3)	Creative Writing: Poetry
ENGL 530	(3)	Literary Forms
ENGL 531	(3)	Literary Forms
ENGL 533	(3)	Literary Movements
ENGL 535	(3)	Literary Themes
ENGL 540	(3)	Literary Theory 1
ENGL 545	(3)	Topics in Literature & Society

### Major Author

3 credits on a Major Author must be included in the 27 complementary course credits.

ENGL 315	(3)	Shakespeare
ENGL 316	(3)	Milton
ENGL 357	(3)	Chaucer - Canterbury Tales
ENGL 409	(3)	Studies in a Canadian Author
ENGL 416	(3)	Studies in Shakespeare
ENGL 417	(3)	A Major English Poet
ENGL 418	(3)	A Major Modernist Writer
ENGL 516	(3)	Shakespeare

### 25.10.17.10 Bachelor of Arts (B.A.) - Major Concentration English - Drama and Theatre (36 credits)

The Drama and Theatre option tries to place its subject in as broad a social and philosophical context as possible. The Drama and

**Complementary Courses (27 credits)**

27 credits selected as described below.

**Performance-Oriented Courses**

3 credits from a list of performance-oriented courses:

ENGL 365	(3)	Costuming for the Theatre 1
ENGL 367	(3)	Acting 2
ENGL 368	(3)	Stage Scenery and Lighting 1
ENGL 372	(3)	Stage Scenery and Lighting 2
ENGL 373	(3)	Voice and Speech 2
ENGL 375	(3)	Interpretation Dramatic Text
ENGL 376	(3)	Scene Study
ENGL 377	(3)	Costuming for the Theatre 2
ENGL 465D1	(4.5)	Theatre Laboratory
ENGL 465D2	(4.5)	Theatre Laboratory
ENGL 466D1	(3)	Directing for the Theatre
ENGL 466D2	(3)	Directing for the Theatre
ENGL 469	(3)	Acting 3
ENGL 474	(3)	Advanced Practical Work Theatre 2

**Drama and/or Theatre Courses with a Canadian Component**

3 credits from a list of Drama and/or Theatre courses with a Canadian component:

ENGL 313	(3)	Canadian Drama and Theatre
ENGL 413	(3)	Special Topics in Canadian Drama and Theatre

**Theory or Criticism Courses**

3 credits from a list of theory or criticism courses:

ENGL 317	(3)	Theory of English Studies 1
ENGL 318	(3)	Theory of English Studies 2
ENGL 319	(3)	Theory of English Studies 3
ENGL 322	(3)	Theories of the Text
ENGL 346	(3)	Materiality and Sociology of Text
ENGL 352	(3)	Theories of Difference

**Theatre History Courses**

3 credits from a list of courses in theatre history:

ENGL 306	(3)	Theatre History: Medieval and Early Modern
ENGL 308	(3)	English Renaissance Drama 1
ENGL 309	(3)	English Renaissance Drama 2
ENGL 310	(3)	Restoration and 18th Century Drama
ENGL 314	(3)	20th Century Drama
ENGL 370	(3)	Theatre History: The Long Eighteenth Century

ENGL 371	(3)	Theatre History: 19th to 21st Centuries
ENGL 416	(3)	Studies in Shakespeare
ENGL 467	(3)	Advanced Studies in Theatre History
ENGL 485	(3)	Special Topics in Theatre History 1700-1900
ENGL 486	(3)	Special Topics in Theatre History After 1900
ENGL 516	(3)	Shakespeare
ENGL 565	(3)	Medieval Drama Workshop

### **Drama and Theatre Before 1900 Courses**

3 credits from a list of courses in Drama and Theatre before 1900:

ENGL 306	(3)	Theatre History: Medieval and Early Modern
ENGL 308	(3)	English Renaissance Drama 1
ENGL 309	(3)	English Renaissance Drama 2
ENGL 310	(3)	Restoration and 18th Century Drama
ENGL 370	(3)	Theatre History: The Long Eighteenth Century
ENGL 416	(3)	Studies in Shakespeare
ENGL 485	(3)	Special Topics in Theatre History 1700-1900
ENGL 516	(3)	Shakespeare
ENGL 565	(3)	Medieval Drama Workshop

### **Drama and Theatre Option's Offerings - Additional Courses**

12 additional credits from the option's offerings.

This category includes all the courses listed above except required courses, as well as the courses listed below.

Note: Any English course not on the lists specifically for the Drama and Theatre option - such as unlisted courses in Cultural Studies - may not count towards the Drama and





ENGL 318	(3)	Theory of English Studies 2
ENGL 319	(3)	Theory of English Studies 3
ENGL 322	(3)	Theories of the Text
ENGL 346	(3)	Materiality and Sociology of Text
ENGL 352	(3)	Theories of Difference

### Historical Dimension

6 credits from a list of courses in Cultural Studies with an historical dimension:

ENGL 350	(3)	Studies in the History of Film 1
ENGL 351	(3)	Studies in the History of Film 2
ENGL 363	(3)	Studies in the History of Film 3
ENGL 374	(3)	Film Movement or Period
ENGL 451	(3)	A Period in Cinema
ENGL 480	(3)	Studies in History of Film 1

### Additional Cultural Studies

9 additional credits from the option's offerings which includes all the courses specifically listed in the Cultural Studies categories above and the courses listed below. Any ENGL course not on these Cultural Studies lists, such as courses in Literature, may not count toward the Major Concentration English - Cultural Studies.

ENGL 280	(3)	Introduction to Film as Mass Medium
ENGL 354	(3)	Sexuality and Representation
ENGL 366	(3)	Film Genre
ENGL 378	(3)	Media and Culture
ENGL 379	(3)	Film Theory
ENGL 380	(3)	Non-Fic Media: Cinema, Television, Radio
ENGL 382	(3)	International Cinema 1
ENGL 383	(3)	Studies in Communications 1
ENGL 384	(3)	Semiotics of Advertising
ENGL 385	(3)	Topics in Literature and Film
ENGL 386	(3)	Fans, Celebrities, Audiences
ENGL 388	(3)	Studies in Popular Culture
ENGL 389	(3)	Studies in Popular Culture
ENGL 390	(3)	Political and Cultural Theory
ENGL 391	(3)	Special Topics: Cultural Studies 1
ENGL 395	(3)	Cultural and Theatre Studies
ENGL 397	(3)	Feminist Approaches to Cultural Studies
ENGL 398	(3)	Psychoanalytic Approaches to Cultural Studies
ENGL 476	(3)	Alternative Approaches to Media 1
ENGL 482	(3)	International Cinema 2
ENGL 585	(3)	Cultural Studies: Film
ENGL 586	(3)	Cultural Studies: Other Media
ENGL 587	(3)	Theoretical Approaches to Cultural Studies

## **Other Departments**

Students are normally permitted to count 6 credits from other departments toward their English programs. In exceptional circumstances an adviser, approached by a student with strong academic grounds for including a third such course, may grant permission, to a maximum of 9 extra-departmental credits, and must so indicate in advance by signing the departmental program Audit Sheet.

### **25.10.17.12 Bachelor of Arts (B.A.) - Honours English - Literature (60 credits)**

Entry to Honours is by application, normally after two terms in a Departmental program, including at least 18 credits of English. The Faculty of Arts requires that all students admitted to Honours programs complete a second-program Minor in addition to their Honours program.

Admission to the Honours program is limited to a small number of students with excellent records. The minimum CGPA for application to the Honours program is 3.50; students meeting the 3.50 minimum in English Department courses alone (although not in CGPA) may also apply and make a case for their acceptance. In neither instance is admission guaranteed. After admission into the Honours program, the student is required to maintain a CGPA at a level set by the Faculty for graduation with Honours and a program GPA at the level set by the Department.

The Honours program in English requires 60 credits. Students intending to apply for Honours should plan to complete as many of the specific requirements of their option as possible within the first two years. With 15 5to000

ENGL 528 (3) Canadian Literature

### **American Literature**

3 credits from a list of American Literature courses:

ENGL 225 (3) American Literature 1  
ENGL 226 (3) American Literature 2  
ENGL 227 (3) American Literature 3  
ENGL 323 (3) 20th Century American Poetry  
ENGL 324 (3) 20th Century American Prose  
ENGL 325 (3) Modern American Fiction  
ENGL 326 (3) 19th Century American Prose  
ENGL 422 (3) Studies in 19th Century American Literature  
ENGL 423 (3) Studies in 19th Century Literature  
ENGL 525 (3) American Literature

### **Shakespeare**

3 credits from a list of courses on Shakespeare.

ENGL 315 (3) Shakespeare  
ENGL 416 (3) Studies in Shakespeare  
ENGL 516 (3) Shakespeare

### **Theory**

3 credits from a list of courses on theory:

ENGL 317 (3) Theory of English Studies 1  
ENGL 318 (3) Theory of English Studies 2  
ENGL 319 (3) Theory of English Studies 3  
ENGL 322 (3) Theories of the Text  
ENGL 346 (3) Materiality and Sociology of Text  
ENGL 352 (3) Theories of Difference

### **Areas of English Literature**

6 credits, 3 credits each from two of the following areas: Backgrounds of English Literature, Old English, Medieval, Renaissance.

### **Backgrounds of English Literature**

ENGL 340die (3) History of the English Language

ENGL 452 (3) Studies in Old English  
ENGL 553 (3) Old English Literature

**Medieval**

ENGL 337 (3) Theme or Genre in Medieval Literature  
ENGL 349 (3) English Literature and Folklore 1  
ENGL 356 (3) Middle English  
ENGL 357 (3) Chaucer - Canterbury Tales  
ENGL 358 (3) Chaucer - Troilus and Criseyde  
ENGL 456 (3) Middle English  
ENGL 500 (3) Middle English

**Renaissance**

ENGL 215 (3) Introduction to Shakespeare  
ENGL 305 (3) Renaissance English Literature 1  
ENGL 307 (3) Renaissance English Literature 2  
ENGL 308 (3) English Renaissance Drama 1  
ENGL 309 (3) English Renaissance Drama 2  
ENGL 315 (3) Shakespeare  
ENGL 316 (3) Milton  
ENGL 349 (3) English Literature and Folklore 1  
ENGL 400 (3) Earlier English Renaissance  
ENGL 401 (3) Studies in the 17th Century  
ENGL 416 (3) Studies in Shakespeare  
ENGL 501 (3) 16th Century

**Areas of English Literature**

6 creditsCu1 0 0 1 165.81g each from tw0 0 1 165.86471.58903 Tm(6 credoglisth Cfollo0 0 1 221.9491Tm5803 Tm(6 credwing af En:ssasto)Tj Sh, 18tury)Tj1 0 0 1 16

**Romantic**

ENGL 331	(3)	Literature Romantic Period 1
ENGL 332	(3)	Literature Romantic Period 2
ENGL 405	(3)	Studies in 19th Century Literature 2
ENGL 504	(3)	19th Century

**Victorian**

ENGL 329	(3)	English Novel: 19th Century 1
ENGL 330	(3)	English Novel: 19th Century 2
ENGL 334	(3)	Victorian Poetry
ENGL 404	(3)	Studies in 19th Century Literature 1
ENGL 405	(3)	Studies in 19th Century Literature 2
ENGL 504	(3)	19th Century

**19th-Century American**

ENGL 326	(3)	19th Century American Prose
ENGL 422	(3)	Studies in 19th Century American Literature

**Areas of English Literature**

3 credits from one of the follo

ENGL 336	(3)	The 20th Century Novel 2
ENGL 339	(3)	Canadian Prose Fiction 2
ENGL 362	(3)	Poetry of the 20th Century 2
ENGL 407	(3)	The 20th Century
ENGL 408	(3)	The 20th Century
ENGL 419	(3)	Studies in 20th Century Literature
ENGL 443	(3)	Contemporary Women's Fiction

### **Cultural Studies**

3 credits selected from ENGL courses specific to Cultural Studies. Please consult the complementary course lists for Cultural Studies programs for course choices.

### **Drama and Theatre**

3 credits selected from ENGL courses specific to Drama and Theatre. Please consult the complementary course lists for Drama and Theatre programs for

ENGL 416	(3)	Studies in Shakespeare
ENGL 516	(3)	Shakespeare

**Drama and/or Theatre Courses with a Canadian Component**

3 credits from a list of courses in Drama and/or Theatre with a Canadian component:

ENGL 313	(3)	Canadian Drama and Theatre
ENGL 413	(3)	Special Topics in Canadian Drama and Theatre

**Theatre History**

ENGL 346	(3)	Materiality and Sociology of Text
ENGL 352	(3)	Theories of Difference

#### **400-Level Theory Courses**

3 credits from a list of courses with a theoretical component, from the option's offerings at the 400-level or above:

ENGL 458	(3)	Theories of Text and Performance 1
ENGL 459	(3)	Theories of Text and Performance 2
ENGL 467	(3)	Advanced Studies in Theatre History

#### **Performance-Oriented Courses**

9 credits from a list of performance-oriented courses:

ENGL 365	(3)	Costuming for the Theatre 1
ENGL 367	(3)	Acting 2
ENGL 368	(3)	Stage Scenery and Lighting 1
ENGL 372	(3)	Stage Scenery and Lighting 2
ENGL 373	(3)	Voice and Speech 2
ENGL 375	(3)	Interpretation Dramatic Text
ENGL 376	(3)	Scene Study
ENGL 377	(3)	Costuming for the Theatre 2
ENGL 465D1	(4.5)	Theatre Laboratory
ENGL 465D2	(4.5)	Theatre Laboratory
ENGL 466D1	(3)	Directing for the Theatre
ENGL 466D2	(3)	Directing for the Theatre
ENGL 469	(3)	Acting 3
ENGL 474	(3)	Advanced Practical Work Theatre 2

#### **Departmental Offerings in English Literature and/or Cultural Studies**



HISP 324*	(3)	20th Century Drama
ITAL 330*	(3)	Commedia Dell'Arte
MUAR 387*	(3)	The Opera
PHIL 242	(3)	Introduction to Feminist Theory
PSYC 212	(3)	Perception

**25.10.17.14 Bachelor of Arts (B.A.) - Honours English - Cultural Studies (60 credits)**

Entry to Honours is by application, normally after two terms in a Departmental program, including at least 18 credits of English. The Faculty of Arts requires that all students admitted to Honours programs complete a second-program Minor in addition to their Honours program.

Admission to the Honours program is limited to a small number of students with excellent records. The minimum CGPA for application to the Honours program is 3.50; students meeting the 3.50 minimum in English Department courses alone (although not in CGPA) may also apply and make a case for their acceptance. In neither instance is admission guaranteed. After admission into the Honours program, the student is required to maintain a CGPA at a level set by the Faculty for graduation with Honours and a program GP

ENGL 393	(3)	Canadian Cinema
ENGL 440	(3)	First Nations and Inuit Literature and Media
ENGL 441	(3)	Special Topics in Canadian Cultural Studies

### **Theory or Criticism**

3 credits from a list of courses on Theory or Criticism:

ENGL 317	(3)	Theory of English Studies 1
ENGL 318	(3)	Theory of English Studies 2
ENGL 319	(3)	Theory of English Studies 3
ENGL 322	(3)	Theories of the Text
ENGL 346	(3)	Materiality and Sociology of Text
ENGL 352	(3)	Theories of Difference

### **Historical Dimension**

6 credits from a list of courses in Cultural Studies with an historical dimension:

ENGL 350	(3)	Studies in the History of Film 1
ENGL 351	(3)	Studies in the History of Film 2
ENGL 363	(3)	Studies in the History of Film 3
ENGL 374	(3)	Film Movement or Period
ENGL 451	(3)	A Period in Cinema
ENGL 480	(3)	Studies in History of Film 1

### **400-Level Theory**

3 credits from a list of 400-level courses in Cultural Studies with a theoretical component:

ENGL 454	(3)	Topics in Cultural Studies and Gender
ENGL 479	(3)	Philosophy of Film
ENGL 484	(3)	Seminar in the Film
ENGL 487	(3)	Cultural Icons
ENGL 488	(3)	Special Topics / Communications and Mass Media 2
ENGL 489	(3)	Culture and Critical Theory 1
ENGL 490	(3)	Culture and Critical Theory 2
ENGL 492	(3)	Image and Text
ENGL 497	(3)	Seminar in Cultural Studies

### **Literature and/or Drama and Theory**

12 credits in ENGL courses specific to English Literature and/or Drama and Theatre, of which at least 6 credits are at the 300-level. 842 Tm(v)Teditis i10Tj5 cour 1 1ed below

ENGL 366	(3)	Film Genre
ENGL 378	(3)	Media and Culture
ENGL 379	(3)	Film Theory
ENGL 380	(3)	Non-Fic Media: Cinema, Television, Radio
ENGL 382	(3)	International Cinema 1
ENGL 383	(3)	Studies in Communications 1
ENGL 384	(3)	Semiotics of Advertising
ENGL 385	(3)	Topics in Literature and Film
ENGL 386	(3)	Fans, Celebrities, Audiences
ENGL 388	(3)	Studies in Popular Culture
ENGL 389	(3)	Studies in Popular Culture
ENGL 390	(3)	Political and Cultural Theory
ENGL 391	(3)	Special Topics: Cultural Studies 1
ENGL 395	(3)	Cultural and Theatre Studies
ENGL 397	(3)	Feminist Approaches to Cultural Studies
ENGL 398	(3)	Psychoanalytic Approaches to Cultural Studies
ENGL 476	(3)	Alternative Approaches to Media 1
ENGL 482	(3)	International Cinema 2
ENGL 585	(3)	Cultural Studies: Film
ENGL 586	(3)	Cultural Studies: Other Media
ENGL 587	(3)	Theoretical Approaches to Cultural Studies

**Bachelor of Arts (B.A.) - Joint Honours Component English - Literature (36 credits)**

**Advanced Study**

6 credits of advanced study, in one of the following two forms A or B, in order of preference:

A) 6-credits of honours essay:

ENGL 491D1	(3)	Honours Essay
ENGL 491D2	(3)	Honours Essay

B) Two 3-credit 500-level courses selected in consultation with the student's adviser(s).

(In very rare cases, a third alternative may be approved at the discretion of the Joint Honours adviser, but only when it is formally recommended for the joint subject according to the description of that Joint Honours program found in the Arts section of this publication. For example, Joint Honours with Anthropology allows the option of combining 3 credits of essay work with 3 credits in the joint subject to create a joint essay.)

**Pre-1800**

9 credits from a list of pre-1800 literature courses:

ENGL 301	(3)	Earlier 18th Century Novel
ENGL 302	(3)	Restoration and 18th C. English Literature 1
ENGL 303	(3)	Restoration and 18th C. English Literature 2
ENGL 305	(3)	Renaissance English Literature 1
ENGL 307	(3)	Renaissance English Literature 2
ENGL 315	(3)	Shakespeare
ENGL 316	(3)	Milton
ENGL 340	(3)	History of the English Language
ENGL 342	(3)	Introduction to Old English
ENGL 347	(3)	Great Writings of Europe 1
ENGL 348	(3)	Great Writings of Europe 2
ENGL 349	(3)	English Literature and Folklore 1
ENGL 356	(3)	Middle English
ENGL 357	(3)	Chaucer - Canterbury Tales
ENGL 358	(3)	Chaucer - Troilus and Criseyde
ENGL 400	(3)	Earlier English Renaissance
ENGL 401	(3)	Studies in the 17th Century
ENGL 403	(3)	Studies in the 18th Century
ENGL 416	(3)	Studies in Shakespeare
ENGL 452	(3)	Studies in Old English
ENGL 456	(3)	Middle English
ENGL 500	(3)	Middle English
ENGL 501	(3)	16th Century
ENGL 502	(3)	17th Century
ENGL 503	(3)	18th Century
ENGL 516	(3)	Shakespeare
ENGL 553	(3)	Old English Literature

**Theory**

3 credits from a list of courses on Theory:

ENGL 317	(3)	Theory of English Studies 1
ENGL 318	(3)	Theory of English Studies 2
ENGL 319	(3)	Theory of English Studies 3
ENGL 322	(3)	Theories of the Text
ENGL 346	(3)	Materiality and Sociology of Text
ENGL 352	(3)	Theories of Difference

### **500 Level**

3 credits of English (ENGL) courses at the 500-level.

### **Department Offerings**

9 additional credits of English (ENGL) courses, preferably courses at the 300-level or above.

### **25.10.17.16 Bachelor of Arts (B.A.) - Joint Honours Component English - Drama and Theatre (36 credits)**

Students who wish to study at the Honours level in two Arts disciplines may apply to combine Joint Honours Program components from two Arts disciplines. For a list of available Joint Honours programs, see "Overview of Programs Offered" and "Joint Honours Programs." Applications to do a Joint Honours Program in English and another subject in the Faculty of Arts should be submitted once a minimum of 9 credits, and no more than 18 credits, have been completed in English. There are normally two possible application dates for Joint Honours in English: either by the end of January (by which time first-term courses are completed and the grades are available), or at the same time as the Honours application date, typically in mid-April. (Only students who will have completed more than 18 credits in English by the end of January may apply in the Fall.)

(In very rare cases, a third alternative may be approved at the discretion of the Joint Honours adviser, but only when it is formally recommended for the joint subject according to the description of that Joint Honours program found in the Arts section of this publication. For example, Joint Honours with Anthropology allo



**Historical Dimension**

3 credits from a list of courses in Cultural Studies with an historical dimension:

ENGL 350	(3)	Studies in the History of Film 1
ENGL 351	(3)	Studies in the History of Film 2
ENGL 363	(3)	Studies in the History of Film 3
ENGL 374	(3)	Film Movement or Period
ENGL 451	(3)	A Period in Cinema
ENGL 480	(3)	Studies in History of Film 1

**Departmental Offerings**

12 additional credits of English (ENGL) courses, preferably courses at the 300-level or above.

**25.10.17.18 Admission Requirements to the Joint Honours Program – English Component**

Applications will be considered by the Department'



## Lecturers

Robert Myles; B.A., M.A.(Car.), Ph.D.(McG.)

Carolyn Samuel; B.A., Dip.Ed.(McG.), M.Ed.(OISE, Tor.)

## 25.10.19 English for Academic Purposes (EAPR)

### 25.10.19.1 Location

English and French Language Centre  
688 Sherbrooke Street West, 2nd Floor  
Montreal, Quebec H3A 3R1

Telephone: 514-398-4172

Fax: 514-398-5449

Website: [www.mcgill.ca/eflc](http://www.mcgill.ca/eflc)

### 25.10.19.2 About English for Academic Purposes

The English for Academic Purposes (EAP) course, EAPR 250 Research Essay & Rhetoric, develops *academic* writing and critical thinking skills.

The course is for native speakers of English. Near-native English speakers may also take the course, but students with less than advanced English Second Language (ESL) skills are advised to take the academic writing courses listed under ESLN (English as a Second Language) in this publication.

### 25.10.19.3 Entrance Test

Short composition first day of class. Students with less than advanced ESL skills and students with serious writing problems will be advised on other courses they might take.

### 25.10.19.4 English for Academic Purposes (EAPR) Faculty

## Director

TBA

Arts Freshman students enrolled in the Option 3: En français may select up to a maximum of 18 credits from FRSL courses.

### **25.10.21.3 Admission and Registration**

**A Placement Test** is required before admission to any FRSL course, including Beginners' French. *All students should bring a photocopy of their transcript from high school or CEGEP. Departmental permission will be given after the student's level has been determined by a placement test.* Where students' levels in French make admission to this Department inappropriate, they will be directed to the Département de langue et littérature françaises.

No auditors are accepted.

Placement tests and registration take place at the Arts Multimedia Language F

La plupart des cours peuvent être suivis par tout étudiant ayant les connaissances et les capacités voulues : le professeur jugera en dernier ressort. Il existe toutefois quelques restrictions.

1. L'admission aux cours pratiques de langue (Composition 1 et 2, Grammaire avancée, Traduction) est subordonnée à la réussite d'un test qui a pour but de déterminer le niveau de connaissance de l'étudiant et d'assurer que celui-ci sera dirigé vers un cours correspondant à ses besoins. Si la préparation de l'étudiant s'avère insuffisante pour lui permettre de suivre un cours au Département, un cours au Centre d'enseignement du français et de l'anglais (French as a Second Language) lui sera conseillé.
2. L'admission aux programmes de Spécialisation en Traduction est subordonnée à la réussite d'un test.
3. Les étudiants extérieurs au Département peuvent s'inscrire à tous les cours offerts au Département sauf exceptions indiquées dans le libellé des cours.

#### **25.10.22.3 Association générale des étudiants de langue et littérature françaises (AGELF)**

Association regroupant les étudiants de 1er cycle (inscrits à au moins 6 crédits en français) qui a pour but de promouvoir les intérêts de tous ses membres.

#### **25.10.22.4 French Language and Literature (FREN) Faculty**

FREN 201	(3)	Composition 1
FREN 203	(3)	Composition 2
FREN 239	(3)	Stylistique comparée
FREN 245	(3)	Grammaire avancée
FREN 250	(3)	Littérature française avant 1800
FREN 251	(3)	Littérature française depuis 1800
FREN 252	(3)	Littérature québécoise

6 à 12 crédits choisis parmi les cours suivants du Centre d'enseignement du français et de l'anglais :

FRSL 321D1	(3)	Oral and Written French 2
FRSL 321D2	(3)	Oral and Written French 2
FRSL 325	(6)	Oral and Written French 2 - Intensive
FRSL 326	(3)	Découvrons le Québec en français

### **Cours complémentaires - Introduction (3 crédits)**

3 crédits choisis parmi les cours d'introduction :

FREN 222	(3)	Introduction aux études littéraires
FREN 250	(3)	Littérature française avant 1800
FREN 251	(3)	Littérature française depuis 1800
FREN 252	(3)	Littérature québécoise

### **Cours complémentaires - Orientation (15 crédits)**

En outre, l'étudiant(e) doit choisir entre deux orientations (streams) soit :

« Études littéraires », ou « Pratiques littéraires ».

#### **Orientation - Études littéraires**

Les 15 crédits de cours complémentaires se répartiront comme suit :

12 crédits choisis parmi les cours du bloc « Études littéraires » (au moins 3 de ces 12 crédits doivent porter sur la littérature a

FREN 480	(3)	Littérature québécoise contemporaine
FREN 482	(3)	La littérature du 19e siècle 2
FREN 485	(3)	Littérature française contemporaine

**II. Bloc : « Pratiques littéraires »**

**(a) Série Traduction**

FREN 239	(3)	Stylistique comparée
FREN 244	(3)	Traduction 1
FREN 394	(3)	Théorie de la traduction
FREN 441	(3)	Traduction français-anglais
FREN 443	(3)	Traduction littéraire
FREN 492	(3)	Histoire de la traduction
FREN 494	(3)	Traduction spécialisée

**(b) Série Création**

FREN 240	(3)	Atelier d'écriture poétique
FREN 340	(3)	Atelier d'écriture narrative
FREN 440	(3)	Atelier d'écriture dramatique

**(c) Série Édition**

FREN 376	(3)	Correction et révision
FREN 377	(3)	Pratiques de l'édition littéraire
FREN 476	(3)	Le livre

**25.10.22.8 Bachelor of Arts (B.A.) - Concentration mineure langue et littérature françaises - Traduction (18 crédits)**

Concentration mineure convertible en Concentration majeure option Traduction.

Conditions d'admission : Bonne connaissance du français et de l'anglais lus et écrits; cette connaissance est vérifiée à l'aide d'un test, à la suite duquel l'étudiant(e) peut se voir imposer de suivre le cours FREN 239 Stylistique comparée au trimestre d'automne de U1.

**Cours obligatoires (12 crédits)**

FREN 244	(3)	Traduction 1
FREN 346	(3)	Traduction 2
FREN 349	(3)	Traduction 3
FREN 431	(3)	Traduction 4

**Cours complémentaires (6 crédits)**

3 crédits choisis parmi :

FREN 222	(3)	Introduction aux études littéraires
FREN 250	(3)	Littérature française avant 1800
FREN 251	(3)	Littérature française depuis 1800
FREN 252	(3)	Littérature québécoise

3 crédits choisis parmi :

FREN 239 (3) Stylistique comparée

ou 3 crédits choisis dans le bloc :

**« Études littéraires »**

**(a) Série Théorie littéraire**

FREN 337 (3) Analyse et interprétation littéraires

FREN 391 (3) Doctrines et idées littéraires 1

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FREN 394	(3)	Théorie de la traduction
FREN 490	(3)	Théorie littéraire contemporaine
FREN 496	(3)	Doctrines et idées littéraires 2

### **Bloc : « Études littéraires »**

3 crédits choisis parmi les cours de niveau 300 ou 400 du bloc « Études littéraires »

#### **(a) Série Théorie littéraire**

FREN 337	(3)	Analyse et interprétation littéraires
FREN 391	(3)	Doctrines et idées littéraires 1
FREN 490	(3)	Théorie littéraire contemporaine
FREN 496	(3)	Doctrines et idées littéraires 2

#### **(b) Série Oeuvres et courants**

FREN 355	(3)	Littérature du 20e siècle 1
FREN 360	(3)	La littérature du 19e siècle 1
FREN 362	(3)	La littérature du 17e siècle 1
FREN 364	(3)	La littérature du 18e siècle 1
FREN 366	(3)	Littérature de la Renaissance 1
FREN 372	(3)	Littérature québécoise 1
FREN 380	(3)	Littérature de la francophonie
FREN 382	(3)	Littérature québécoise 2
FREN 453	(3)	Littérature du 20e siècle 2
FREN 455	(3)	La littérature médiévale 1
FREN 456	(3)	La littérature médiévale 2
FREN 457	(3)	La littérature de la Renaissance 2
FREN 458	(3)	La littérature du 17e siècle 2
FREN 459	(3)	La littérature du 18e siècle 2
FREN 480	(3)	Littérature québécoise contemporaine
FREN 482	(3)	La littérature du 19e siècle 2
FREN 485	(3)	Littérature française contemporaine

### **25.1022.10 Bachelor of Arts (B.A.) - Concentration majeure langue et littérature françaises - Études et pratiques littéraires (36 crédits)**

Conditions d'admission : Bonne connaissance du français lu, écrit et parlé; cette connaissance pourra être vérifiée à l'aide d'un test.

#### **Cours obligatoires (12 crédits)**

FREN 222	(3)	Introduction aux études littéraires
FREN 333	(3)	Thème de littérature d'Ancien Régime
FREN 444	(3)	Thème de littérature moderne
		Thème de littérature québécoise de littérature moderne québécoise d'après le mode 03.703 0 d'un test.



« Études littéraires », ou « Pratiques littéraires ».

**Orientation - Études littéraires**

Les 24 crédits de cours complémentaires se répartiront comme suit :

18 crédits choisis parmi les cours du bloc « Études littéraires », comme suit :

6 crédits de la série Théorie littéraire

12 crédits de la série Oeuvres et courants (au moins 3 de ces 18 crédits doivent porter sur la littérature av

**(a) Série Traduction**

FREN 239	(3)	Stylistique comparée
FREN 244	(3)	Traduction 1
FREN 394	(3)	Théorie de la traduction
FREN 441	(3)	Traduction français-anglais
FREN 443	(3)	Traduction littéraire
FREN 492	(3)	Histoire de la traduction
FREN 494	(3)	Traduction spécialisée

**(b) Série Création**

FREN 240	(3)	Atelier d'écriture poétique
FREN 340	(3)	Atelier d'écriture narrative
FREN 440	(3)	Atelier d'écriture dramatique

**(c) Série Édition**

FREN 376	(3)	Correction et révision
FREN 377	(3)	Pratiques de l'édition littéraire
FREN 476	(3)	Le livre

**25.102211 Bachelor of Arts (B.A.) - Concentration majeure langue et littérature françaises - Traduction (36 crédits)**

Conditions d'admission : Bonne connaissance du français et de l'anglais lus et écrits; cette connaissance est vérifiée à l'aide d'un test, à la suite duquel l'étudiant(e) peut se voir imposer de suivre le cours FREN 239 Stylistique comparée au trimestre d'automne de U1.

**Cours obligatoires (24 crédits)**

FREN 222	(3)	Introduction aux études littéraires
FREN 231	(3)	Linguistique française
FREN 244	(3)	Traduction 1
FREN 346	(3)	Traduction 2
FREN 347	(3)	Terminologie générale
FREN 349	(3)	Traduction 3
FREN 431	(3)	Traduction 4
FREN 494	(3)	Traduction spécialisée

**Cours complémentaires (12 crédits)**

3 crédits choisis parmi les cours suivants :

FREN 394	(3)	Théorie de la traduction
FREN 441	(3)	Traduction français-anglais
FREN 443	(3)	Traduction littéraire
FREN 492	(3)	Histoire de la traduction

**I. Bloc : « Études littéraires »**

6 crédits choisis parmi les cours du bloc « Études littéraires »

**(a) Série Théorie littéraire**

FREN 337	(3)	Analyse et interprétation littéraires
FREN 391	(3)	Doctrines et idées littéraires 1
FREN 490	(3)	Théorie littéraire contemporaine
FREN 496	(3)	Doctrines et idées littéraires 2

**(b) Série Oeuvres et courants**

FREN 355	(3)	Littérature du 20e siècle 1
FREN 360	(3)	La littérature du 19e siècle 1
FREN 362	(3)	La littérature du 17e siècle 1
FREN 364	(3)	La littérature du 18e siècle 1
FREN 366	(3)	Littérature de la Renaissance 1
FREN 372	(3)	Littérature québécoise 1
FREN 380	(3)	Littérature de la francophonie
FREN 382	(3)	Littérature québécoise 2
FREN 453	(3)	Littérature du 20e siècle 2
FREN 455	(3)	La littérature médiévale 1
FREN 456	(3)	La littérature médiévale 2
FREN 457	(3)	La littérature de la Renaissance 2
FREN 458	(3)	La littérature du 17e siècle 2
FREN 459	(3)	La littérature du 18e siècle 2
FREN 480	(3)	Littérature québécoise contemporaine
FREN 482	(3)	La littérature du 19e siècle 2
FREN 485	(3)	Littérature française contemporaine

**II. Bloc : « Pratiques littéraires »**

3 crédits choisis parmi les cours du bloc « Pratiques littéraires » (à l'exclusion de la série Traduction)

**(a) Série Traduction**

FREN 239	(3)	Stylistique comparée
FREN 244	(3)	Traduction 1
FREN 394	(3)	Théorie de la traduction
FREN 441	(3)	Traduction français-anglais
FREN 443	(3)	Traduction littéraire
FREN 492	(3)	Histoire de la traduction
FREN 494	(3)	Traduction spécialisée

**(b) Série Création**

FREN 240	(3)	Atelier d'écriture poétique
FREN 340	(3)	Atelier d'écriture narrative
FREN 440	(3)	Atelier d'écriture dramatique

**(c) Série Édition**

FREN 376	(3)	Correction et révision
FREN 377	(3)	Pratiques de l'édition littéraire
FREN 476	(3)	Le livre

**25.102212 Bachelor of Arts (B.A.) - Spécialisation en langue et littérature françaises - Études et pratiques littéraires (54 crédits)**

Conditions d'admission : Bonne connaissance du français lu, écrit et parlé; cette connaissance pourra être vérifiée à l'aide d'un test.

FREN 382	(3)	Littérature québécoise 2
FREN 453	(3)	Littérature du 20e siècle 2
FREN 455	(3)	La littérature médiévale 1
FREN 456	(3)	La littérature médiévale 2
FREN 457	(3)	La littérature de la Renaissance 2
FREN 458	(3)	La littérature du 17e siècle 2
FREN 459	(3)	La littérature du 18e siècle 2
FREN 480	(3)	Littérature québécoise contemporaine
FREN 482	(3)	La littérature du 19e siècle 2
FREN 485	(3)	Littérature française contemporaine

## **II. Bloc : « Pratiques littéraires »**

15 crédits choisis parmi les cours du bloc « Pratiques littéraires », comme suit :

au moins 3 crédits de la série Traduction

au moins 3 crédits de la série Création

au moins 3 crédits de la série Édition

### **(a) Série Traduction**

FREN 239	(3)	Stylistique comparée
FREN 244	(3)	Traduction 1
FREN 394	(3)	Théorie de la traduction
FREN 441	(3)	Traduction français-anglais

En plus des cours du programme de Spécialisation, les étudiants doivent faire une Concentration mineure (18 crédits) dans un département autre que celui de leur programme de Spécialisation.

**Cours obligatoires (33 crédits)**

FREN 222	(3)	Introduction aux études littéraires
FREN 231	(3)	Linguistique française
FREN 244	(3)	Traduction 1
FREN 346	(3)	Traduction 2
FREN 347	(3)	Terminologie générale
FREN 349	(3)	Traduction 3
FREN 394	(3)	Théorie de la traduction
FREN 431	(3)	Traduction 4
FREN 441	(3)	Traduction français-anglais
FREN 443	(3)	Traduction littéraire
FREN 494	(3)	Traduction spécialisée

**Cours complémentaires (21 crédits)**

3 crédits choisis parmi les cours suivants :

FREN 336	(3)	La langue française
FREN 434	(3)	Sociolinguistique du français
FREN 492	(3)	Histoire de la traduction

**I. Bloc : « Études littéraires »**

12 crédits choisis parmi les cours du bloc « Études littéraires »

(au moins 3 de ces 12 crédits doivent porter sur la littérature avant 1800

et 3 autres sur la littérature depuis 1800.)

**(a) Série Théorie littéraire**

FREN 337	(3)	Analyse et interprétation littéraires
FREN 391	(3)	Doctrines et idées littéraires 1
FREN 490	(3)	Théorie littéraire contemporaine
FREN 496	(3)	Doctrines et idées littéraires 2

**(b) Série Oeuvres et courants**

FREN 355	(3)	Littérature du 20e siècle 1
FREN 360	(3)	La littérature du 19e siècle 1
FREN 362	(3)	La littérature du 17e siècle 1
FREN 364	(3)	La littérature du 18e siècle 1
FREN 366	(3)	Littérature de la Renaissance 1
FREN 372	(3)	Littérature québécoise 1
FREN 380	(3)	Littérature de la francophonie
FREN 382	(3)	Littérature québécoise 2
FREN 453	(3)	Littérature du 20e siècle 2

FREN 455	(3)	La littérature médiévale 1
FREN 456	(3)	La littérature médiévale 2
FREN 457	(3)	La littérature de la Renaissance 2
FREN 458	(3)	La littérature du 17e siècle 2
FREN 459	(3)	La littérature du 18e siècle 2
FREN 480	(3)	Littérature québécoise contemporaine
FREN 482	(3)	La littérature du 19e siècle 2
FREN 485	(3)	Littérature française contemporaine

## II. Bloc : « Pratiques littéraires »

6 crédits choisis parmi les cours du bloc « Pratiques littéraires » (à l'exclusion de la série Traduction)

### (a) Série Traduction

FREN 239	(3)	Stylistique comparée
FREN 244	(3)	Traduction 1
FREN 394	(3)	Théorie de la traduction
FREN 441	(3)	Traduction français-anglais
FREN 443	(3)	Traduction littéraire
FREN 492	(3)	Histoire de la traduction
FREN 494	(3)	Traduction spécialisée

### (b) Série Création

FREN 240	(3)	Atelier d'écriture poétique
FREN 340	(3)	Atelier d'écriture narrative
FREN 440	(3)	Atelier d'écriture dramatique

### (c) Série Édition

FREN 376	(3)	Correction et révision
FREN 377	(3)	Pratiques de l'édition littéraire
FREN 476	(3)	Le livre

## 25.102214 Bachelor of Arts (B.A.) - Double Spécialisation en langue et littérature françaises - Études et pratiques littéraires (36 crédits)

Conditions d'admission : Bonne connaissance du français lu, écrit et parlé; cette connaissance pourra être vérifiée à l'aide d'un test.

L'obtention d'un baccalauréat avec Spécialisation ou Double Spécialisation est obligatoire pour l'admission dans les programmes de 2e et 3e cycles (maîtrise et doctorat).

En Spécialisation, les étudiants doivent conserver au minimum une moyenne de 3.00 pour l'ensemble do

FREN 450	(3)	Thème de littérature québécoise
FREN 464D1	(3)	Projet de recherche individuel
FREN 464D2	(3)	Projet de recherche individuel
FREN 595	(3)	Séminaire avancé lettres françaises

### Cours complémentaires (15 crédits)

#### I. Bloc : « Études littéraires »

6 crédits choisis parmi les cours du bloc « Études littéraires », comme suit :

3 crédits de la série Théorie littéraire

3 crédits de la série Oeuvres et courants

##### (a) Série Théorie littéraire

FREN 337	(3)	Analyse et interprétation littéraires
FREN 391	(3)	Doctrines et idées littéraires 1
FREN 490	(3)	Théorie littéraire contemporaine
FREN 496	(3)	Doctrines et idées littéraires 2

##### (b) Série Oeuvres et courants

(3)Lititqerprétali00e siècle 20Tj1300 1 165.864 493252 0Tm((3))Tj1 0 0 1 70.52 493252 0Tm0uvre690Lititqerprétati0 070e siècle 1





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FREN 492	(3)	Histoire de la traduction
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### **I. Bloc : « Études littéraires »**

6 crédits choisis parmi les cours du bloc « Études littéraires »

(au moins 3 de ces crédits doivent porter sur la littérature avant 1800

et 3 autres sur la littérature depuis 1800.)

#### **(a) Série Théorie littéraire**

FREN 337	(3)	Analyse et interprétation littéraires
FREN 391	(3)	Doctrines et idées littéraires 1
FREN 490	(3)	Théorie littéraire contemporaine
FREN 496	(3)	Doctrines et idées littéraires 2

#### **(b) Série Oeuvres et courants**

FREN 355	(3)	Littérature du 20e siècle 1
FREN 360	(3)	La littérature du 19e siècle 1
FREN 362	(3)	La littérature du 17e siècle 1
FREN 364	(3)	La littérature du 18e siècle 1
FREN 366	(3)	Littérature de la Renaissance 1
FREN 372	(3)	Littérature québécoise 1
FREN 380	(3)	Littérature de la francophonie
FREN 382	(3)	Littérature québécoise 2
FREN 453	(3)	Littérature du 20e siècle 2
FREN 455	(3)	La littérature médiévale 1
FREN 456	(3)	La littérature médiévale 2
FREN 457	(3)	La littérature de la Renaissance 2
FREN 458	(3)	La littérature du 17e siècle 2
FREN 459	(3)	La littérature du 18e siècle 2
FREN 480	(3)	Littérature québécoise contemporaine
FREN 482	(3)	La littérature du 19e siècle 2
FREN 485	(3)	Littérature française contemporaine

### **II. Bloc : « Pratiques littéraires »**

3 crédits choisis parmi les cours du bloc « Pratiques littéraires » (à l'exclusion de la série Traduction)

#### **(a) Série Traduction**

FREN 239	(3)	Stylistique comparée
FREN 244	(3)	Traduction 1
FREN 394	(3)	Théorie de la traduction
FREN 441	(3)	Traduction français-anglais
FREN 443	(3)	Traduction littéraire
FREN 492	(3)	Histoire de la traduction
FREN 494	(3)	Traduction spécialisée

**(b) Série Création**

FREN 240	(3)	Atelier d'écriture poétique
FREN 340	(3)	Atelier d'écriture narrative
FREN 440	(3)	Atelier d'écriture dramatique

**(c) Série Édition**

FREN 376	(3)	Correction et révision
FREN 377	(3)	Pratiques de l'édition littéraire
FREN 476	(3)	Le livre

**25.1022.16 French Language and Literature (FREN) Related Programs****25.1022.16.1 Concentration majeure langue et littérature françaises – Linguistique du français (36 crédits)**

Ce programme est aboli à partir de septembre 2009. Les étudiants inscrits à ce programme avant cette date doivent consulter la directrice des Études de 1er cycle qui les guidera sur la manière de compléter leur programme.

**Geograph**

GEOG 203	(3)	Environmental Systems
GEOG 210	(3)	Global Places and Peoples
GEOG 216	(3)	Geography of the World Economy
GEOG 217	(3)	Cities in the Modern World
GEOG 272	(3)	Earth's Changing Surface

9 credits from Geography (GEOG) courses at the 300- or 400-level.

**25.10.23.5 Bachelor of Arts (B.A.) - Minor Concentration Geographic Information Systems (18 credits)**

This minor concentration is designed to provide students in the Faculty of Arts who have an interest in Geographic Information Systems (GIS) with a basic, but comprehensive knowledge of concepts and methods relating to the analysis of geospatial data.

This minor concentration may be expanded into the Major Concentration Geography but not into the Major Concentration Geography - Urban Systems.

**Required Courses (15 credits)**

GEOG 201	(3)	Introductory Geo-Information Science
GEOG 306	(3)	Raster Geo-Information Science
GEOG 307	(3)	Socioeconomic Applications of GIS
GEOG 308	(3)	Principles of Remote Sensing
GEOG 506	(3)	Advanced Geographic Information Science

**Complementary Courses (3 credits)**

3 credits selected from:

ATOC 309	(3)	Weather Radars and Satellites
COMP 420	(3)	Secondary Storage Algorithms and Data Structures
COMP 557	(3)	Fundamentals of Computer Graphics
GEOG 535	(3)	Remote Sensing and Interpretation
GEOG 551	(3)	Environmental Decisions
URBP 505	(3)	Geographic Information Systems

**25.10.23.6 Bachelor of Arts (B.A.) - Minor Concentration Geography (Urban Systems) (18 credits)**

This minor concentration may be expanded into the Major Concentration Geography (Urban Systems).

**Complementary Courses (18 credits)**

18 credits selected as follows:

**Group A**

9 - 12 credits selected from:

GEOG 210	(3)	Global Places and Peoples
GEOG 217	(3)	Cities in the Modern World
GEOG 303	(3)	Health Geography
GEOG 311	(3)	Economic Geography
GEOG 315	(3)	Urban Transportation Geography
GEOG 331	(3)	Urban Social Geography
GEOG 494	(3)	Urban Field Studies

**Group B**

6 - 9 credits selected from:

**Architecture**

Although Architecture courses have prerequisites, they are waived for Urban Systems students, but the course may not be taken before the year indicated:

U2 - ARCH 378;

U3 - ARCH 515, ARCH 527, ARCH 528, ARCH 529, and ARCH 550.

ARCH 550 requires permission of the Geography adviser.

Note: ARCH 550 has the same content as CIVE 433 but requires an additional project.

ARCH 378                      (3)                      Site Usage

**25.10.23.7 Bachelor of Arts (B.A.) - Major Concentration Geography (36 credits)**

## Geography

The remaining 18 credits are to be selected from Geography (GEOG) courses excluding GEOG 200 and GEOG 205. Of these 18 credits, at least 3 credits must be at the 400-level or above.

### 25.10.23.8 Bachelor of Arts (B.A.) - Major Concentration Geography - Urban Systems (36 credits)

This interdisciplinary concentration exposes students to the various approaches to urban studies in many disciplines. Students who wish to retain the option of entering a Geography honours program should include GEOG 201, GEOG 203, GEOG 216 and GEOG 272 as well as the 9 credits of Required Courses listed below.

Students should observe the levels indicated by course numbers: 200-level are first year (U1); 300-level, second year (U2); 400- or 500-level, third year (U3).

For students majoring in Urban Systems, the total number of credits permitted outside Arts and Science is 30. Faculty of Arts regulations about "Courses Outside the Faculties of Arts and of Science" may be found with the Arts guidelines for "Course Requirements".

#### Required Courses (12 credits)

GEOG 201	(3)	Introductory Geo-Information Science
GEOG 217	(3)	Cities in the Modern World
GEOG 331	(3)	Urban Social Geography
GEOG 351	(3)	Quantitative Methods

#### Complementary Courses (24 credits)

24 credits selected as follows:

##### Statistics

3 credits from:

Note: Credit giv

**Art History**

ARTH 314 (3) The Medieval City

**Civil Engineering**

CIVE 433 requires departmental permission to register (call, 514-398-6345).

CIVE 433 (3) Urban Planning

CIVE 540 (3) Urban Transportation Planning

**Economics**

ECON 348 (3) Urban Economics

**Geography**

GEOG 210 (3) Global Places and Peoples

GEOG 303 (3) Health Geography

GEOG 311 (3) Economic Geography

GEOG 315 (3) Urban Transportation Geography

GEOG 380 (3) Adaptive Environmental Management

GEOG 494 (3) Urban Field Studies

**History**

HIST 353 (3) History of Montreal

**Jewish Studies**

JWST 371D1 (3) Jews and the Modern City

JWST 371D2 (3) Jews and the Modern City

**Law**

PUB1 004 (3) Land Use Planning

**Management**

FINE 445 (3) Real Estate Finance

**Political Science**

POLI 318 (3) Comparative Local Government

**Urban Planning**

URBP 201 (3) Planning the 21st Century City

URBP 501 (2) Principles and Practice 1

URBP 506 (3) Environmental Policy and Planning



Balance of up to 6 credits selected from the course lists below:

**Geography**

GEOG 290	(1)	Local Geographical Excursion
GEOG 306	(3)	Raster Geo-Information Science
GEOG 307	(3)	Socioeconomic Applications of GIS
GEOG 316	(3)	Political Geography
GEOG 504	(3)	Industrial Restructuring - Geographic Implications

Note: Credit given for statistics courses is subject to certain restrictions. Students should consult the "Course Overlap" information in the "Course Requirements" section for the Faculty of Arts.

BIOL 373	(3)	Biometry
GEOG 202	(3)	Statistics and Spatial Analysis
MATH 203	(3)	Principles of Statistics 1
PSYC 204	(3)	Introduction to Psychological Statistics
SOCI 350	(3)	Statistics in Social Research

**Field Courses**

**Statistics**

3 credits from:

Note: Credit given for statistics courses is subject to certain restrictions. Students should consult the "Course Overlap" information in the "Course Requirements" section for the Faculty of Arts.

BIOL 373	(3)	Biometry
GEOG 202	(3)	Statistics and Spatial Analysis
MATH 203	(3)	Principles of Statistics 1
PSYC 204	(3)	Introduction to Psychological Statistics

**Geography**

12 credits from the following Geography (GEOG) courses:

GEOG 203	(3)	Environmental Systems
GEOG 210	(3)	Global Places and Peoples
GEOG 221	(3)	Environment and Health
GEOG 303	(3)	Health Geography
GEOG 307	(3)	Socioeconomic Applications of GIS
GEOG 311	(3)	Economic Geography
GEOG 331	(3)	Urban Social Geography

**Categories**

12 credits in ONE of three categories:

Urban History and Theory

Urban Design

Urban Policy and Governance

**Urban History and Theory**

Although Architecture courses have prerequisites, they are waived for Urban Systems students, but the course may not be taken before the year indicated:

U3 - ARCH 528 and ARCH 529

ARCH 528	(3)	History of Housing
ARCH 529	(3)	Housing Theory
ARTH 314	(3)	The Medieval City
GEOG 503	(3)	Advanced Topics in Health Geography
GEOG 504	(3)	Industrial Restructuring - Geographic Implications
HIST 353	(3)	History of Montreal
JWST 371D1	(3)	Jews and the Modern City
JWST 371D2	(3)	Jews and the Modern City
SOCI 222	(3)	Urban Sociology
URBP 501	(2)	Principles and Practice 1

**Urban Design**

Although Architecture courses have prerequisites, they are waived for Urban Systems students, but the course may not be taken before the year indicated:

U2 - ARCH 378;

U3 - ARCH 515, ARCH 520, ARCH 521, ARCH 527, and ARCH 550.

ARCH 550 requires permission of the Geography adviser.

Note: ARCH 550 has the same content as CIVE 433 but requires an additional project.

ARCH 378	(3)	Site Usage
ARCH 515	(3)	Sustainable Design
ARCH 520	(3)	Montreal: Urban Morphology
ARCH 521	(3)	Structure of Cities
ARCH 527	(3)	Civic Design
ARCH 550	(3)	Urban Planning and Development
CIVE 433	(3)	Urban Planning
CIVE 540	(3)	Urban Transportation Planning
GEOG 315	(3)	Urban Transportation Geography
URBP 201	(3)	Planning the 21st Century City

GEOG 203	(3)	Environmental Systems
GEOG 210	(3)	Global Places and Peoples
GEOG 216	(3)	Geography of the World Economy
GEOG 217	(3)	Cities in the Modern World
GEOG 272	(3)	Earth's Changing Surface

### Statistics

3 credits from:

Note: Credit given for statistics courses is subject to certain restrictions. Students should consult the "Course Overlap" information in the "Course Requirements" section for the Faculty of Arts.

BIOL 373	(3)	Biometry
GEOG 202	(3)	Statistics and Spatial Analysis
MATH 203	(3)	Principles of Statistics 1
PSYC 204	(3)	Introduction to Psychological Statistics
SOCI 350	(3)	Statistics in Social Research

### Research

3 - 6 credits of research courses. Where both departments require an Honours Thesis, the student has the option of submitting the thesis to either department. If the thesis is submitted to the other department, then the student must register for GEOG 492D1/GEOG 492D2. In some cases, it is required that the thesis be jointly supervised by faculty of both departments.

GEOG 491D1	(3)	Honours Research
GEOG 491D2	(3)	Honours Research
GEOG 492D1	(1.5)	Joint Honours Research
GEOG 492D2	(1.5)	Joint Honours Research

### Remaining Geography

6 - 9 credits from a coherent set of Geography (GEOG) courses approved by the program adviser. Including a field course is desirable.

#### 25.1023.12 Geography (GEOG) Related Programs and Study Semesters

##### 25.1023.121 African Field Study Semester

The Department of Geography (Prof. Thom Meredith), Faculty of Science, coordinates the 15-credit interdisciplinary African Field Study Semester. For further information please contact Martine Dolmière, Internship & Field Studies Officer, 514-398-1063; see *Field Studies and Study Abroad > African Field Study Semester*.

##### 25.1023.122 Panama Field Study Semester

The program is a joint venture between McGill University and the Smithsonian Tropical Research Institute (STRI) in Panama. For more information, see *Field Studies and Study Abroad > Panama Field Study Semester*.

#### 25.1023.13 Geography Courses of Most Interest to Arts Students

GEOG 199	(3)	FYS: Geo-Environments
GEOG 200	(3)	Geographical Perspectives: World Environmental Problems
GEOG 201	(3)	Introductory Geo-Information Science
GEOG 205	(3)	Global Change: Past, Present and Future
GEOG 210	(3)	Global Places and Peoples
GEOG 216	(3)	Geography of the World Economy
GEOG 217	(3)	The Canadian City
GEOG 221	(3)	Environment and Health



### 25.10.24.2 About German Studies

With faculty members working at the forefront of literary, media and cultural studies, the Department of German Studies immerses students both in the rich literary traditions of German-language literature and in the innovative directions of transdisciplinary research. With our multiple major, minor, honors and joint honors programs, we can accommodate a broad range of student interests from 18th-century Enlightenment to questions of migration and multiculturalism in contemporary German culture. While our department offers a wide spectrum of courses in language, literature and culture, our particular strengths lie in philosophy, critical theory, cultural studies, philology, cinema and media studies. Students in our department receive close attention and individual mentoring in both their academic and professional training. We also consider German Studies to be part of a broader humanistic endeavor and encourage students to draw on the wealth of faculty working on relevant topics both at McGill and the many other Montreal universities in departments and programs such as History, Philosophy, Music, Art History and Communications, Jewish Studies, English, and other national literatures.

### 25.10.24.3 Prerequisites for Literature Courses

The prerequisite for all literature courses taught in German is GERM 325, or equivalent, or permission of the Department.

### 25.10.24.4 Topical Listings

#### Language

##### a) General courses

GERM 200	(6)	German Language, Intensive Beginners'
GERM 202	(6)	German Language, Beginners'
GERM 203	(6)	German for Reading
GERM 300	(6)	German Language Intensive Intermediate
GERM 307	(6)	German Language - Intermediate
GERM 325	(6)	German Language - Intensive Advanced

##### b) Special courses

**Literature and Culture in Translation**

GERM 197	(3)	FYS: Images of Otherness
GERM 259	(3)	Introduction to German Literature 1
GERM 260	(3)	Introduction to German Literature 2
GERM 355	(3)	Nietzsche and Wagner
GERM 357	(3)	German Culture in European Context
GERM 358	(3)	Franz Kafka
GERM 359	(3)	Bertolt Brecht
GERM 364	(3)	German Culture: Gender and Society
GERM 365	(3)	Language of Media from Manuscript to Hypertext
GERM 366	(3)	Postwar German Literature/Film
GERM 367	(3)	Topics in German Thought
GERM 368	(3)	Fin-de-Siècle Vienna
GERM 371	(3)	Cultural Change and Evolution of German
GERM 382	(3)	Faust: Chapbook to Horror Film
GERM 400	(3)	Interdisciplinary Seminar: Contemporary German Studies

**25.10.24.5 German Studies (GERM) Faculty**

**Chair**

Karin Bauer

**Emeritus Professor**

Peter M. Daly; B.A.(Brist.), Ph.D.(Zur.)

**Emeritus Honarific Professor**

Adrian Hsia; Ph.D.(Free Univ., Berlin)

**Professor**

Paul Peters; B.A.(Man.), Ph.D.(Free Univ., Berlin)

**Associate Professor**

Karin Bauer; M.A., Ph.D.(Wash.)

**Assistant Professors**

Michael Cowan; B.A., Ph.D.(Calif., Berk.)

Andrew Piper; B.A.(Prin.), Ph.D.(Col.)

**Faculty Lecturer**

Sylvia Rieger; M.A.(Regensburg), M.A.(Vanderbilt), Ph.D.(Wash., Seattle)

**Undergraduate Program Director**

Professor Michael Cowan

**Advisers**

Minor, Major, Honours, Joint Honours Programs: Professor Andrew Piper, 514-398-2044



### Advisers

Major in Contemporary German Studies: Professor Karin Bauer, 514-398-3647



**Note:** Students may begin at the intermediate or advanced level in their first year if they have taken German courses in high school or in CEGEP or through McGill Summer Studies. The courses GERM 202 or GERM 307 may be offered through Summer Studies.

### 25.10.24.6 Bachelor of Arts (B.A.) - Minor Concentration German Language (18 credits)

This program may be expanded to the Major Concentration German Language and Literature.

#### Complementary Courses (18 credits)

Students may begin at the intermediate or advanced level in their first year if they have taken German courses in high school or in CEGEP or through McGill Summer Studies.

Note: Beginners' and Intermediate language levels are offered either as a one-term intensive course or a two-term spanned course. Students choose which version of the level they prefer.

GERM 200	(6)	German Language, Intensive Beginners'
GERM 202D1	(3)	German Language, Beginners'
GERM 202D2	(3)	German Language, Beginners'
GERM 300	(6)	German Language Intensive Intermediate
GERM 307D1	(3)	German Language - Intermediate
GERM 307D2	(3)	German Language - Intermediate
GERM 325	(6)	German Language - Intensive Advanced
GERM 336	(3)	German Language, Media and Culture
GERM 341	(3)	Essay Writing
GERM 342	(3)	Translation
GERM 345	(3)	Business German 1
GERM 346	(3)	Business German 2

### 25.10.24.7 Bachelor of Arts (B.A.) - Minor Concentration German Literature (18 credits)

This is offered as a special program for students who already possess the necessary language skills before coming to McGill, or have acquired the competence by completing the intensive sequence (GERM 200 and GERM 300) as elective courses in their first year.

This program may be expanded to the Major Concentration German Language and Literature.

#### Required Course (6 credits)

GERM 325	(6)	German Language - Intensive Advanced
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#### Complementary Courses (12 credits)

12 credits of courses in German literature or culture, given in German, such as:

GERM 330	(3)	Landeskunde
GERM 331	(3)	Germany after Reunification
GERM 352	(3)	German Literature - 19th Century 3
GERM 353	(3)	19th Century Literary Topics
GERM 360	(3)	German Literature 1890 to 1918
GERM 361	(3)	German Literature 1918 to 1945
GERM 362	(3)	20th Century Literature Topics
GERM 363	(3)	German Postwar Literature

(3)

18th Century German Literature

B) 12 credits from courses in German Society

C) 9 credits from courses in German Studies

### A) German Literature and Culture

6 credits in German Literature and Culture selected from:

GERM 330	(3)	Landeskunde
GERM 331	(3)	Germany after Reunification
GERM 357	(3)	German Culture in European Context
GERM 362	(3)	20th Century Literature Topics
GERM 363	(3)	German Postwar Literature
GERM 365	(3)	Language of Media from Manuscript to Hypertext
GERM 366	(3)	Postwar German Literature/Film
GERM 367	(3)	Topics in German Thought
GERM 368	(3)	Fin-de-Siècle Vienna

### B) German Society

12 credits in German Society chosen from three disciplines including History, or from two disciplines excluding History. Courses are to be selected from the lists below:

#### Economics

ECON 340	(3)	Ex-Socialist Economies
ECON 345	(3)	The International Economy since 1914
ECON 423D1	(3)	International Trade and Finance
ECON 423D2	(3)	International Trade and Finance

#### History

HIST 435D1	(3)	Germany in the 20th Century
HIST 435D2	(3)	Germany in the 20th Century

#### Management

BUSA 391	(3)	International Business Law
MGCR 382	(3)	International Business
MGPO 383	(3)	International Business Policy
MRKT 483	(3)	International Marketing Management
ORGB 380	(3)	Cross Cultural Management

#### Political Science

POLI 212	(3)	Government and Politics - Developed World
POLI 328	(3)	Modern Politics in Western Europe
POLI 331	(3)	Politics in East Central Europe
POLI 344	(3)	Foreign Policy: Europe
POLI 357	(3)	Politics: Contemporary Europe
POLI 431	(3)	Nations and States/Developed World
POLI 463	(3)	Politics of Germany

POLI 466 (3) Public Policy Analysis

### **Sociology**

SOCI 330 (3) Sociological Theory

SOCI 354 (3) Dynamics of Industrial Societies

### **C) German Studies**

9 credits in German Studies selected from the GERM courses below or from any advanced course in German language or German literature (taught in German or in translation) or from the lists of courses on German Society above. Other courses offered by Art History, Geography, Jewish Studies, Music, Philosophy, etc. can be substituted with permission of the program adviser.

GERM 345 (3) Business German 1

GERM 346 (3) Business German 2

Courses may also be chosen from the lists below.

### **Jewish Studies**

JWST 371D1 (3) Jews and the Modern City

JWST 371D2 (3) Jews and the Modern City

JWST 383 (3) Holocaust Literature

### **Philosophy**

PHIL 367 (3) 19th Century Philosophy

PHIL 474 (3) Phenomenology

## **25.1024.10 Bachelor of Arts (B.A.) - Major Concentration German Studies - Language and Literature (36 credits)**

### **Required Courses (18 credits)**

Students who have advanced standing equivalency for any of the language courses below will substitute more advanced courses in language, culture or literature.

Note: Beginners' and Intermediate language le

GERM 360	(3)	German Literature 1890 to 1918
GERM 361	(3)	German Literature 1918 to 1945
GERM 362	(3)	20th Century Literature Topics
GERM 363	(3)	German Postwar Literature
GERM 364	(3)	German Culture: Gender and Society
GERM 365	(3)	Language of Media from Manuscript to Hypertext
GERM 366	(3)	Postwar German Literature/Film
GERM 367	(3)	Topics in German Thought
GERM 368	(3)	Fin-de-Siècle Vienna

### Classicism or Romanticism

at least 3 credits from:

GERM 450	(3)	Classical Period in German Literature
GERM 451	(3)	German Romanticism
GERM 455	(3)	Women of the Romantic Era
GERM 580	(3)	Topics in 18th Century Literature

### Other Periods

at least 3 credits from:

GERM 352	(3)	German Literature - 19th Century 3
GERM 353	(3)	19th Century Literary Topics
GERM 380	(3)	18th Century German Literature
GERM 382	(3)	Faust: Chapbook to Horror Film
GERM 412	(3)	Heroes, Lovers and Crusaders
GERM 511	(3)	Middle High German Literature
GERM 561	(3)	German Literature: Baroque

### Additional German Studies

9 credits selected from any of the literature courses above not already taken or from:

GERM 330	(3)	Landeskunde
GERM 331	(3)	Germany after Reunification
GERM 400	(3)	Interdisciplinary Seminar: Contemporary German Studies

Note: Courses on German literature or culture given in English may be substituted for any courses in the lists, to a maximum of 6 credits.

### 25.1024.11 Bachelor of Arts (B.A.) - Major Concentration German Studies - Literature and Culture (36 credits)

#### Complementary Courses (36 credits)

All German literature courses given in German require the linguistic competence acquired in GERM 325 or its equivalent. Such equivalence will be established by the program adviser.

36 credits selected as follows:

9 credits from:

GERM 330	(3)	Landeskunde
GERM 331	(3)	Germany after Reunification

GERM 360	(3)	German Literature 1890 to 1918
GERM 361	(3)	German Literature 1918 to 1945
GERM 362	(3)	20th Century Literature Topics
GERM 363	(3)	German Postwar Literature

15 credits from:

GERM 352	(3)	German Literature - 19th Century 3
GERM 353	(3)	19th Century Literary Topics
GERM 380	(3)	18th Century German Literature
GERM 412	(3)	Heroes, Lovers and Crusaders
GERM 450	(3)	Classical Period in German Literature
GERM 451	(3)	German Romanticism
GERM 455	(3)	Women of the Romantic Era
GERM 511	(3)	Middle High German Literature
GERM 561	(3)	German Literature: Baroque

12 credits from:

GERM 259	(3)	Introduction to German Literature 1
GERM 260	(3)	Introduction to German Literature 2
GERM 354	(3)	Literary Approach to Song
GERM 355	(3)	Nietzsche and Wagner
GERM 358	(3)	Franz Kafka
GERM 359	(3)	Bertolt Brecht
GERM 364	(3)	German Culture: Gender and Society
GERM 365	(3)	Language of Media from Manuscript to Hypertext
GERM 366	(3)	Postwar German Literature/Film
GERM 367	(3)	Topics in German Thought
GERM 371	(3)	Cultural Change and Evolution of German
GERM 382	(3)	Faust: Chapbook to Horror Film
GERM 400	(3)	Interdisciplinary Seminar: Contemporary German Studies

**25.1024.12 Bachelor of Arts (B.A.) - Honours German Studies (60 credits)**

The Honours German Studies consists of 60 credits in German. Literature courses provide an introduction to the major periods from the Middle Ages to the present.

Admission to the honours program requires departmental approval. Students may begin this program in their first year. Honours students must maintain a GPA of 3.30 in their program courses, and, according to Faculty regulations, a minimum CGPA of 3.00 in general.

Honours students, according to Faculty regulations, also must complete at least a Minor Concentration (18 credits) in another academic unit.

**Required Courses (42 credits)**

GERM 200	(6)	German Language, Intensive Beginners'
GERM 300	(6)	German Language Intensive Intermediate
GERM 325	(6)	German Language - Intensive Advanced
GERM 352	(3)	German Literature - 19th Century 3

GERM 360	(3)	German Literature 1890 to 1918
GERM 363	(3)	German Postwar Literature
GERM 450	(3)	Classical Period in German Literature
GERM 451	(3)	German Romanticism
GERM 511	(3)	Middle High German Literature
GERM 575	(6)	Honours Thesis

With permission from the adviser, students with advanced standing in German language will replace language courses for more advanced courses in language, culture or literature.

### **Complementary Courses (18 credits)**

18 credits selected as follows:

12 credits from:

GERM 330	(3)	Landeskunde
GERM 331	(3)	Germany after Reunification
GERM 353	(3)	19th Century Literary Topics
GERM 361	(3)	German Literature 1918 to 1945
GERM 362	(3)	20th Century Literature Topics
GERM 365	(3)	Language of Media from Manuscript to Hypertext
GERM 380	(3)	18th Century German Literature
GERM 400	(3)	Interdisciplinary Seminar: Contemporary German Studies
GERM 580	(3)	Topics in 18th Century Literature

In the event that there are not enough courses offered in German, substitution with courses from the list below is allowed only with permission of the adviser.

6 credits from:

GERM 259	(3)	Introduction to German Literature 1
GERM 260	(3)	Introduction to German Literature 2
GERM 336	(3)	German Language, Media and Culture

Literary .sm(.sm(.sm)Tj1 l 306hure tERM 336)Tdg1 Tm((3))Tj1 0 0

**25.1024.13 Bachelor of Arts (B.A.) - Joint Honours Component German Studies (36 credits)**

Students who wish to study at the Honours level in two disciplines can combine Joint Honours Program components in any two Arts disciplines. For a list of available Joint Honours programs, see "Overview of Programs Offered" and "Joint Honours Programs."

Joint Honours students should consult an adviser in each department to discuss their course selection and their interdisciplinary research project (if applicable).

Admission to the joint honours program requires departmental approval. Joint honours students must maintain a GPA of 3.30 in their program courses, and, according to Faculty regulations, a minimum CGPA of 3.00 in general.

**Required Courses (21 credits)**

GERM 200	(6)	German Language, Intensive Beginners'
GERM 300	(6)	German Language Intensive Intermediate
GERM 325	(6)	German Language - Intensive Advanced
GERM 570	(3)	Joint Honours Thesis

With permission of the adviser, students with advanced standing in German language will replace language courses for more advanced courses in language,



- Minor Concentration in Hispanic Languages (Expandable)
- Minor Concentration in Hispanic Literature and Culture (Expandable)
- Major Concentration in Hispanic Languages
- Major Concentration in Hispanic Literature and Culture
- Honours Program in Hispanic Studies
- Joint Honours Program in Hispanic Studies

Students who envision graduate studies upon completion of the B.A. are strongly advised to pursue a program of Honours or Joint Honours. (Honours students must submit their thesis by March 15.) Although the Major and Minor Concentrations form an important part of the multi-track B.A. in Arts, this general degree does not provide the specialized training called for by most graduate programs in the Humanities and Social Sciences.



**Note: Advanced Placement (AP) credits and courses taken at other universities in Quebec will not be accredited towards the Minor.**

#### 25.10.25.4 Hispanic Studies (HISP) Faculty

##### Chair

Amanda Holmes

##### Professors

K.M. Sibbald; M.A.(Cant.), M.A.(Liv.), Ph.D.(McG.)

Jesús Pérez-Magallón; Lic.Fil.(Barcelona), Ph.D.(Penn.)

##### Associate Professors

David A. Boruchoff; A.B., A.M., Ph.D.(Harv.)

Amanda Holmes; B.A.(McG.), M.A., Ph.D.(Ore.)

José Jouve-Martin; Lic.Phil.(Madrid), Ph.D.(G'town)

##### Assistant Professor

Fernanda Macchi; Lic.Lit.(Buenos Aires), M.A.(Ore.), Ph.D.(Yale)

##### Faculty Lecturer

Lucia Chamanadjian; M.A.(Car.)

#### 25.10.25.5 Bachelor of Arts (B.A.) - Minor Concentration Hispanic Languages (18 credits)

This program may be expanded to the Major Concentration Hispanic Studies - Languages.

#### Complementary Courses (18 credits)

18 credits from the list of courses below:

HISP 220D1	(3)	Spanish Language: Intermediate
HISP 220D2	(3)	Spanish Language: Intermediate
HISP 225	(3)	Hispanic Civilization 1
HISP 226	(3)	Hispanic Civilization 2

**25.10.25.6 Bachelor of Arts (B.A.) - Minor Concentration Hispanic Literature and Culture (18 credits)**

This program may be expanded to the Major Concentration Hispanic Studies - Literature and Culture.

Note: Advanced Placement (AP) credits and courses taken at other universities in Quebec will not be accredited towards the Minor.

Students with advanced standing in the language will replace language courses with more adv

HISP 438	(3)	Topics: Spanish Literature
HISP 439	(3)	Topics: Spanish-American Literature
HISP 442	(3)	Modernismo
HISP 451D1	(3)	Cervantes
HISP 451D2	(3)	Cervantes
HISP 453	(3)	20th Century Spanish-American Poetry
HISP 454	(3)	Major Figures: Spanish Literature
HISP 455	(3)	Major Figures: Spanish-American Literature
HISP 457	(3)	Medieval Literature
HISP 458	(3)	Golden Age Literature: Renaissance
HISP 460	(3)	Golden Age Literature: Baroque
HISP 501	(3)	History of the Spanish Language
HISP 505	(3)	Seminar in Hispanic Studies 01
HISP 506	(3)	Seminar in Hispanic Studies 02
HISP 507	(3)	Seminar in Hispanic Studies 03

**25.10.25.7 Bachelor of Arts (B.A.) - Major Concentration Hispanic Studies - Languages (36 credits)**

**Complementary Courses (36 credits)**

36 credits selected as follows:

**Language and Civilisation**

0 - 18 credits in language and civilization from:

HISP 202D1	(3)	Portuguese Language: Beginners'
HISP 202D2	(3)	Portuguese Language: Beginners'
HISP 204D1	(3)	Portuguese Language: Intermediate
HISP 204D2	(3)	Portuguese Language: Intermediate
HISP 210D1	(3)	Spanish Language: Beginners'
HISP 210D2	(3)	Spanish Language: Beginners'
	(6)	Spanish Language Intensive - Elementary

12 - 30 credits in Hispanic literature at the 300-level or above, of which at least 6 credits must be in literature of the pre-1700 period, from:

HISP 321	(3)	Spanish Literature - 18th Century
HISP 324	(3)	20th Century Drama
HISP 325	(3)	Spanish Novel of the 19th Century
HISP 326	(3)	Spanish Romanticism
HISP 327	(3)	Literature of Ideas: Spain
HISP 328	(3)	Literature of Ideas: Spanish America
HISP 332	(3)	Spanish-American Literature of 19th Century
HISP 333	(3)	Spanish-American Drama
HISP 350	(3)	The Generation of 1898
HISP 351	(3)	Spanish-American Novel 1
HISP 352	(3)	Spanish-American Novel 2
HISP 356	(3)	Spanish-American Short Story
HISP 358	(3)	Women Writers Fiction Spanish-America
HISP 423	(3)	Modern Lyric Poetry
HISP 424	(3)	Spanish Novel since Civil War
HISP 438	(3)	Topics: Spanish Literature
HISP 439	(3)	Topics: Spanish-American Literature
HISP 442	(3)	Modernismo
HISP 453	(3)	20th Century Spanish-American Poetry
HISP 454	(3)	Major Figures: Spanish Literature
HISP 455	(3)	Major Figures: Spanish-American Literature
HISP 505	(3)	Seminar in Hispanic Studies 01
HISP 506	(3)	Seminar in Hispanic Studies 02
HISP 507	(3)	Seminar in Hispanic Studies 03

### **Pre-1700 Literature**

At least 6 credits from:

HISP 432	(3)	Literature - Discovery and Exploration Spain New World
HISP 437	(3)	Viceregal Spanish America
HISP 457	(3)	Medieval Literature
HISP 458	(3)	Golden Age Literature: Renaissance
HISP 460	(3)	Golden Age Literature: Baroque
HISP 501	(3)	History of the Spanish Language

**Bachelor of Arts (B.A.) - Major Concentration Hispanic Studies - Literature and Culture (36 credits)**

HISP 451D2                   (3)                   Cervantes

**Complementary Courses (18 credits)**

18 credits selected as follows:

0 - 3 credits from:

HISP 250                   (3)                   Reading Hispanic Literature

**300-Level or Above Hispanic Literature**

At least 15 credits in Hispanic literature at the 300-level or above, of which at least 3 credits must be in literature of the pre-1700 period, from:

HISP 321                   (3)                   Spanish Literature - 18th Century  
HISP 324                   (3)                   20th Century Drama  
HISP 325                   (3)                   Spanish Novel of the 19th Century  
HISP 326                   (3)                   Spanish Romanticism  
HISP 327                   (3)                   Literature of Ideas: Spain  
HISP 328                   (3)                   Literature of Ideas: Spanish America  
HISP 332                   (3)                   Spanish-American Literature of 19th Century  
HISP 333                   (3)                   Spanish-American Drama  
HISP 350                   (3)                   The Generation of 1898  
HISP 351                   (3)                   Spanish-American Novel 1  
HISP 352                   (3)                   Spanish-American Novel 2  
HISP 356                   (3)                   Spanish-American Short Story  
Women

HISP 501 (3) History of the Spanish Language

**25.10.25.9 Bachelor of Arts (B.A.) - Honours Hispanic Studies (60 credits)**

Prerequisite for admission into Honours: a first-year Spanish course with a final grade of B+. Honours students are expected to maintain a program GPA of 3.30 and, according to Faculty regulations, a minimum CGPA of 3.00 in general.

Students must take an 18-credit Minor Concentration in another area.

**Required Courses (24 credits)**

HISP 241	(3)	Survey of Spanish Literature 1
HISP 242	(3)	Survey of Spanish Literature 2
HISP 243	(3)	Survey of Spanish-American Literature 1
HISP 244	(3)	Survey of Spanish-American Literature 2
HISP 451D1	(3)	Cervantes
HISP 451D2	(3)	Cervantes
HISP 490D1	(3)	Honours Thesis
HISP 490D2	(3)	Honours Thesis

**Complementary Courses (36 credits)**

36 credits with at least 6 credits selected from:

HISP 432	(3)	Literature - Discovery and Exploration Spain New World
HISP 437	(3)	Viceregal Spanish America
HISP 458	(3)	Golden Age Literature: Renaissance
HISP 460	(3)	Golden Age Literature: Baroque

All remaining credits may be selected from courses give08 Tmj1 0 0 1 221.70.52 388.9its)B.A.) - Honour

HISP 243	(3)	Survey of Spanish-American Literature 1
HISP 244	(3)	Survey of Spanish-American Literature 2

#### 400-Level

At least 6 credits from the 400-level courses below:

HISP 432	(3)	Literature - Discovery and Exploration Spain New World
HISP 437	(3)	Viceregal Spanish America
HISP 458	(3)	Golden Age Literature: Renaissance
HISP 460	(3)	Golden Age Literature: Baroque

All remaining credits may be selected from courses given in Spanish in the Department above the Intermediate Spanish language level (HISP 219 OR HISP 220D1/HISP 220D2).

#### 25.10.25.11 Hispanic Studies (HISP) Related Programs

The Minor Concentration in Spanish Literature and Culture and the Minor Concentration in Spanish-American Literature and Culture were retired at the end of the 2003-04 academic year. Students enrolled in either program at that time should consult with a Departmental adviser.

### 25.10.26 History (HIST)

#### 25.10.26.1 Location

General Office, Room 608  
 Undergraduate Office, Room 638  
 Sixth Floor, Stephen Leacock Building  
 855 Sherbrooke Street West  
 Montreal, Quebec H3A 2T7

Telephone: 514-398-3975  
 Undergraduate Office Telephone: 514-398-5892  
 Fax: 514-398-8365  
 Email: [undergrad.history@mcgill.ca](mailto:undergrad.history@mcgill.ca)  
 Website: [www.mcgill.ca/history](http://www.mcgill.ca/history)

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#### 25.10.26.2 About History

In today's world, people who can research thoroughly, write effectively, speak eloquently, and think clearly are in great demand. Recent graduates of our programs are currently pursuing careers in a variety of professions, including law, business, journalism, academia, finance, government, the arts, science, education, and medicine. All have benefited as professionals, individuals, and citizens from their study of history. The study of history develops skills in research, writing, and critical thinking and provides a context for understanding the present world. History requires and develops flexible thinking as it normally employs inductive reasoning. Historians usually begin with a specific, temporally and spatially defined issue and try to determine a pattern or cause for change over time. They move from the particular to the general and since historians usually begin with an open-ended question, they often find themselves drawing on other disciplines to understand the problem.

#### 25.10.26.3 Programs in History

The Department offers three kinds of undergraduate programs: Honours, Major Concentration and Minor Concentration. Courses in History fall into one of the following FOUR areas: The Americas; Europe; Asia/Africa/Middle East; Global/thematic. In each program, a specified number of credits may be selected from any single area. Each student's program is worked out with an academic program adviser to suit the student's specific needs within the general framework of the program.

Courses within each area are listed in the History Department's website. Please refer to our website for a listing of courses being offered in 2010-2011 in each area.

Candidates entering University as U0 or U1 students may, during their first year, take all courses at the 200 level as well as courses at the 300 level.

## 25.10.26.4 History (HIST) Faculty

### Chair

John E. Zucchi

### Undergraduate Program Director

Catherine Desbarats

### Emeritus Professors

Myron Echenberg; M.A.(McG.), Ph.D.(Wisc.)

Andrée Lévesque; B.A.(Laval), M.A., Ph.D.(Duke)

Michael P. Maxwell; B.A.(Sir G. Wms.), M.A., Ph.D.(McG.)

Carman I. Miller; B.A., B.Ed.(Acad.), M.A.(Dal.), Ph.D.(Lond.)

Desmond Morton; B.A.(RMC), B.A., M.A.(Oxf.), Ph.D.(Lond.) (*Hiram Mills Emeritus Professor of History*)

Albert Schachter; B.A.(McG.), D.Phil.(Oxf.) (*Hiram Mills Emeritus Professor of Classics*)

Brian J. Young; B.A.(Tor.), M.A., Ph.D.(Qu.) (*James McGill Emeritus Professor of History*)

### Professors

Hans Beck; Ph.D.(Erlangen) (*John MacNaughton Professor of Classics*)

Valentin J. Boss; B.A.(Cant.), Ph.D.(Harv.)

Gwyn Campbell; B.Soc.Sc., M.Soc.Sc.(Birm.), Ph.D.(Wales)

Allan Greer; B.A.(Br. Col.), M.A.(Car.), Ph.D.(York)

John W. Hellman; B.A.(Marquette), M.A., Ph.D.(Harv.)

Peter Hoffmann; Ph.D.(Munich), F.R.S.C. (*William Kingsford Professor of History*)

Gershon D. Hundert; B.A., M.A.(Ohio St.), Ph.D.(Col.) (*Leonor Segal Professor of Jewish Studies*) (*joint appoint. with Jewish Studies*)

Suzanne Morton; B.A.(Trent), M.A., Ph.D.(Dal.)

Yuzo Ota; B.A., M.A., Ph.D.(Tokyo)

Nancy F. Partner; B.A., M.A., Ph.D.(Calif.)

Andrea Tone; B.A.(Qu.), M.A., Ph.D.(Emory) (*joint appoint. with Social Studies of Medicine*)

Gil E. Troy; A.B., A.M., Ph.D.(Harv.)

Robin D.S. Yates; B.A., M.A.(Oxf.), M.A.(Calif.), Ph.D.(Harv.) (*James McGill Professor*) (*joint appoint. with East Asian Studies*)

John Zucchi; B.A., M.A., Ph.D.(Tor.)

### Associate Professors

Paula Clarke; B.A.(Oxf. and Nfld.), M.A.(Tor.), Ph.D.(Lond.)

Brian Cowan; B.A.(Reed), M.A., Ph.D.(Prin.)

Catherine Desbarats; B.A.(Qu.), D.Phil.(Oxf.), Ph.D.(McG.)

Elizabeth Elbourne; B.A., M.A.(Tor.), D.Phil.(Oxf.)

Elsbeth Heaman; B.A., M.A.(McG.), Ph.D.(Tor.)

Catherine C. LeGrand; B.A.(Reed), M.A., Ph.D.(Stan.)

Brian Lewis; B.A., M.A.(Oxf.), A.M., Ph.D.(Harv.)

Leonard Moore; A.B., M.A., Ph.D.(Calif.)

Jason Opal; B.A.(C'nell), M.A., Ph.D.(Brandeis)

Laila Parsons; B.A.(Exe.), D.Phil.(Oxf.) (*joint appoint. with Islamic Studies*)



## Associate Professors

Daviken Studnicki-Gizbert; BAC Spécialisé(Montr.), Ph.D.(Yale)

Griet Vankeerberghen; B.A., M.A.(Louvain), Ph.D.(Prin.) (*joint appoint. with East*)

HIST 333	(3)	Natives and French
HIST 334	(3)	History of New France
HIST 335	(3)	Science and Medicine in Canada
HIST 341	(3)	The New Nation: U.S. 1800-1850
HIST 342	(3)	Canada: External Relations since 1867
HIST 343	(3)	Women in Post-Confederation Canada
HIST 351	(3)	Themes in U.S. History since 1865
HIST 353	(3)	History of Montreal
HIST 357	(3)	Religion and Canadian Society in Historical Perspective
HIST 360	(3)	Latin America since 1825
HIST 361	(3)	The Canadian West to 1905
HIST 362	(3)	The Canadian West since 1905
HIST 363	(3)	Canada 1870-1914
HIST 364	(3)	Canada 1914-1945
HIST 366	(3)	Themes in Latin American History 1
HIST 367	(3)	Canada since 1945
HIST 370	(3)	Canadian Party Politics 1867-2000
HIST 371	(3)	American Civil Rights 1877-1940
HIST 373	(3)	Canadian Labour History
HIST 377	(3)	The United States, 1940-1965
HIST 392	(3)	The United States since 1965
HIST 393	(3)	Civil War and Reconstruction
		Canadian Military Exd0an Military Exd0an Milita4mexd0an Military Exd0an MeL.52mexd1il 1965

**The Americas - Honours Seminars**

HIST 382	(3)	History of South Africa
HIST 396	(3)	Disease in Africa Since 1960

**Asia/Africa/Middle East - 400-Level**

HIST 400	(3)	Ancient Greece, Rome and China
HIST 420	(3)	Gender and Sexuality in Modern China
HIST 439	(3)	History of Women in China
HIST 441	(3)	Topics: Culture and Ritual in China
HIST 442	(3)	Asian Diaspora: Chinese Overseas
HIST 443	(3)	China in the Modern World
HIST 445	(3)	Late Imperial China
HIST 448	(3)	Women, Gender and Sexuality in the Middle East
HIST 478	(3)	Pre-modern Chinese Law and Society

**Asia/Africa/Middle East - 500-Level**

HIST 579	(3)	The Arts of Healing in China
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HIST 307	(3)	Jews in Poland
HIST 312	(3)	Hist of Consumption in Canada
HIST 313	(3)	Eastern Europe: 1740-1914
HIST 314	(3)	Reformation in Britain & Ireland
HIST 316	(3)	Russia: Revolutions 1905 and 1917
HIST 320	(3)	European Thought and Culture 1
HIST 321	(3)	European Thought and Culture 2
HIST 324	(3)	History of Ireland
HIST 325	(3)	Renaissance-Reformation Europe
HIST 329	(3)	Eastern Europe: 4th Century - 1453
HIST 330	(3)	Science in the Medieval West
HIST 336	(3)	France, 1789 to 1914
HIST 345	(3)	History of Italian Renaissance
HIST 346	(3)	France, 1914 to the Present
HIST 354	(3)	Women in Europe 1700-2000
HIST 355	(3)	Topics in German History
HIST 356	(3)	Medicine in the Medieval West
HIST 365	(3)	17th - 18th C. Western Europe
HIST 368	(3)	Greek History: Classical Period
HIST 369	(3)	Greek History: Early Greece
HIST 372	(3)	The Low Countries: 14th - 17th Century
HIST 375	(3)	Roman History: Early Empire
HIST 376	(3)	Roman History: Later Empire
HIST 378	(3)	Roman & Greek Social History
HIST 379	(3)	Greek History: Hellenistic Period
HIST 380	(3)	Western Europe: The Middle Ages
HIST 383	(3)	Eighteenth-Century Britain
HIST 384	(3)	Nineteenth-Century Britain
HIST 386	(3)	Twentieth-Century Britain
HIST 389	(3)	Early Modern France
HIST 390	(3)	Eighteenth-Century France
HIST 391	(3)	Roman History: Republic
HIST 394	(3)	Stuart Britain and Ireland
HIST 398	(3)	Topics in Italian History

#### Europe - 400-Level

HIST 400	(3)	Ancient Greece, Rome and China
HIST 401	(3)	Topics: Medieval Culture and Society
HIST 402	(3)	East Central Europe 1918-1941
HIST 405	(3)	European Cultural History 1
HIST 406	(3)	Petrine and Catherinian Russia
HIST 407	(3)	Topics in Ancient History

HIST 412	(3)	Women and Gender in Modern Britain
HIST 415	(3)	European Cultural History 2
HIST 416	(3)	British and French Identity
HIST 417	(3)	British & Irish Nationalisms
HIST 421	(3)	Topics in Early Modern Europe
HIST 425	(3)	European Food History
HIST 426	(3)	Topics: British Cultural History
HIST 428	(3)	History of the Book in Britain
HIST 433	(3)	British Queer History
HIST 436	(3)	Topics: European History
HIST 437	(3)	French Revolution Historiography
HIST 449	(3)	Medicine in the Ancient World
HIST 450	(3)	Ancient History Methods
HIST 451	(3)	The Ancient Mediterranean City
HIST 453	(3)	History of Revolution in Europe
HIST 456	(3)	Russian Intellectual History 1825-1917
HIST 460	(3)	Milton in Myth and History
HIST 474	(3)	History of the GULAG 1918-1991

**Europe - 500-Level**

HIST 582	(3)	European Intellectual History
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**Europe - Honours Seminars**

Honours two-part seminars in the list below: HIST 466/HIST 496, HIST 550/HIST 551, HIST 565/HIST 566

HIST 465D1	(3)	Seminar: Italian Renaissance
HIST 465D2	(3)	Seminar: Italian Renaissance
HIST 466	(3)	Seminar: Medieval Medicine
HIST 470D1	(3)	Topics: Historical Interpretation
HIST 470D2	(3)	Topics: Historical Interpretation
HIST 476D1	(3)	Seminar: Topics in Russian History
HIST 476D2	(3)	Seminar: Topics in Russian History
HIST 482D1	(3)	Seminar: Antiquity to Reformation
HIST 482D2	(3)	Seminar: Antiquity to Reformation
HIST 489D1	(3)	Topics: Germany
HIST 489D2	(3)	Topics: Germany
HIST 492D1	(3)	Topics in Comparative History
HIST 492D2	(3)	Topics in Comparative History
HIST 496	(3)	Research: Medieval Medicine
HIST 498D1	(3)	Seminar in Eastern Europe
HIST 498D2	(3)	Seminar in Eastern Europe
HIST 550	(3)	Ancient History: Seminar
HIST 551	(3)	Ancient History: Research

HIST 565	(3)	Modern Britain: Seminar 1
HIST 566	(3)	Modern Britain: Seminar 2 French Atlantic

HIST 438	(3)	Topics in Cold War History
HIST 440	(3)	Fiction and History
HIST 457	(3)	Topics in Medical History

#### **Global/Thematic - 500-Level**

HIST 525	(3)	Women, Work and Family in Global History
HIST 526	(3)	Women and War
HIST 528	(3)	Indian Ocean World Slave Trade
HIST 585	(3)	Theory for Historical Studies
HIST 590	(3)	Topics: The British Empire

#### **Global/Thematic - Honours Seminars**

Honours two-part seminars in the list below: HIST 454/HIST 455, HIST 458/HIST 459, HIST 552/HIST 553, HIST 560/HIST 561

HIST 454	(3)	Seminar: Early Modern Medicine
HIST 455	(3)	Research: Early Modern Medicine
HIST 458	(3)	Modern Medicine: Seminar
HIST 459	(3)	Modern Medicine: Research
HIST 470D1	(3)	Topics: Historical Interpretation
HIST 470D2	(3)	Topics: Historical Interpretation
HIST 477D1	(3)	Seminar in Jewish History
HIST 477D2	(3)	Seminar in Jewish History
HIST 552	(3)	International Relations: Seminar
HIST 553	(3)	International Relations: Research
HIST 560	(3)	World History: Seminar
HIST 561	(3)	World History: Research

#### **25.10.26.6 Bachelor of Arts (B.A.) - Major Concentration History (36 credits)**

##### **Complementary Courses (36 credits)**

36 credits selected from the areas of History course lists (The Americas, Europe, Asia/Africa/Middle East, and Global/Thematic) with the following stipulations:

A maximum of 12 credits at the 200-level or lower.

A maximum of 24 credits from any one area.

3 credits in history of the pre-1800 period

3 credits in history of the post-1800 period

##### **The Americas - FYS & 200-Level**



HIST 300	(3)	Nationalisms in Canada
HIST 301	(3)	U.S. Presidential Campaigning
HIST 303	(3)	History of Quebec
HIST 309	(3)	History of Latin America to 1825
HIST 311	(3)	The Gilded Age and The Progressive Era
HIST 322	(3)	Canada: American Presence since 1939
HIST 331	(3)	The United States Between the Wars
HIST 333	(3)	Natives and French
HIST 334	(3)	History of New France
HIST 335	(3)	Science and Medicine in Canada
HIST 341	(3)	The New Nation: U.S. 1800-1850
HIST 342	(3)	Canada: External Relations since 1867
HIST 343	(3)	Women in Post-Confederation Canada
HIST 351	(3)	Themes in U.S. History since 1865
HIST 353	(3)	History of Montreal
HIST 357	(3)	Religion and Canadian Society in Historical Perspective
HIST 360	(3)	Latin America since 1825
HIST 361	(3)	The Canadian West to 1905
HIST 362	(3)	The Canadian West since 1905
HIST 363	(3)	Canada 1870-1914
HIST 364	(3)	Canada 1914-1945
HIST 366	(3)	Themes in Latin American History 1
HIST 367	(3)	Canada since 1945
HIST 370	(3)	Canadian Party Politics 1867-2000
HIST 371	(3)	American Civil Rights 1877-1940
HIST 373	(3)	Canadian Labour History
HIST 377	(3)	The United States, 1940-1965
HIST 392	(3)	The United States since 1965
HIST 393	(3)	Civil War and Reconstruction
HIST 395	(3)	Canadian Military Experience
HIST 397	(3)	Canada: Ethnicity, Migration

#### The Americas - 400-Level

HIST 403	(3)	History of Quebec Institutions
HIST 408	(3)	Colonialism and Native Peoples
HIST 409	(3)	Themes in Latin American History 2
HIST 414	(3)	Canadian Cultural History
HIST 419	(3)	Central America
HIST 423	(3)	Topics: Migration and Ethnicity
HIST 429	(3)	Topics: Canadian Family History
HIST 431	(3)	Topics in U.S. History
HIST 432	(3)	The Atlantic Provinces

HIST 434	(3)	British North America 1760-1867
HIST 447	(3)	The Natural History of America

**The Americas - 500-Level**

HIST 530	(3)	U.S. Foreign Relations
HIST 583	(3)	Conservatism in Canada

**The Americas - Honours Seminars**

Honours two-part seminar in the list below: HIST 556/HIST 557

HIST 461D1	(3)	Topics in Modern U.S. History
HIST 461D2	(3)	Topics in Modern U.S. History
HIST 462D1	(3)	Topics: Canadian Conservatism
HIST 462D2	(3)	Topics: Canadian Conservatism
HIST 463D1	(3)	Topics: History of Women in Canada
HIST 463D2	(3)	Topics: History of Women in Canada
HIST 464D1	(3)	Topics: Latin American History
HIST 464D2	(3)	Topics: Latin American History
HIST 468D1	(3)	Topics: 19th Century U.S. History
HIST 468D2	(3)	Topics: 19th Century U.S. History
HIST 469D1	(3)	Topics in Canadian Religious History
HIST 469D2	(3)	Topics in Canadian Religious History
HIST 483D1	(3)	History of Montreal
HIST 483D2	(3)	History of Montreal
HIST 493D1	(3)	Topics: Canadian Social History
HIST 493D2	(3)	Topics: Canadian Social History
HIST 556	(3)	Colonial America: Seminar 1
HIST 557	(3)	Colonial America: Seminar 2

**Asia/Africa/Middle East - 200-Level**

HIST 200	(3)	Introduction to African History
HIST 201	(3)	Modern African History
HIST 206	(3)	Africa and the Indian Ocean World
HIST 208	(3)	Introduction to East Asian History
HIST 218	(3)	Modern East Asian History
HIST 240	(3)	Modern History of Islamic Movements

**Asia/Africa/Middle East - 300-Level**

HIST 308	(3)	Formation of Chinese Tradition
HIST 318	(3)	History of Japan 1
HIST 328	(3)	The Qing Empire
HIST 337	(3)	Japanese Intellectual History 1
HIST 338	(3)	Twentieth-Century China

HIST 339	(3)	Arab-Israeli Conflict
HIST 348	(3)	China: Science-Medicine-Technology
HIST 352	(3)	Japanese Intellectual History 2
HIST 358	(3)	Medieval to Early Modern China
HIST 359	(3)	History of Japan 2
HIST 374	(3)	West Africa since 1800
HIST 381	(3)	Colonial Africa: Health/Disease
HIST 382	(3)	History of South Africa
HIST 396	(3)	Disease in Africa Since 1960

#### Asia/Africa/Middle East - 400-Level

HIST 400	(3)	Ancient Greece, Rome and China
HIST 420	(3)	Gender and Sexuality in Modern China
HIST 439	(3)	History of Women in China
HIST 441	(3)	Topics: Culture and Ritual in China
HIST 442	(3)	Asian Diaspora: Chinese Overseas
HIST 443	(3)	China in the Modern World
HIST 445	(3)	Late Imperial China
HIST 448	(3)	Women, Gender and Sexuality in the Middle East
HIST 478	(3)	Pre-modern Chinese Law and Society

#### Asia/Africa/Middle East - 500-Level

HIST 579	(3)	The Arts of Healing in China
HIST 581	(3)	The Art of War in China

#### Asia/Africa/Middle East - Honours Seminars

HIST 485D1	(3)	Seminar in Japanese History
HIST 485D2	(3)	Seminar in Japanese History
HIST 486D1	(3)	Topics: African Social History
HIST 486D2	(3)	Topics: African Social History
HIST 497D1	(3)	Topics in Chinese History
HIST 497D2	(3)	Topics in Chinese History

#### Europe - FYS & 200-Level

HIST 199	(3)	FYS: Medieval Women and Men
HIST 204	(3)	History of Great Britain to 1688
HIST 205	(3)	Ancient Mediterranean History
HIST 214	(3)	Introduction to European History
HIST 215	(3)	Modern European History
HIST 216	(3)	History of Russia to 1801
HIST 224	(3)	Britain Since 1688
HIST 225	(3)	History of France to 1789

HIST 226	(3)	Eastern Europe in 20th Century
HIST 231	(3)	Archaeology of the Ancient World
HIST 236	(3)	Russia from 1801 to 1991

#### Europe - 300-Level

HIST 305	(3)	Ancient Warfare and Imperialism
HIST 306	(3)	East Central Europe Since 1944
HIST 307	(3)	Jews in Poland
HIST 312	(3)	Hist of Consumption in Canada
HIST 313	(3)	Eastern Europe: 1740-1914
HIST 314	(3)	Reformation in Britain & Ireland
HIST 316	(3)	Russia: Revolutions 1905 and 1917
HIST 320	(3)	European Thought and Culture 1
HIST 321	(3)	European Thought and Culture 2
HIST 324	(3)	History of Ireland
HIST 325	(3)	Renaissance-Reformation Europe
HIST 329	(3)	Eastern Europe: 4th Century - 1453
HIST 330	(3)	Science in the Medieval West
HIST 336	(3)	France, 1789 to 1914
HIST 345	(3)	History of Italian Renaissance
HIST 346	(3)	France, 1914 to the Present
HIST 354	(3)	Women in Europe 1700-2000
HIST 355	(3)	Topics in German History
HIST 356	(3)	Medicine in the Medieval West
HIST 365	(3)	17th - 18th C. Western Europe
HIST 368	(3)	Greek History: Classical Period
HIST 369	(3)	Greek History: Early Greece
HIST 372	(3)	The Low Countries: 14th - 17th Century
HIST 375	(3)	Roman History: Early Empire
HIST 376	(3)	Roman History: Later Empire
HIST 378	(3)	Roman & Greek Social History
HIST 379	(3)	Greek History: Hellenistic Period
HIST 380	(3)	Western Europe: The Middle Ages
HIST 383	(3)	Eighteenth-Century Britain
HIST 384	(3)	Nineteenth-Century Britain
HIST 386	(3)	Twentieth-Century Britain
HIST 389	(3)	Early Modern France
HIST 390	(3)	Eighteenth-Century France
HIST 391	(3)	Roman History: Republic
HIST 394	(3)	Stuart Britain and Ireland
HIST 398	(3)	Topics in Italian History

#### Europe - 400-Level

HIST 400	(3)	Ancient Greece, Rome and China
HIST 401	(3)	Topics: Medieval Culture and Society
HIST 402	(3)	East Central Europe 1918-1941
HIST 405	(3)	European Cultural History 1
HIST 406	(3)	Petrine and Catherinian Russia
HIST 407	(3)	Topics in Ancient History
HIST 412	(3)	Women and Gender in Modern Britain
HIST 415	(3)	European Cultural History 2
HIST 416	(3)	British and French Identity
HIST 417	(3)	British & Irish Nationalisms
HIST 421	(3)	Topics in Early Modern Europe
HIST 425	(3)	European Food History
HIST 426	(3)	Topics: British Cultural History
HIST 428	(3)	History of the Book in Britain
HIST 433	(3)	British Queer History
HIST 436	(3)	Topics: European History
HIST 437	(3)	French Revolution Historiography
HIST 449	(3)	Medicine in the Ancient World
HIST 450	(3)	Ancient History Methods
HIST 451	(3)	The Ancient Mediterranean City
HIST 453	(3)	History of Revolution in Europe
HIST 456	(3)	Russian Intellectual History 1825-1917
HIST 460	(3)	Milton in Myth and History
HIST 474	(3)	History of the GULAG 1918-1991

#### Europe - 500-Level

HIST 582	(3)	European Intellectual History
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#### Europe - Honours Seminars

Honours two-part seminars in the list below: HIST 466/HIST 496, HIST 550/HIST 551, HIST 565/HIST 566

HIST 465D1	(3)	Seminar: Italian Renaissance
HIST 465D2	(3)	Seminar: Italian Renaissance
HIST 466	(3)	Seminar: Medieval Medicine
HIST 470D1	(3)	Topics: Historical Interpretation
HIST 470D2	(3)	Topics: Historical Interpretation
HIST 476D1	(3)	Seminar: Topics in Russian History
HIST 476D2	(3)	Seminar: Topics in Russian History
HIST 482D1	(3)	Seminar: Antiquity to Reformation
HIST 482D2	(3)	Seminar: Antiquity to Reformation
HIST 489D1	(3)	Topics: Germany
HIST 489D2	(3)	Topics: Germany
HIST 492D1	(3)	Topics in Comparative History

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**Islamic Studies (ISLA)**

Please consult with History Department program advisers.

**Jewish Studies (JWST)**

JWST 305	(3)	American Jewish History / Colonial Era to WWI
JWST 306	(3)	The American Jewish Community
JWST 356	(3)	Jewish Labour Movement/Eastern Europe
JWST 357	(3)	Jewish Labour Movement/North America

**Quebec Studies (QCST)**

Please consult with History Department program advisers.

**25.10.26.7 Bachelor of Arts (B.A.) - Honours History (60 credits)**

Students must maintain a 3.30 grade point average in their program courses and must have no less than a "B" in any program course. In addition, and in accordance with Faculty of Arts rules, students must maintain an overall CGPA of 3.00.

**Required Course (3 credits)**

HIST 399	(3)	History and Historical Methods
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**Complementary Courses (57 credits)**

57 credits selected from the areas of History course lists (The Americas, Europe, Asia/Africa/Middle East, and Global/Thematic) with the following stipulations:



HIST 334	(3)	History of New France
HIST 335	(3)	Science and Medicine in Canada
HIST 341	(3)	The New Nation: U.S. 1800-1850
HIST 342	(3)	Canada: External Relations since 1867
HIST 343	(3)	Women in Post-Confederation Canada
HIST 351	(3)	Themes in U.S. History since 1865
HIST 353	(3)	History of Montreal
HIST 357	(3)	Religion and Canadian Society in Historical Perspective
HIST 360	(3)	Latin America since 1825
HIST 361	(3)	The Canadian West to 1905
HIST 362	(3)	The Canadian West since 1905
HIST 363	(3)	Canada 1870-1914
HIST 364	(3)	Canada 1914-1945
HIST 366	(3)	Themes in Latin American History 1
HIST 367	(3)	Canada since 1945
		Canadian P

Honours two-part seminar in the list below: HIST 556/HIST 557

HIST 461D1	(3)	Topics in Modern U.S. History
HIST 461D2	(3)	Topics in Modern U.S. History
HIST 462D1	(3)	Topics: Canadian Conservatism
HIST 462D2	(3)	Topics: Canadian Conservatism
HIST 463D1	(3)	Topics: History of Women in Canada
HIST 463D2	(3)	Topics: History of Women in Canada
HIST 464D1	(3)	Topics: Latin American History
HIST 464D2	(3)	Topics: Latin American History
HIST 468D1	(3)	Topics: 19th Century U.S. History
HIST 468D2	(3)	Topics: 19th Century U.S. History
HIST 469D1	(3)	Topics in Canadian Religious History
HIST 469D2	(3)	Topics in Canadian Religious History
HIST 483D1	(3)	History of Montreal
HIST 483D2	(3)	History of Montreal
HIST 493D1	(3)	Topics: Canadian Social History
HIST 493D2	(3)	Topics: Canadian Social History
HIST 556	(3)	Colonial America: Seminar 1
HIST 557	(3)	Colonial America: Seminar 2

**Asia/Africa/Middle East - 200-Level**

HIST 200	(3)	Introduction to African History
HIST 201	(3)	Modern African History
HIST 206	(3)	Africa and the Indian Ocean World
HIST 208	(3)	Introduction to East Asian History
HIST 218	(3)	Modern East Asian History
HIST 240	(3)	Modern History of Islamic Movements

**Asia/Africa/Middle East - 300-Level**

HIST 308	(3)	Formation of Chinese Tradition
HIST 318	(3)	History of Japan 1
HIST 328	(3)	The Qing Empire
HIST 337	(3)	Japanese Intellectual History 1
HIST 338	(3)	Twentieth-Century China
HIST 339	(3)	Arab-Israeli Conflict
HIST 348	(3)	China: Science-Medicine-Technology
HIST 352	(3)	Japanese Intellectual History 2
HIST 358	(3)	Medieval to Early Modern China
HIST 359	(3)	History of Japan 2
HIST 374	(3)	West Africa since 1800
HIST 381	(3)	Colonial Africa: Health/Disease
HIST 382	(3)	History of South Africa

HIST 396 (3) Disease in Africa Since 1960

**Asia/Africa/Middle East - 400-Level**

HIST 400 (3) Ancient Greece, Rome and China  
HIST 420 (3) Gender and Sexuality in Modern China  
HIST 439 (3) History of Women in China  
HIST 441 (3) Topics: Culture and Ritual in China  
HIST 442 (3) Asian Diaspora: Chinese Overseas  
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HIST 415	(3)	European Cultural History 2
HIST 416	(3)	British and French Identity
HIST 417	(3)	British & Irish Nationalisms
HIST 421	(3)	Topics in Early Modern Europe
HIST 425	(3)	European Food History
HIST 426	(3)	Topics: British Cultural History
HIST 428	(3)	History of the Book in Britain
HIST 433	(3)	British Queer History
HIST 436	(3)	Topics: European History
HIST 437	(3)	French Revolution Historiography
HIST 449	(3)	Medicine in the Ancient World
HIST 450	(3)	Ancient History Methods
HIST 451	(3)	The Ancient Mediterranean City
HIST 453	(3)	History of Revolution in Europe
HIST 456	(3)	Russian Intellectual History 1825-1917
HIST 460	(3)	Milton in Myth and History
HIST 474	(3)	History of the GULAG 1918-1991

#### Europe - 500-Level

HIST 582	(3)	European Intellectual History
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#### Europe - Honours Seminars

Honours two-part seminars in the list below: HIST 466/HIST 496, HIST 550/HIST 551, HIST 565/HIST 566

HIST 465D1	(3)	Seminar: Italian Renaissance
HIST 465D2	(3)	Seminar: Italian Renaissance
HIST 466	(3)	Seminar: Medieval Medicine
HIST 470D1	(3)	Topics: Historical Interpretation
HIST 470D2	(3)	Topics: Historical Interpretation
HIST 476D1	(3)	Seminar: Topics in Russian History
HIST 476D2	(3)	Seminar: Topics in Russian History
HIST 482D1	(3)	Seminar: Antiquity to Reformation
HIST 482D2	(3)	Seminar: Antiquity to Reformation
HIST 489D1	(3)	Topics: Germany
HIST 489D2	(3)	Topics: Germany
HIST 492D1	(3)	Topics in Comparative History
HIST 492D2	(3)	Topics in Comparative History
HIST 496	(3)	Research: Medieval Medicine
HIST 498D1	(3)	Seminar in Eastern Europe
HIST 498D2	(3)	Seminar in Eastern Europe
HIST 550	(3)	Ancient History: Seminar
HIST 551	(3)	Ancient History: Research
HIST 565	(3)	Modern Britain: Seminar 1

HIST 566	(3)	Modern Britain: Seminar 2
HIST 593D1	(3)	French Atlantic Worlds: Seminar
HIST 593D2	(3)	French Atlantic Worlds: Seminar
HIST 594D1	(3)	Seminar in Early Modern Britain
HIST 594D2	(3)	Seminar in Early Modern Britain
HIST 595D1	(3)	Seminar: Early Modern Western Europe
HIST 595D2	(3)	Seminar: Early Modern Western Europe

**Global/Thematic - FYS & 200-Level**

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HIST 440	(3)	Fiction and History
HIST 457	(3)	Topics in Medical History

**Global/Thematic - 500-Le**

JWST 356	(3)	Jewish Labour Movement/Eastern Europe
JWST 357	(3)	Jewish Labour Movement/North America

### **Quebec Studies (QCST)**

Please consult with History Department program advisers.

### **25.10.26.8 Bachelor of Arts (B.A.) - Joint Honours Component History (36 credits)**

Students who wish to study at the Honours level in two disciplines can combine Joint Honours Program components in any two Arts disciplines. For a list of available Joint Honours programs, see "Overview of Programs Offered" and "Joint Honours Programs."

Joint Honours students should consult an adviser in each department to discuss their course selection and their interdisciplinary research project (if applicable).

Students must maintain a 3.30 grade point average in their program courses and must have no less than a "B" in any program course. In addition, and in accordance with Faculty of Arts rules, students must maintain an overall CGPA of 3.00.

### **Required Course (3 credits)**

HIST 399	(3)	History and Historical Methods
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### **Complementary Courses (33 credits)**

33 credits selected from the areas of History course lists (The Americas, Europe, Asia/Africa/Middle East, and Global/Thematic) with the following stipulations:

A maximum of 12 credits at the 200-level or lower.

A maximum of 27 credits credits)



HIST 342	(3)	Canada: External Relations since 1867
HIST 343	(3)	Women in Post-Confederation Canada
HIST 351	(3)	Themes in U.S. History since 1865
HIST 353	(3)	History of Montreal
HIST 357	(3)	Religion and Canadian Society in Historical Perspective
HIST 360	(3)	Latin America since 1825
HIST 361	(3)	The Canadian West to 1905
HIST 362	(3)	The Canadian West since 1905
HIST 363	(3)	Canada 1870-1914
HIST 364	(3)	Canada 1914-1945
HIST 366	(3)	Themes in Latin American History 1
HIST 367	(3)	Canada since 1945
HIST 370	(3)	Canadian Party Politics 1867-2000
HIST 371	(3)	American Civil Rights 1877-1940
HIST 373	(3)	Canadian Labour History
HIST 377	(3)	The United States, 1940-1965
HIST 392	(3)	The United States since 1965
HIST 393	(3)	Civil War and Reconstruction
HIST 395	(3)	Canadian Military Experience
HIST 397	(3)	Canada: Ethnicity, Migration

#### **The Americas - 400-Level**

HIST 403	(3)	History of Quebec Institutions
HIST 408	(3)	Colonialism and Native Peoples
HIST 409	(3)	Themes in Latin American History 2
HIST 414	(3)	Canadian Cultural History
HIST 419	(3)	Central America
		THIST 408 419

HIST 462D1	(3)	Topics: Canadian Conservatism
HIST 462D2	(3)	Topics: Canadian Conservatism
HIST 463D1	(3)	Topics: History of Women in Canada
HIST 463D2	(3)	Topics: History of Women in Canada
HIST 464D1	(3)	Topics: Latin American History
HIST 464D2	(3)	Topics: Latin American History
HIST 468D1	(3)	Topics: 19th Century U.S. History
HIST 468D2	(3)	Topics: 19th Century U.S. History
HIST 469D1	(3)	Topics in Canadian Religious History
HIST 469D2	(3)	Topics in Canadian Religious History
HIST 483D1	(3)	History of Montreal
HIST 483D2	(3)	History of Montreal
HIST 493D1	(3)	Topics: Canadian Social History
HIST 493D2	(3)	Topics: Canadian Social History
HIST 556	(3)	Colonial America: Seminar 1
HIST 557	(3)	Colonial America: Seminar 2

#### **Asia/Africa/Middle East - 200-Level**

HIST 200	(3)	Introduction to African History
HIST 201	(3)	Modern African History
HIST 206	(3)	Africa and the Indian Ocean World
HIST 208	(3)	Introduction to East Asian History
HIST 218	(3)	Modern East Asian History
HIST 240	(3)	Modern History of Islamic Movements

#### **Asia/Africa/Middle East - 300-Level**

HIST 308	(3)	Formation of Chinese Tradition
HIST 318	(3)	History of Japan 1
Ery	(3)	The Qing Empire

HIST 400	(3)	Ancient Greece, Rome and China
HIST 420	(3)	Gender and Sexuality in Modern China
HIST 439	(3)	History of Women in China
HIST 441	(3)	Topics: Culture and Ritual in China
HIST 442	(3)	Asian Diaspora: Chinese Overseas
HIST 443	(3)	China in the Modern World
HIST 445	(3)	Late Imperial China
		Women, Gender and Sexuality in the Middle East

HIST 316	(3)	Russia: Revolutions 1905 and 1917
HIST 320	(3)	European Thought and Culture 1
HIST 321	(3)	European Thought and Culture 2
HIST 324	(3)	History of Ireland
HIST 325	(3)	Renaissance-Reformation Europe
HIST 329	(3)	Eastern Europe: 4th Century - 1453
HIST 330	(3)	Science in the Medieval West
HIST 336	(3)	France, 1789 to 1914
HIST 345	(3)	History of Italian Renaissance

HIST 421	(3)	Topics in Early Modern Europe
HIST 425	(3)	European Food History
HIST 426	(3)	Topics: British Cultural History
HIST 428	(3)	History of the Book in Britain
HIST 433	(3)	British Queer History
HIST 436	(3)	Topics: European History
HIST 437	(3)	French Revolution Historiography
HIST 449	(3)	Medicine in the Ancient World
HIST 450	(3)	Ancient History Methods
HIST 451	(3)	The Ancient Mediterranean City
HIST 453	(3)	History of Revolution in Europe
HIST 456	(3)	Russian Intellectual History 1825-1917
HIST 460	(3)	Milton in Myth and History
HIST 474	(3)	History of the GULAG 1918-1991

#### Europe - 500-Level

HIST 582	(3)	European Intellectual History
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#### Europe - Honours Seminars

Honours two-part seminars in the list below: HIST 466/HIST 496, HIST 550/HIST 551, HIST 565/HIST 566

HIST 465D1	(3)	Seminar: Italian Renaissance
HIST 465D2	(3)	Seminar: Italian Renaissance
HIST 466	(3)	Seminar: Medieval Medicine
HIST 470D1	(3)	Topics: Historical Interpretation
HIST 470D2	(3)	Topics: Historical Interpretation
HIST 476D1	(3)	Seminar: Topics in Russian History
HIST 476D2	(3)	Seminar: Topics in Russian History
HIST 482D1	(3)	Seminar: Antiquity to Reformation
HIST 482D2	(3)	Seminar: Antiquity to Reformation
HIST 489D1	(3)	Topics: Germany
HIST 489D2	(3)	Topics: Germany
HIST 492D1	(3)	Topics in Comparative History
HIST 492D2	(3)	Topics in Comparative History
HIST 496	(3)	Research: Medieval Medicine
HIST 498D1	(3)	Seminar in Eastern Europe
HIST 498D2	(3)	Seminar in Eastern Europe
HIST 550	(3)	Ancient History: Seminar
HIST 551	(3)	Ancient History: Research
HIST 565	(3)	Modern Britain: Seminar 1
HIST 566	(3)	Modern Britain: Seminar 2
HIST 593D1	(3)	French Atlantic Worlds: Seminar
HIST 593D2	(3)	French Atlantic Worlds: Seminar

HIST 594D1	(3)	Seminar in Early Modern Britain
HIST 594D2	(3)	Seminar in Early Modern Britain
HIST 595D1	(3)	Seminar: Early Modern Western Europe
HIST 595D2	(3)	Seminar: Early Modern Western Europe

**Global/Thematic - FYS & 200-Level**

(3)	FYS: Topics in History
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**Global/Thematic - 500-Level**

HIST 525	(3)	Women, Work and Family in Global History
HIST 526	(3)	Women and War
HIST 528	(3)	Indian Ocean World Slave Trade
HIST 585	(3)	Theory for Historical Studies
HIST 590	(3)	Topics: The British Empire

**Global/Thematic - Honours Seminars**

Honours two-part seminars in the list below: HIST 454/HIST 455, HIST 458/HIST 459, HIST 552/HIST 553, HIST 560/HIST 561

HIST 454	(3)	Seminar: Early Modern Medicine
HIST 455	(3)	Research: Early Modern Medicine
HIST 458	(3)	Modern Medicine: Seminar
HIST 459	(3)	Modern Medicine: Research
HIST 470D1	(3)	Topics: Historical Interpretation
HIST 470D2	(3)	Topics: Historical Interpretation
HIST 477D1	(3)	Seminar in Jewish History
HIST 477D2	(3)	Seminar in Jewish History
HIST 552	(3)	International Relations: Seminar
HIST 553	(3)	International Relations: Research
HIST 560	(3)	World History: Seminar
HIST 561	(3)	World History: Research

**Courses Offered by Other Units**

The follo

**Quebec Studies (QCST)**



**History and Philosophy of Science (HPSC)**

HPSC 300	(3)	Independent Studies: History and Philosophy of Science
HPSC 500	(3)	Interdisciplinary Seminar: History & Philosophy of Science

**Philosophy (PHIL)**

Either PHIL 210 or PHIL 310 may count toward the program but not both.

PHIL 210	(3)	Introduction to Deductive Logic 1
PHIL 220	(3)	Introduction to History and Philosophy of Science 1
PHIL 306	(3)	Philosophy of Mind
PHIL 310	(3)	Intermediate Logic
PHIL 340	(3)	Philosophy of the Social Sciences 1
PHIL 341	(3)	Philosophy of Science 1
PHIL 350	(3)	History and Philosophy of Ancient Science
PHIL 411	(3)	Topics in Philosophy of Logic and Mathematics
PHIL 440	(3)	Philosophy of Social Sciences 2
PHIL 441	(3)	Philosophy of Science 2
PHIL 453	(3)	Ancient Metaphysics and Natural Philosophy
PHIL 511	(3)	Seminar: Philosophy of Logic and Mathematics
PHIL 541	(3)	Seminar: Philosophy of Science
PHIL 580	(3)	Seminar: Problems of Philosophy 1

**Religious Studies (RELG)**

RELG 340	(3)	Religion and the Sciences
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**Sociology (SOCI)**

SOCI 338	(3)	Introduction to Biomedical Knowledge
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**History of Science**

6 - 12 credits of courses focused on the History of Science with no more than 6 credits at the 200-level chosen from the following:

**Anthropology (ANTH)**

ANTH 359	(3)	History of Archaeological Theory
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**Biology (BIOL)**

BIOL 210	(3)	Perspectives of Science
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**Geography (GEOG)**

GEOG 381	(3)	Geographic Thought and Practice
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**History (HIST)**

HIST 212	(0)	
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HIST 249

		Medicine in Canada
		China: Science-Medicine-Technology
	(3)	Science and the Enlightenment
HIST 356	(3)	Medicine in the Medieval West
HIST 381	(3)	Colonial Africa: Health/Disease
HIST 410	(3)	Topics in History of Science
HIST 447	(3)	The Natural History of Africa
HIST 452	(3)	Medicine in Europe, 1500-1800
HIST 457	(3)	Topics in History of Science
HIST 458	(3)	Medicine in the Middle Ages
HIST 459	(3)	Medicine in the Renaissance
HIST 466	(3)	Medicine in the Modern World

#### History of Science (HPSC)

HPSC 400	(3)	Independent Studies: History and Philosophy of Science
HPSC 500	(3)	Interdisciplinary Seminar: History & Philosophy of Science

#### Islamic Studies (ISLA)

ISLA 345	(3)	Science and Civilization in Islam
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#### Mathematics (MATH)

MATH 338	(3)	Mathematics in History
MATH 339	(3)	Mathematics in the Modern World

Modern Psychology in Historical Perspective

#### 25.10.28 Humanistic Studies (HMST)

##### 25.10.28.1 Location

Dawson Hall, Room 110  
853 Sherbrooke Street West  
Montreal, Quebec H3A 2T6

Telephone: 514-398-4210

Fax: 514-398-7185

Email: [humanisticstudies.arts@mcgill.ca](mailto:humanisticstudies.arts@mcgill.ca)

Website: [www.mcgill.ca/humanistic](http://www.mcgill.ca/humanistic)

## 25.10.20.2 Advising for In-Program Students

Students are strongly encouraged to take this program in tandem with concentrations in language and literature. Telephone 514-398-4210 to set up an appointment.

## 25.10.29 Industrial Relations

### 25.10.29.1 Location

Peterson Hall, Room 126  
3460 McTavish Street  
Montreal, Quebec H3A 1X9

Telephone: 514-398-4804

Fax: 514-398-2786

Email: [interdisciplinary866T547.9sh.Strewww1.120.323.559\(251.Tm47.9sh.Stre.741.Tmcca/indr.rg0/F0.8.f0.0.1.103.657.642.244.T5.521010.29.About.1.Relation](mailto:interdisciplinary866T547.9sh.Strewww1.120.323.559(251.Tm47.9sh.Stre.741.Tmcca/indr.rg0/F0.8.f0.0.1.103.657.642.244.T5.521010.29.About.1.Relation)

**U2 Required**

ECON 306D1	(3)	Labour Economics and Institutions
ECON 306D2	(3)	Labour Economics and Institutions
INDR 494	(3)	Labour Law
ORGB 423	(3)	Human Resources Management
SOCI 304	(3)	Sociology of the Welfare State
SOCI 420	(3)	Organizations

**U3 Required**

INDR 492	(3)	Globalization and Labour Policy
INDR 496	(3)	Collective Bargaining

**Complementary Courses (12 credits)**

**U2 Complementary**

6 credits of statistics courses (either Economics or Sociology but not both):

ECON 227D1	(3)	Economic Statistics
ECON 227D2	(3)	Economic Statistics
SOCI 350	(3)	Statistics in Social Research
SOCI 461	(3)	Quantitative Data Analysis

**U3 Complementary**

6 credits from the following:

ECON 305	(3)	Industrial Organization
ECON 308	(3)	Governmental Policy Towards Business
ECON 310	(3)	Introduction to Behavioural Economics
ECON 426	(3)	Labour Economics
INDR 449	(3)	Occupational Health and Safety
INDR 459	(3)	International Employment Relations
INDR 497	(3)	Contract Administration
INDR 499	(3)	Internship in Industrial Relations
SOCI 321	(3)	Gender and Work
SOCI 354	(3)	Dynamics of Industrial Societies

**25.10.30 International Development Studies (INTD)**

**25.10.30.1 Location**

Institute for the Study of International Development  
 Peterson Hall  
 3460 McTavish Street, Room 126  
 Montreal, Quebec H3A 1X9

Telephone: 514-398-4804  
 Fax: 514-398-2786  
 Email: [ids@mcgill.ca](mailto:ids@mcgill.ca)

Website: [www.mcgill.ca/ids](http://www.mcgill.ca/ids)

### **25.10.30.2 About International Development Studies**

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ANTH 212	(3)	Anthropology of Development
GEOG 210	(3)	Global Places and Peoples
GEOG 216	(3)	Geography of the World Economy
POLI 227	(3)	Developing Areas/Introduction
SOCI 254	(3)	Development and Underdevelopment

### **Streams**

6 credits from one of the four streams:

Stream 1: Economic Development and Living Standards

Stream 2: States and Governance

Stream 3: Culture and Society

Stream 4: Environment and Agricultural Resources

### **Stream 1: Economic Development and Living Standards**

Experience has shown that development requires economic growth and is shaped by the distribution of economic resources. At the same time, the globalized economy has created new opportunities and new challenges for sustained growth. Courses in this stream revolve around the factors contributing to sustained economic growth, the trade-offs associated with different ways of achieving it, and the distributional issues de

**Stream 1 - History**

HIST 348	(3)	China: Science-Medicine-Technology
HIST 381	(3)	Colonial Africa: Health/Disease
HIST 396	(3)	Disease in Africa Since 1960

**Stream 1 - International Development Studies**

INTD 490	(3)	Development Field Research
INTD 499	(3)	Internship: International Development Studies

**Stream 1 - Management Core**

MGCR 360	(3)	Social Context of Business
MGCR 382	(3)	International Business

**Stream 1 - Management Policy**

MGPO 475	(3)	Strategies for Developing Countries
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**Stream 1 - Mining and Materials Engineering**

MIME 524	(3)	Mineral Resources Economics
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**Stream 1 - Natural Resource Sciences**

NRSC 340	(3)	Global Perspectives on Food
NRSC 540	(3)	Socio-Cultural Issues in Water

**Stream 1 - Political Science**

POLI 423	(3)	Politics of Ethno-Nationalism
POLI 445	(3)	International Political Economy: Monetary Relations

**Stream 1 - Sociology**

SOCI 307	(3)	Sociology of Globalization
SOCI 309	(3)	Health and Illness
SOCI 365	(3)	Health and Development
SOCI 513	(3)	Social Aspects HIV/AIDS in Africa

**Stream 2: States and Governance**

The courses in this stream focus on how political institutions shape developmental processes. Some courses analyze states and recognize how some promote development by providing diverse developmental goods while others impede development by preying on their peoples. Other courses focus on regimes and consider how political rights and participation, or their absences, affect developmental processes. Finally, several courses consider factors that make possible effective states and regimes.

**Stream 2 - Anthropology**

ANTH 342	(3)	Gender, Inequality and the State
ANTH 512	(3)	Political Ecology

**Stream 2 - Economics**

ECON 223 (3) Political Economy of Trade Policy

**Stream 2 - International Development Studies**

INTD 490 (3) Development Field Research

INTD 499 (3) Internship: International Development Studies

**Stream 2 - Islamic Studies**

ISLA 360 (3) Islam and Politics

ISLA 383 (3) Central Questions in Islamic Law

**Stream 2 - Political Science**

POLI 319 (3) Politics of Latin America

POLI 322 (3) Political Change in South Asia

POLI 323 (3) Developing Areas/China and Japan

POLI 324 (3) Developing Areas/Africa

POLI 340 (3) Developing Areas/Middle East

POLI 345 (3) International Organizations

POLI 347 (3) Arab-Israel Conflict, Crisis, Peace

POLI 349 (3) Foreign Policy: Asia

POLI 369 (3) Politics of Southeast Asia

POLI 423 (3) Politics of Ethno-Nationalism

POLI 445 (3) International Political Economy: Monetary Relations

POLI 450 (3) Peacebuilding

POLI 473 (3) Democracy and the Market

POLI 474 (3) Inequality and Development

POLI 522 (3) Seminar: Developing Areas

**Stream 2 - Sociology**

SOCI 265 (3) War, States and Social Change

SOCI 484 (3) Emerging Democratic States

SOCI 550 (3) Developing Societies

**Stream 2 - Social Work**

SWRK 400 (3) Policy and Practice for Refugees

**Stream 3: Culture and Society**

The courses in this stream focus on how the social structures, history, and culture of populations affect developmental processes. Associations, class, gender, religion, race, and ethnicity, for example, all shape development in multiple and diverse ways. Moreover, present developmental processes oftentimes cannot be adequately understood without considering history. Culture, in turn, is increasingly recognized within de



**Stream 3 - Anthropology**

ANTH 209	(3)	Anthropology of Religion
ANTH 301	(3)	Nomadic Pastoralists
ANTH 318	(3)	Globalization and Religion
ANTH 322	(3)	Social Change in Modern Africa
ANTH 326	(3)	Anthropology of Latin America
ANTH 327	(3)	Peoples of South Asia
ANTH 329	(3)	Modern Chinese Society and Change
ANTH 341	(3)	Women in Cross-cultural Perspective
ANTH 342	(3)	Gender, Inequality and the State
ANTH 422	(3)	Contemporary Latin American Culture & Society
ANTH 500	(3)	Chinese Diversity and Diaspora

**Stream 3 - East Asian Studies**

EAST 211	(3)	Introduction: East Asian Culture: China
EAST 213	(3)	Introduction: East Asian Culture: Korea

**Stream 3 - History**

Students may count either HIST 339 or POLI 347 toward Stream 3 but not both. See the Political Science course list for Stream 3.

HIST 197	(3)	FYS: Race in Latin America
HIST 200	(3)	Introduction to African History
HIST 201	(3)	Modern African History
HIST 213	(3)	World History, 1300-2000
HIST 218	(3)	Modern East Asian History
HIST 309	(3)	History of Latin America to 1825
HIST 338	(3)	Twentieth-Century China
HIST 339	(3)	Arab-Israeli Conflict
HIST 360	(3)	Latin America since 1825
HIST 366	(3)	Themes in Latin American History 1
HIST 382	(3)	History of South Africa
HIST 419	(3)	Central America
HIST 448	(3)	Women, Gender and Sexuality in the Middle East
HIST 528	(3)	Indian Ocean World Slave Trade

**Stream 3 - Integrated Studies in Education**

EDER 461	(3)	Society and Change
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**Stream 3 - International Development Studies**

INTD 490	(3)	Development Field Research
INTD 499	(3)	Internship: International Development Studies

**Stream 3 - Islamic Studies**

ISLA 200	(3)	Islamic Civilization
ISLA 210	(3)	Muslim Societies
ISLA 345	(3)	Science and Civilization in Islam
ISLA 355	(3)	Modern History of the Middle East
ISLA 360	(3)	Islam and Politics
ISLA 365	(3)	Middle East Since the 1970's
ISLA 383	(3)	Central Questions in Islamic Law
ISLA 411	(3)	History: Middle-East 1918-1945
ISLA 415	(3)	Modern Iran: Anthropological Approach
ISLA 421	(3)	Islam in South Asia: 1757 to Present

**Stream 3 - Management, Organizational Behaviour**

ORGB 380	(3)	Cross Cultural Management
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**Stream 3 - Political Science**

Students may count either HIST 339 or POLI 347 toward Stream 3 but not both. See the History course list for Stream 3.

POLI 347	(3)	Arab-Israel Conflict, Crisis, Peace
POLI 423	(3)	Politics of Ethno-Nationalism
POLI 435	(3)	Identity and Inequality
POLI 442	(3)	International Relations of Ethnic Conflict
POLI 450	(3)	Peacebuilding
POLI 474	(3)	Inequality and Development

**Stream 3 - Religious Studies**

RELG 370	(3)	Religion and Human Rights
RELG 371	(3)	Ethics of Violence/Non-Violence
RELG 375	(3)	Religion and Society

**Stream 3 - Sociology**

SOCI 234	(3)	Population and Society
SOCI 370	(3)	Sociology: Gender and Development
SOCI 446	(3)	Colonialism and Society
SOCI 519	(3)	Gender and Globalization
SOCI 520	(3)	Migration and Immigrant Groups
SOCI 550	(3)	Developing Societies
SOCI 555	(3)	Comparative Historical Sociology

**Stream 4: Environment and Agricultural Resources**

Within development studies, the environment has long been recognized as a vital determinant of development. More recently, many scholars have changed their environmental focus to emphasize sustainability. The courses in this stream recognize both: some courses consider how the environment can be exploited to promote human well-being while others consider how the environment must be respected to render development sustainable. Together, they highlight the delicate balance that must be attained between humans and their environments to make possible sustainable livelihoods.

**Stream 4 - Agricultural Economics**

AGEC 430	(3)	Agriculture, Food and Resource Policy
AGEC 442	(3)	Economics of International Agricultural Development

**Stream 4 - Anthropology**

ANTH 206	(3)	Environment and Culture
ANTH 301	(3)	Nomadic Pastoralists
ANTH 339	(3)	Ecological Anthropology
ANTH 418	(3)	Environment and Development
ANTH 512	(3)	Political Ecology

**Stream 4 - Economics**

ECON 326	(3)	Ecological Economics
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**Stream 4 - Geography**

GEOG 302	(3)	Environmental Management 1
GEOG 403	(3)	Global Health and Environmental Change
GEOG 408	(3)	Geography of Development
GEOG 410	(3)	Geography of Underdevelopment: Current Problems
GEOG 508	(3)	Resources, People and Power
GEOG 510	(3)	Humid Tropical Environments

**Stream 4 - International Development Studies**

INTD 490	(3)	Development Field Research
INTD 499	(3)	Internship: International Development Studies

**Stream 4 - Management Core**

MGCR 360	(3)	Social Context of Business
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**Stream 4 - Mining and Materials Engineering**

MIME 524	(3)	Mineral Resources Economics
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**Stream 4 - Natural Resource Sciences**

NRSC 340	(3)	Global Perspectives on Food
NRSC 540	(3)	Socio-Cultural Issues in Water

**Stream 4 - Nutrition**

NUTR 501	(3)	Nutrition in Developing Countries
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**Stream 4 - Urban Planning**

URBP 506

(3) Environmental Policy and Planning  
y and Planning3) Globalization: Planning and Change

AGEC 442 (3) Economics of International Agricultural Development

**Stream 1 - Anthropology**

ANTH 227 (3) Medical Anthropology

**Stream 1 - Economics**

ECON 209 (3) Macroeconomic Analysis and Applications

ECON 223 (3) Political Economy of Trade Policy

ECON 314 (3) Economic Development 2

ECON 326 (3) Ecological Economics

ECON 336 (3) The Chinese Economy

ECON 411 (3) Economic Development: A World Area

ECON 416 (3) Topics in Economic Development 2

**Stream 1 - Geography**

GEOG 310 (3) Development and Livelihoods

GEOG 403 (3) Global Health and Environmental Change

GEOG 409 (3) Geographies of Developing Asia

GEOG 508 (3) Resources, People and Power

**Stream 1 - History**

HIST 348 (3) China: Science-Medicine-Technology

HIST 381 (3) Colonial Africa: Health/Disease

HIST 396 (3) Disease in Africa Since 1960

**Stream 1 - International Development Studies**

INTD 490 (3) Development Field Research

INTD 499 (3) Internship: International Development Studies

**Stream 1 - Management Core**

MGCR 360 (3) Social Context of Business

MGCR 382 (3) International Business

**Stream 1 - Management Policy**

MGPO 475 (3) Strategies for Developing Countries

**Stream 1 - Mining and Materials Engineering**

MIME 524 (3) Mineral Resources Economics

**Stream 1 - Natural Resource Sciences**

NRSC 340 (3) Global Perspectives on Food



POLI 423	(3)	Politics of Ethno-Nationalism
POLI 445	(3)	International Political Economy: Monetary Relations
POLI 450	(3)	Peacebuilding
POLI 473	(3)	Democracy and the Market Inequality and DeInequality and DeInIn

HIST 213	(3)	World History, 1300-2000
HIST 218	(3)	Modern East Asian History
HIST 309	(3)	History of Latin America to 1825
HIST 338	(3)	Twentieth-Century China
HIST 339	(3)	Arab-Israeli Conflict
HIST 360	(3)	Latin America since 1825
HIST 366	(3)	Themes in Latin American History 1
HIST 382	(3)	History of South Africa
HIST 419	(3)	Central America
HIST 448	(3)	Women, Gender and Sexuality in the Middle East
HIST 528	(3)	Indian Ocean World Slave Trade

**Stream 3 - Integrated Studies in Education**

EDER 461	(3)	Society and Change
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**Stream 3 - International Development Studies**

INTD 490	(3)	Development Field Research
INTD 499	(3)	Internship: International Development Studies

**Stream 3 - Islamic Studies**

ISLA 200	(3)	Islamic Civilization
ISLA 210	(3)	Muslim Societies
ISLA 345	(3)	Science and Civilization in Islam
ISLA 355	(3)	Modern History of the Middle East
ISLA 360	(3)	Islam and Politics
ISLA 365	(3)	Middle East Since the 1970's
ISLA 383	(3)	Central Questions in Islamic Law
ISLA 411	(3)	History: Middle-East 1918-1945
ISLA 415	(3)	Modern Iran: Anthropological Approach
ISLA 421	(3)	Islam in South Asia: 1757 to Present

**Stream 3 - Management, Organizational Behaviour**

ORGB 380	(3)	Cross Cultural Management
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**Stream 3 - Political Science**

Students may count either HIST 339 or POLI 347 toward Stream 3 but not both. See the History course list for Stream 3.

POLI 347	(3)	Arab-Israel Conflict, Crisis, Peace
POLI 423	(3)	Politics of Ethno-Nationalism
POLI 435	(3)	Identity and Inequality
POLI 442	(3)	International Relations of Ethnic Conflict
POLI 450	(3)	Peacebuilding
POLI 474	(3)	Inequality and Development



**Stream 3 - Religious Studies**

RELG 370	(3)	Religion and Human Rights
RELG 371	(3)	Ethics of Violence/Non-Violence
	(3)	Religion and Society

INTD 490	(3)	Development Field Research
INTD 499	(3)	Internship: International Development Studies

#### **Stream 4 - Management Core**

MGCR 360	(3)	Social Context of Business
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#### **Stream 4 - Mining and Materials Engineering**

MIME 524	(3)	Mineral Resources Economics
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#### **Stream 4 - Natural Resource Sciences**

NRSC 340	(3)	Global Perspectives on Food
NRSC 540	(3)	Socio-Cultural Issues in Water

#### **Stream 4 - Nutrition**

NUTR 501	(3)	Nutrition in Developing Countries
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#### **Stream 4 - Urban Planning**

URBP 506	(3)	Environmental Policy and Planning
URBP 520	(3)	Globalization: Planning and Change

### **25.10.30.6 Bachelor of Arts (B.A.) - Honours International Development Studies (57 credits)**

Honours students must maintain a GPA of 3.30 in their program courses and, according to Faculty regulations, a minimum CGPA of 3.00 in general.

#### **Course Selection Guidelines for the Overall Program**

1. In their complete program (57 credits), students can take a maximum of 18 credits from any one discipline, and a minimum of 12 credits from a second discipline.
2. At least 30 of the 57 credits must be at the 300-level or above; 9 credits of these must be at the 400-level or above. Students may complete fieldwork, or an honours thesis, or an honours thesis with fieldwork (INTD 490 or INTD 491 or INTD 492) as part of the 400-level requirements of their stream.
3. In the final year (U3), no program courses may be taken below the 300-level.

#### **Required Courses (15 credits)**

ECON 208	(3)	Microeconomic Analysis and Applications
ECON 313	(3)	Economic Development 1
ECON 314	(3)	Economic Development 2
INTD 200	(3)	Introduction to International Development
INTD 497	(3)	Research Seminar on International Development

#### **Complementary Cour**

GEOG 216

(3)

Geography of the World Economy

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**Stream 1 - Economics**

ECON 209	(3)	Macroeconomic Analysis and Applications
ECON 223	(3)	Political Economy of Trade Policy
ECON 314	(3)	Economic Development 2
ECON 326	(3)	Ecological Economics
ECON 336	(3)	The Chinese Economy
ECON 411	(3)	Economic Development: A World Area
ECON 416	(3)	Topics in Economic Development 2

**Stream 1 - Geography**

GEOG 310	(3)	Development and Livelihoods
	(3)	Global Health and Environmental Change

POLI 423	(3)	Politics of Ethno-Nationalism
POLI 445	(3)	International Political Economy: Monetary Relations

**Stream 1 - Sociology**

SOCI 307	(3)	Sociology of Globalization
SOCI 309	(3)	Health and Illness
SOCI 365	(3)	Health and Development
SOCI 513	(3)	Social Aspects HIV/AIDS in Africa

**Stream 2: States and Governance**

The courses in this stream focus on how political institutions shape developmental processes. Some courses analyze states and recognize how some promote development by providing diverse developmental goods while others impede development by preying on their peoples. Other courses focus on regimes and consider how political rights and participation, or their absences, affect developmental processes. Finally, several courses consider factors that make possible effective states and regimes.

**Stream 2 - Anthropology**

ANTH 342	(3)	Gender, Inequality and the State
ANTH 512	(3)	Political Ecology

**Stream 2 - Economics**

ECON 223	(3)	Political Economy of Trade Policy
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**Stream 2 - International Development Studies**

INTD 490	(3)	Development Field Research
INTD 491	(3)	Honours Thesis
INTD 492	(6)	Honours Thesis with Field Research
INTD 499	(3)	Internship: International Development Studies

**Stream 2 - Islamic Studies**

ISLA 360	(3)	Islam and Politics
ISLA 383	(3)	Central Questions in Islamic Law

**Stream 2 - Political Science**

POLI 319	(3)	Politics of Latin America
POLI 322	(3)	Political Change in South Asia
POLI 323	(3)	Developing Areas/China and Japan
POLI 324	(3)	Developing Areas/Africa
POLI 340	(3)	Developing Areas/Middle East
POLI 345	(3)	International Organizations
POLI 347	(3)	Arab-Israel Conflict, Crisis, Peace
POLI 349	(3)	Foreign Policy: Asia
POLI 369	(3)	Politics of Southeast Asia
POLI 423	(3)	Politics of Ethno-Nationalism

POLI 445	(3)	International Political Economy: Monetary Relations
POLI 450	(3)	Peacebuilding
POLI 473	(3)	Democracy and the Market
POLI 474	(3)	Inequality and Development
POLI 522	(3)	Seminar: Developing Areas

**Stream 2 - Sociology**

SOCI 265	(3)	War, States and Social Change
SOCI 484	(3)	Emerging Democratic States
SOCI 550	(3)	Developing Societies

**Stream 2 - Social Work**

SWRK 400	(3)	Policy and Practice for Refugees
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**Stream 3: Culture and Society**

The courses in this stream focus on how the social structures, history, and culture of populations affect developmental processes. Associations, class, gender, religion, race, and ethnicity, for example, all shape development in multiple and diverse ways. Moreover, present developmental processes oftentimes cannot be adequately understood without considering history. Culture, in turn, is increasingly recognized within development studies as both a determinant and a constitutive element of development. In exploring all three, the courses in this stream provide important insight into the complex and varied relationship between social context and development.

**Stream 3 - Anthropology**

ANTH 209	(3)	Anthropology of Religion
ANTH 301	(3)	Nomadic Pastoralists
ANTH 318	(3)	Globalization and Religion
ANTH 322	(3)	Social Change in Modern Africa
ANTH 326	(3)	Anthropology of Latin America
ANTH 327	(3)	Peoples of South Asia
ANTH 329	(3)	Modern Chinese Society and Change
ANTH 341	(3)	Women in Cross-cultural Perspective
ANTH 342	(3)	Gender, Inequality and the State
ANTH 422	(3)	Contemporary Latin American Culture & Society
ANTH 500	(3)	Chinese Diversity and Diaspora

**Stream 3 - East Asian Studies**

EAST 211	(3)	Introduction: East Asian Culture: China
EAST 213	(3)	Introduction: East Asian Culture: Korea

**Stream 3 - History**

Students may count either HIST 339 or POLI 347 toward Stream 3 but not both. See the Political Science course list for Stream 3.

HIST 197	(3)	FYS: Race in Latin America
HIST 200	(3)	Introduction to African History
HIST 201	(3)	Modern African History
HIST 213	(3)	World History, 1300-2000

HIST 218	(3)	Modern East Asian History
HIST 309	(3)	History of Latin America to 1825
HIST 338	(3)	Twentieth-Century China
HIST 339	(3)	Arab-Israeli Conflict
HIST 360	(3)	Latin America since 1825
HIST 366	(3)	Themes in Latin American History 1
HIST 382	(3)	History of South Africa
HIST 419	(3)	Central America
HIST 448	(3)	Women, Gender and Sexuality in the Middle East
HIST 528	(3)	Indian Ocean World Slave Trade

### Stream 3 - Integrated Studies in Education

EDER 461	(3)	Society and Change
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### Stream 3 - International Development Studies

INTD 490	(3)	Development Field Research
INTD 491	(3)	Honours Thesis
INTD 492	(6)	Honours Thesis with Field Research
INTD 499	(3)	Internship: International Development Studies

### Stream 3 - Islamic Studies

ISLA 200	(3)	Islamic Civilization
ISLA 210	(3)	Muslim Societies
ISLA 345	(3)	Science and Civilization in Islam
ISLA 355	(3)	Modern History of the Middle East
ISLA 360	(3)	Islam and Politics
ISLA 365	(3)	Middle East Since the 1970's
ISLA 383	(3)	Central Questions in Islamic Law
ISLA 411	(3)	History: Middle-East 1918-1945
ISLA 415	(3)	Modern Iran: Anthropological Approach
ISLA 421	(3)	Islam in South Asia: 1757 to Present

### Stream 3 - Management, Organizational Behaviour

ORGB 380	(3)	Cross Cultural Management
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### Stream 3 - Political Science

Students may count either HIST 339 or POLI 347 toward Stream 3 but not both. See the History course list for Stream 3.

POLI 347	(3)	Arab-Israel Conflict, Crisis, Peace
POLI 423	(3)	Politics of Ethno-Nationalism
POLI 435	(3)	Identity and Inequality
POLI 442	(3)	International Relations of Ethnic Conflict
POLI 450	(3)	Peacebuilding

POLI 474 (3) Inequality and Development

**Stream 3 - Religious Studies**

RELG 370 (3) Religion and Human Rights

RELG 371 (3) Ethics of Violence/Non-Violence

RELG 375 (3) Religion and Society

**Stream 3 - Sociology**

(3) Population and Society



**Stream 4 - International Development Studies**

INTD 490	(3)	Development Field Research
INTD 491	(3)	Honours Thesis
INTD 492	(6)	Honours Thesis with Field Research
INTD 499	(3)	Internship: International Development Studies

**Stream 4 - Management Core**

MGCR 360	(3)	Social Context of Business
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**Stream 4 - Mining and Materials Engineering**

MIME 524	(3)	Mineral Resources Economics
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**Stream 4 - Natural Resource Sciences**

NRSC 340	(3)	Global Perspectives on Food Socio-Cultural Issues in Water
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**Introductory**

6 credits from the following introductory courses (only one course from each discipline may be counted):

ANTH 202	(3)	Comparative Cultures
ANTH 212	(3)	Anthropology of Development
GEOG 210	(3)	Global Places and Peoples
GEOG 216	(3)	Geography of the World Economy
POLI 227	(3)	Developing Areas/Introduction
SOCI 254	(3)	Development and Underdevelopment

**Streams**

GEOG 409	(3)	Geographies of Developing Asia
GEOG 508	(3)	Resources, People and Power

### **Stream 1 - History**

HIST 348	(3)	China: Science-Medicine-Technology
HIST 381	(3)	Colonial Africa: Health/Disease
HIST 396	(3)	Disease in Africa Since 1960

### **Stream 1 - International Development Studies**

INTD 490	(3)	Development Field Research
INTD 491	(3)	Honours Thesis
INTD 492	(6)	Honours Thesis with Field Research
INTD 499	(3)	Internship: International Development Studies

### **Stream 1 - Management Core**

MGCR 360	(3)	Social Context of Business
MGCR 382	(3)	International Business

### **Stream 1 - Management Policy**

MGPO 475	(3)	Strategies for Developing Countries
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### **Stream 1 - Mining and Materials Engineering**

MIME 524	(3)	Mineral Resources Economics
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### **Stream 1 - Natural Resource Sciences**

NRSC 340	(3)	Global Perspectives on Food
NRSC 540	(3)	Socio-Cultural Issues in Water

### **Stream 1 - Political Science**

POLI 423	(3)	Politics of Ethno-Nationalism
POLI 445	(3)	International Political Economy: Monetary Relations

### **Stream 1 - Sociology**

SOCI 307	(3)	Sociology of Globalization
SOCI 309	(3)	Health and Illness
SOCI 365	(3)	Health and Development
SOCI 513	(3)	Social Aspects HIV/AIDS in Africa

### **Stream 2: States and Governance**

The courses in this stream focus on how political institutions shape developmental processes. Some courses analyze states and recognize how some promote development by providing diverse development 0 cgviding di

consider how political rights and participation, or their absences, affect developmental processes. Finally, several courses consider factors that make possible effective states and regimes.



EDER 461 (3) Society and Change

**Stream 3 - International Development Studies**

INTD 490 (3) Development Field Research  
 INTD 491 (3) Honours Thesis  
 INTD 492 (6) Honours Thesis with Field Research  
 INTD 499 (3) Internship: International Development Studies

**Stream 3 - Islamic Studies**

ISLA 200 (3) Islamic Civilization  
 ISLA 210 (3) Muslim Societies  
 ISLA 345 (3) Science and Civilization in Islam  
 ISLA 355 (3) Modern History of the Middle East  
 ISLA 360 (3) Islam and Politics  
 ISLA 365 (3) Middle East Since the 1970's  
 ISLA 383 (3) Central Questions in Islamic Law  
 ISLA 411 (3) History: Middle-East 1918-1945  
 ISLA 415 (3) Modern Iran: Anthropological Approach  
 ISLA 421 (3) Islam in South Asia: 1757 to Present

**Stream 3 - Management, Organizational Behaviour**

ORGB 380 (3) Cross Cultural Management

**Stream 3 - Political Science**

Students may count either HIST 339 or POLI 347 toward Stream 3 but not both. See the History course list for Stream 3.

POLI 347 (3) Arab-Israel Conflict, Crisis, Peace  
 POLI 423 (3) Politics of Ethno-Nationalism  
 POLI 435 (3) Identity and Inequality  
 POLI 442 (3) International Relations of Ethnic Conflict  
 POLI 450 (3) Peacebuilding  
 POLI 474 (3) Inequality and Development

**Stream 3 - Religious Studies**

RELG 370 (3) Religion and Human Rights  
 RELG 371 (3) Ethics of Violence/Non-Violence  
 RELG 375 (3) Religion and Society

**Stream 3 - Sociology**

SOCI 234 (3) Population and Society  
 SOCI 370 (3) Sociology: Gender and Development  
 SOCI 446 (3) Colonialism and Society

SOCI 519	(3)	Gender and Globalization
SOCI 520	(3)	Migration and Immigrant Groups
SOCI 550	(3)	Developing Societies
SOCI 555	(3)	Comparative Historical Sociology

**Stream 4: Environment and Agricultural Resources**

Within development studies, the en

MIME 524 (3) Mineral Resources Economics

**Stream 4 - Natural Resource Sciences**

NRSC 340 (3) Global Perspectives on Food

NRSC 540 (3) Socio-Cultural Issues in Water

**Stream 4 - Nutrition**

NUTR 501 (3) Nutrition in Developing Countries

**Stream 4 - Urban Planning**

URBP 506 (3) Environmental Policy and Planning

URBP 520 (3) Globalization: Planning and Change

**25.10.31 Islamic Studies (ISLA)**

**25.10.31.1 Location**

Morrice Hall, Room 319  
3485 McTavish Street



### **Associate Professors**

Laila Parsons; B.A.(Exe.), D.Phil.(Oxf.)

Robert Wisnovsky; B.A.(Yale), M.A., Ph.D.(Prin.)

### **Assistant Professors**

Malek Abisaab; B.A.(Lebanese U.), M.A.(CUNY), Ph.D.(SUNY, Binghamton)

Prashant Keshavmurthy; B.A.(Jawaharlal Nehru, Univ.), M.A.(Delhi), Ph.D.(Col.)

Setrag Manoukian; B.A.(Venice), M.A., Ph.D.(Mich.)

Khalid Medani; B.A.(Brown), M.A.(G'town), M.A., Ph.D.(Calif., Berk.)

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## 25.10.32 Italian Studies (ITAL)

### 25.10.32.1 Location

688 Sherbrooke Street West, Room 425  
 Montreal, Quebec H3A 3R1

Telephone: 514-398-3953

Fax: 514-398-1748

Email: [italian.studies@mcgill.ca](mailto:italian.studies@mcgill.ca)

Website: [www.mcgill.ca/italian](http://www.mcgill.ca/italian)

### 25.10.32.2 About Italian Studies

The Department has as its mission to maintain the traditions and study of the great classics as well as to provide a window on an increasingly complex and diverse contemporary Italian culture. It promotes the study of the Italian language through an excellent and rigorous language training program. It offers courses in Italian literature, both in Italian and in English, as well as in Italian film. The department periodically invites scholars specializing in social and political aspects of Italian culture, enabling students to gain a broader and more critical understanding of various aspects of the Italian experience.

### 25.10.32.3 Italian Studies (ITAL) Faculty

#### Chair

Lucienne Kroha

#### Emeritus Professor

Pamela D. Stewart; B.A.(Montr.), M.A.(McG.), F.R.S.C.

#### Associate Professor

Lucienne Kroha; B.A., M.A.(McG.), Ph.D.(Harv.)

#### Assistant Professors

Eugenio Bolongaro; B.A., L.L.B.(Br. Col.), Ph.D.(McG.) (*on leave Winter 2011*)

Matteo Soranzo; M.A., Ph.D.(Wisc.)

#### Lecturers

Enrica Quaroni; B.A., Ph.D.(McG.)

Jen Wienstein; B.A., M.A., Ph.D.(McG.)

#### Associate Members

Paula Clarke (*History*)

Anthony Masi (*Sociology*)

Filippo Sabetti (*Political Science*)

#### Adjunct Professors

Dario Brancato (*C'dia*)

Tobias F. Gittes (*Liberal Arts College, C'dia*)

Silvestra Mariniello (*Histoire de l'art et d'Études cinématographiques, Montr.*)

Rosanna Maule (*C'dia*)

Viva Paci (*UQAM*)

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## Advisers

Minors in Language – Dr. Jen Wienstein, 514-398-3955

Minors, Majors, Honours and Joint Honours – Prof. L. Kroha, 514-398-3100; Prof. M. Soranzo, 514-398-2833

### 25.10.32.4 Bachelor of Arts (B.A.) - Minor Concentration Italian Studies (18 credits)

This program may be expanded to the Major Concentration Italian Studies

#### Complementary Courses (18 credits)

18 credits selected from three Italian course lists as follows:

0 - 12 credits from Group A - Basic Language Courses.

Students with advanced standing in the language must replace language courses with courses in Groups B and C.

6 - 18 credits from Group B - Courses Taught in Italian and Group C - Courses Taught in English.

#### Group A - Basic Language Courses

ITAL 205D1	(3)	Italian for Beginners'
ITAL 205D2	(3)	Italian for Beginners'
ITAL 206	(6)	Beginners' Italian Intensive
ITAL 210D1	(3)	Elementary Italian
ITAL 210D2	(3)	Elementary Italian
ITAL 215D1	(3)	Intermediate Italian
ITAL 215D2	(3)	Intermediate Italian
ITAL 216	(6)	Intermediate Italian Intensive

#### Group B - Courses Taught in Italian

\*Note: Only one of ITAL 250 or ITAL 255 can count toward the program.

ITAL 250*	(3)	Italian Literary Composition
ITAL 255*	(6)	Advanced Reading and Composition
ITAL 260	(3)	Twentieth Century Texts
ITAL 270	(3)	Manzoni: Novel and Nationhood
ITAL 280	(3)	Masterpieces of Italian Literature 1
ITAL 281	(3)	Masterpieces of Italian Literature 2
ITAL 290	(3)	Commedia Dell'Arte
ITAL 295	(3)	Contemporary Italy
ITAL 307	(3)	Topics in Italian Culture
ITAL 308	(3)	Business Italian 1
ITAL 327	(3)	A Literary Map of Italy
ITAL 331	(3)	Drama from Goldoni to Pirandello
ITAL 341	(3)	The Art of Essay Writing
ITAL 356	(3)	Medieval Discourses on Love
ITAL 360	(3)	Contemporary Italian Prose
ITAL 362	(3)	Literature and Society 1945-1989
ITAL 368	(3)	Literature of the Renaissance
ITAL 370	(3)	Italian Poetry and Music
ITAL 376	(3)	Medieval Romance in Italy

ITAL 380	(3)	Neorealism: Roots and Development
ITAL 383	(3)	Women's Writing since 1880
ITAL 410	(3)	Modern Italian Literature
ITAL 411	(3)	Pirandello
ITAL 415	(3)	Italian Poetry 20th Century
ITAL 420	(3)	Leopardi and Italian Romanticism
ITAL 435	(3)	Ariosto's "Orlando Furioso"
IT	(3)	Tasso's "Gerusalemme Liberata"



ITAL 542

(3)

History of Italian Language  
Boccaccio and the Italian Nov

ITAL 210D2	(3)	Elementary Italian
ITAL 215D1	(3)	Intermediate Italian
ITAL 215D2	(3)	Intermediate Italian
ITAL 216	(6)	Intermediate Italian Intensive

**Group B - Courses Taught in Italian**

\*Note: Only one of ITAL 300 or ITAL 306 can count toward the program.

ITAL 270	(3)	Manzoni: Novel and Nationhood
ITAL 280	(3)	Masterpieces of Italian Literature 1
ITAL 281	(3)	Masterpieces of Italian Literature 2
ITAL 290	(3)	Commedia Dell'Arte
ITAL 295	(3)	Contemporary Italy
ITAL 300*	(3)	Italian Literary Composition
ITAL 306*	(6)	Advanced Reading and Composition
ITAL 307	(3)	Topics in Italian Culture
ITAL 308	(3)	Business Italian 1 Twentieth Century

ITAL 199	(3)	FYS: Italy's Literature in Context
ITAL 355	(3)	Dante and the Middle Ages
ITAL 361	(3)	Italian Prose after 1945
ITAL 363	(3)	Gender, Literature and Society
ITAL 365	(3)	The Italian Renaissance
ITAL 375	(3)	Cinema and Society in Modern Italy
ITAL 385	(3)	Italian Futurist Movement
ITAL 395	(3)	Interdisciplinary Seminar
ITAL 412	(3)	Pirandello and European Theatre
ITAL 416	(3)	The Twentieth Century
ITAL 464	(3)	Machiavelli
ITAL 477	(3)	Italian Cinema and Video

**Group D - Courses Offered in Other Departments**

ANTH 337	(3)	Mediterranean Society and Culture
ARTH 223	(3)	Introduction to Italian Renaissance Art
ARTH 324	(3)	Sixteenth-Century Art in Italy
ARTH 325	(3)	Visual Culture Renaissance Venice
ARTH 332	(3)	Italian Renaissance Architecture
CLAS 208	(3)	Roman Literature and Society
CLAS 307	(3)	Roman Comedy
CLAS 404	(3)	Classical Tradition
ENGL 447	(3)	Crosscurrents/English Literature and European Literature 1
HIST 345	(3)	History of Italian Renaissance
HIST 380	(3)	Western Europe: The Middle Ages
HIST 398	(3)	Topics in Italian History
HIST 401	(3)	Topics: Medieval Culture and Society
MUHL 387	(3)	Opera from Mozart to Puccini
POLI 414	(3)	Society and Politics in Italy

**25.10.32.7 Bachelor of Arts (B.A.) - Joint Honours Component Italian Studies (36 credits)**

Students who wish to study at the Honours level in two Arts disciplines may apply to combine Joint Honours Program components from two Arts disciplines. For a list of available Joint Honours programs, see "Overview of Programs Offered" and "Joint Honours Programs."

Joint Honours students should consult an adviser in each department to discuss their course selection and their interdisciplinary research project (if applicable).

Joint Honours students must maintain a GPA of 3.30 in their program courses and, according to Faculty regulations, a minimum CGPA of 3.00 in general.

Admission to Joint Honours requires departmental approval. Students wishing to register in the program should consult with the Department as early as possible. Students may register for Joint Honours in the first year, instead of the second year, if in the opinion of the departments they are found to be qualified.

**Required Courses (6 credits)**

ITAL 355	(3)	Dante and the Middle Ages
ITAL 470	(3)	Joint Honours Thesis

**Complementary Courses (30 credits)**



30 credits, 6 of which must be at the 400-level or above, selected from the four Italian course lists as follows:

0 - 12 credits from Group A Basic Language Courses.

12 - 30 credits from Group B Courses Taught in Italian.

0 - 18 credits combined from Group C Courses Taught in English and Group D Courses Offered in Other Departments.

Note: Students with advanced standing in the language must replace language courses with courses from groups B, C, and D.

**Group A - Basic Language Courses**

ITAL 205D1	(3)	Italian for Beginners'
ITAL 205D2	(3)	Italian for Beginners'
ITAL 206	(6)	Beginners' Italian Intensive
ITAL 210D1	(3)	Elementary Italian
ITAL 210D2	(3)	Elementary Italian
ITAL 215D1	(3)	Intermediate Italian
ITAL 215D2	(3)	Intermediate Italian
ITAL 216	(6)	Intermediate Italian Intensive

**Group B - Courses Taught in Italian**

\*Note: Only one of ITAL 250 or ITAL 255 can count toward the program.

ITAL 250*	(3)	Italian Literary Composition
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Advanced Reading and 62 Tm(Italian Literary Composit3 Tm221.949 598.1r6 6nan count to)Tj1 0 09.4 Tm(au1r6 6nan

ITAL 436	(3)	Tasso's "Gerusalemme Liberata"
ITAL 461	(3)	Dante: "The Divine Comedy"
ITAL 530	(3)	17th-18th Century Culture
ITAL 542	(3)	History of Italian Language
ITAL 551	(3)	Boccaccio and the Italian Novella
ITAL 560	(3)	Topics in 19th & 20th Century Literature

## 25.10.33 Jewish Studies (JWST)

### 25.10.33.1 Location

3438 McTavish Street, Room 202  
Montreal, Quebec H3A 1X9

Telephone: 514-398-6543

Fax: 514-398-5158

Website: [www.mcgill.ca/jewishstudies](http://www.mcgill.ca/jewishstudies)

### 25.10.33.2 About Jewish Studies

The Department of Jewish Studies, established in 1968, offers an interdisciplinary approach to the study of Judaica. It includes:

- a selection of courses that will enable students not taking a Concentration in Jewish Studies to broaden their knowledge of Jewish history and culture;
- elementary, intermediate and advanced courses in Jewish languages – Hebrew, Yiddish, and Aramaic. In the case of the first two, this includes attention to both spoken idiom and written texts;
- specialized courses in the various disciplines that comprise Jewish Studies for students who have specific academic interests;
- a Minor Concentration for students who wish to add competence in Jewish Studies to their major field of study;
- a comprehensive Major Concentration, and an Honours program culminating in advanced seminars and tutorials for students contemplating careers in the various fields of Judaica. The Honours Program in Jewish Studies will give students the necessary linguistic, textual and bibliographical knowledge to enable them to pursue graduate work in Jewish Studies.

### 25.10.33.3 Jewish Studies (JWST) Faculty

#### Chair

Eric Caplan

#### Professors

David Aberbach; B.A.(Univ. Coll. Lond.), M.Litt., D.Phil.(Oxf.)

Gershon D. Hundert; B.A.(Col.), M.A.(Ohio St.), Ph.D.(Col.) (*Leonor Segal Professor of Jewish Studies*)

B. Barry Levy; B.A., M.A., B.R.E.(Yeshiva), Ph.D.(NYU)

#### Associate Professors

Eric Caplan; B.A.(McG.), M.A.(Tor.), Ph.D.(McG.)

Carlos Fraenkel; B.A., M.A., Ph.D.(Free Univ., Berlin)

Yael Halevi-Wise; B.A.(Hebrew), M.A.(G'town), Ph.D.(Prin.)

Lawrence Kaplan; B.A.(Yeshiva), M.A., Ph.D.(Harv.)

#### Lecturers

Lea Fima; B.Ed.(Beit Berl College), M.A.(McG.)

Esther Frank; B.A., M.A.(McG.)

Anna Gonshor; B.A., M.L.S., M.A.(McG.)

Karen Slouch; B.Ed., M.A.(McG.)

#### Adjunct Professors

Magdalena Opalski; M.A.(Warsaw), Ph.D.(Ott.)

Ruth Wisse; M.A.(Col.), Ph.D.(McG.)

**25.1033.31 Program Advisers**

**Minor Concentration in Jewish Law**

Lawrence Kaplan, 514-398-5008

**Minor Concentration in Jewish Studies**

Eric Caplan, 514-398-6544

**Biblical Studies**

JWST 211	(3)	Jewish Studies 1: Biblical Period
JWST 310	(3)	Believers, Heretics and Critics
JWST 324	(3)	Biblical Interpretation - Antiquity
JWST 327	(3)	A Book of the Bible
JWST 328	(3)	A Book of the Bible
JWST 329	(3)	A Book of the Bible
JWST 330	(3)	A Book of the Bible
JWST 331	(3)	Bible Interpretation/Medieval Ashkenaz
JWST 332	(3)	Bible Interpretation/Sefardic Tradition
JWST 333	(3)	The Hebrew Liturgy
JWST 428	(3)	Jewish Interpretation of Bible
JWST 429	(3)	Biblical Poetry
JWST 456	(3)	Studies in the Hebrew Bible
JWST 457	(3)	Studies in the Hebrew Bible
JWST 458	(3)	Studies in the Hebrew Bible
JWST 459	(3)	Studies in the Hebrew Bible
JWST 510	(3)	Jewish Bible Interpretation 1
JWST 511	(3)	Jewish Bible Interpretation 2
JWST 520	(3)	Bible Interpretation in Antiquity
JWST 521	(3)	Bible in Dead Sea Scrolls
JWST 523	(3)	Ancient Bible Interpretation
JWST 532	(3)	Narrative Midrash
JWST 533	(3)	Halakhic Midrash
JWST 534	(3)	Homiletic Midrash
JWST 535	(3)	Exegetic Midrash
JWST 536	(3)	Readings: Aramaic Bible Translation
JWST 537	(3)	The Bible in the Talmud Bavli
JWST 538	(3)	Early Rabbinic Parshanut 1
JWST 541	(3)	Medieval Ashkenazi Parshanut
JWST 542	(3)	Abraham Ibn Ezra as Parshan
JWST 543	(3)	Maimonides as Parshan
JWST 544	(3)	Nachmanides as Parshan
JWST 545	(3)	Parshanut in Renaissance Italy
JWST 546	(3)	Innovative Medieval Parshanut
JWST 547	(3)	Mystical Biblical Interpretation
JWST 548	(3)	Medieval Parshanut
JWST 550	(3)	The Bible in Hebrew Literature
JWST 551	(3)	20th Century Parshanut
JWST 554	(3)	Modern Jewish Biblical Scholarship
JWST 555	(3)	The Bible in Jewish Philosophy
JWST 556	(3)	Modern Parshanut 1



HIST 207	(3)	Jewish History: 400 B.C.E. to 1000
HIST 219	(3)	Jewish History: 1000 - 2000
HIST 307	(3)	Jews in Poland
HIST 427	(3)	The Hasidic Movement
HIST 477D1	(3)	Seminar in Jewish History
HIST 477D2	(3)	Seminar in Jewish History
JWST 211	(3)	Jewish Studies 1: Biblical Period
JWST 216	(3)	Jewish Studies 2: 400 B.C.E. - 1000
JWST 217	(3)	Jewish Studies 3: 1000 - 2000
JWST 240	(3)	The Holocaust
JWST 305	(3)	American Jewish History / Colonial Era to WWI
JWST 306	(3)	The American Jewish Community
JWST 314	(3)	Denominations in North American Judaism
JWST 315	(3)	Modern Liberal Jewish Thought
JWST 356	(3)	Jewish Labour Movement/Eastern Europe
JWST 357	(3)	Jewish Labour Movement/North America
JWST 361	(3)	The Shtetl: 1500-1897
JWST 362	(3)	The Shtetl: 1897-1939
JWST 365	(3)	Modern Jewish Ideologies
JWST 366	(3)	History of Zionism
JWST 371D1	(3)	Jews and the Modern City
JWST 371D2	(3)	Jews and the Modern City

### **Jewish Thought**

EDER 318	(3)	Teaching the Jewish Liturgy
HIST 207	(3)	Jewish History: 400 B.C.E. to 1000
HIST 219	(3)	Jewish History: 1000 - 2000
HIST 427	(3)	The Hasidic Movement
JWST 201	(3)	Jewish Law
JWST 216	(3)	Jewish Studies 2: 400 B.C.E. - 1000
JWST 217	(3)	Jewish Studies 3: 1000 - 2000
JWST 261	(3)	History of Jewish Philosophy & Thought
JWST 301	(3)	Hebrew Empire and Crisis
JWST 310	(3)	Believers, Heretics and Critics
JWST 314	(3)	Denominations in North American Judaism
JWST 315	(3)	Modern Liberal Jewish Thought
JWST 337	(3)	Jewish Philosophy and Thought 1
JWST 338	(3)	Jewish Philosophy and Thought 2
JWST 358	(3)	Topics in Jewish Philosophy 1
JWST 359	(3)	Topics in Jewish Philosophy 2
JWST 365	(3)	Modern Jewish Ideologies
JWST 366	(3)	History of Zionism

JWST 474	(3)	Maimonides' Mishneh Torah
JWST 542	(3)	Abraham Ibn Ezra as Parshan
JWST 543	(3)	Maimonides as Parshan
JWST 544	(3)	Nachmanides as Parshan
JWST 558	(3)	Topics: Modern Jewish Thought

**Language and Literature - Hebrew**

JWST 199	(3)	FYS: Images - Jewish Identities
JWST 200	(12)	Hebrew Language (Intensive)
JWST 220D1	(3)	Introductory Hebrew
JWST 220D2	(3)	Introductory Hebrew
JWST 225	(3)	Literature and Society
JWST 300	(3)	Charisma and Social Change
JWST 301	(3)	Hebrew Empire and Crisis
JWST 320D1	(3)	Intermediate Hebrew
JWST 320D2	(3)	Intermediate Hebrew
		The Israel0D2



JWST 355	(3)	The Yiddish Canon
JWST 361	(3)	The Shtetl: 1500-1897
JWST 362	(3)	The Shtetl: 1897-1939
JWST 380D1	(3)	Intermediate Yiddish
JWST 380D2	(3)	Intermediate Yiddish
JWST 381	(3)	Modern Yiddish Literature
JWST 383	(3)	Holocaust Literature
JWST 387	(3)	Modern Jewish Authors
JWST 480	(3)	Advanced Yiddish 1
JWST 481	(3)	Advanced Yiddish 2
JWST 485	(3)	Tutorial in Yiddish Literature
JWST 486	(3)	Tutorial in Yiddish Literature
JWST 487	(3)	Tutorial in Yiddish Literature
JWST 488	(3)	Tutorial in Yiddish Literature
JWST 498D1	(3)	Tutorial in Yiddish Literature
JWST 498D2	(3)	Tutorial in Yiddish Literature
JWST 530	(3)	Topics in Yiddish Literature
JWST 531	(3)	Topics in Yiddish Literature
JWST 587	(3)	Tutorial in Yiddish Literature
JWST 588	(3)	Tutorial in Yiddish Literature

#### **Modern Jewish Studies**

HIST 219	(3)	Jewish History: 1000 - 2000
HIST 427	(3)	The Hasidic Movement
HIST 477D1	(3)	Seminar in Jewish History
HIST 477D2	(3)	Seminar in Jewish History
JWST 217	(3)	Jewish Studies 3: 1000 - 2000
JWST 240	(3)	The Holocaust
JWST 301	(3)	Hebrew Empire and Crisis
JWST 309	(3)	Jews in Film
JWST 346	(3)	Modern Jewish Studies
JWST 347	(3)	Modern Jewish Studies
JWST 348	(3)	Modern Jewish Studies
JWST 349	(3)	Modern Jewish Studies
JWST 351	(3)	Studies in Modern Jewish Literature
JWST 356	(3)	Jewish Labour Movement/Eastern Europe
JWST 357	(3)	Jewish Labour Movement/North America
JWST 359	(3)	Topics in Jewish Philosophy 2
JWST 361	(3)	The Shtetl: 1500-1897
JWST 362	(3)	The Shtetl: 1897-1939
JWST 365	(3)	Modern Jewish Ideologies
JWST 366	(3)	History of Zionism

JWST 371D1	(3)	Jews and the Modern City
JWST 371D2	(3)	Jews and the Modern City
JWST 383	(3)	Holocaust Literature
JWST 386	(3)	American Jewish Literature
JWST 387	(3)	Modern Jewish Authors
JWST 404	(3)	Literary Response to Loss/Separation
JWST 445	(3)	The Poetry of Nationalism
JWST 502	(3)	Modern Israeli Literature
JWST 556	(3)	Modern Parshanut 1
JWST 558	(3)	Topics: Modern Jewish Thought
JWST 585	(3)	Tutorial: Eastern European Studies 1
JWST 586	(3)	Tutorial: Eastern European Studies 2
POLI 347	(3)	Arab-Israel Conflict, Crisis, Peace
SOCI 327	(3)	Jews in North America

**Rabbinic Studies**

HIST 207	(3)	Jewish History: 400 B.C.E. to 1000
HIST 219	(3)	Jewish History: 1000 - 2000
JWST 201	(3)	Jewish Law
JWST 216	(3)	Jewish Studies 2: 400 B.C.E. - 1000
JWST 217	(3)	Jewish Studies 3: 1000 - 2000
JWST 316	(3)	Social and Ethical Issues Jewish Law 1
JWST 319	(3)	Judaism and the Occult
JWST 333	(3)	The Hebrew Liturgy
JWST 345	(3)	Introduction to Rabbinic Literature
JWST 358	(3)	Topics in Jewish Philosophy 1
JWST 359	(3)	Topics in Jewish Philosophy 2
JWST 374	(3)	Talmud and Law 1: Bava Kamma
JWST 375	(3)	Talmud and Law 2: Bava Metzia
JWST 402	(3)	Readings in Rabbinic Literature
JWST 474	(3)	Maimonides' Mishneh Torah
JWST 532	(3)	Narrative Midrash
JWST 533	(3)	Halakhic Midrash
JWST 534	(3)	Homiletic Midrash
JWST 535	(3)	Exegetic Midrash
JWST 537	(3)	The Bible in the Talmud Bavli
JWST 538	(3)	Early Rabbinic Parshanut 1
JWST 541	(3)	Medieval Ashkenazi Parshanut
JWST 542	(3)	Abraham Ibn Ezra as Parshan
JWST 543	(3)	Maimonides as Parshan
JWST 544	(3)	Nachmanides as Parshan
JWST 572	(3)	Aggadah in Modern Scholarship

JWST 574	(3)	Bible in Responsa Literature
JWST 576	(3)	Jewish Family Law



JWST 545	(3)	Parshanut in Renaissance Italy
JWST 546	(3)	Innovative Medieval Parshanut
JWST 547	(3)	Mystical Biblical Interpretation
JWST 548	(3)	Medieval Parshanut
		The Bible in Hebrew Literature

JWST 486	(3)	Tutorial in Yiddish Literature
JWST 487	(3)	Tutorial in Yiddish Literature
JWST 488	(3)	Tutorial in Yiddish Literature
JWST 498D1	(3)	Tutorial in Yiddish Literature
JWST 498D2	(3)	Tutorial in Yiddish Literature
JWST 585	(3)	Tutorial: Eastern European Studies 1
JWST 586	(3)	Tutorial: Eastern European Studies 2

### **Jewish History**

HIST 207	(3)	Jewish History: 400 B.C.E. to 1000
HIST 219	(3)	Jewish History: 1000 - 2000
HIST 307	(3)	Jews in Poland
HIST 427	(3)	The Hasidic Movement
HIST 477D1	(3)	Seminar in Jewish History
HIST 477D2	(3)	Seminar in Jewish History
JWST 211	(3)	Jewish Studies 1: Biblical Period
JWST 216	(3)	Jewish Studies 2: 400 B.C.E. - 1000
JWST 217	(3)	Jewish Studies 3: 1000 - 2000
JWST 240	(3)	The Holocaust
		American Jewish History / Colonial Era to

JWST 310	(3)	Believers, Heretics and Critics
JWST 314	(3)	Denominations in North American Judaism
JWST 315	(3)	Modern Liberal Jewish Thought
JWST 337	(3)	Jewish Philosophy and Thought 1
JWST 338	(3)	Jewish Philosophy and Thought 2
JWST 358	(3)	Topics in Jewish Philosophy 1
JWST 359	(3)	Topics in Jewish Philosophy 2
JWST 365	(3)	Modern Jewish Ideologies
JWST 366	(3)	History of Zionism
JWST 474	(3)	Maimonides' Mishneh Torah
JWST 542	(3)	Abraham Ibn Ezra as Parshan
JWST 543	(3)	Maimonides as Parshan
JWST 544	(3)	Nachmanides as Parshan
JWST 558	(3)	Topics: Modern Jewish Thought

### Language and Literature - Hebrew

JWST 199	(3)	FYS: Images - Jewish Identities
JWST 200	(12)	Hebrew Language (Intensive)
JWST 220D1	(3)	Introductory Hebrew
JWST 220D2	(3)	Introductory Hebrew
JWST 225	(3)	Literature and Society
JWST 300	(3)	Charisma and Social Change
JWST 301	(3)	Hebrew Empire and Crisis
JWST 320D1	(3)	Intermediate Hebrew
JWST 320D2	(3)	Intermediate Hebrew
JWST 323	(3)	The Israeli Novel
JWST 325	(3)	Israeli Literature in Translation
JWST 340D1	(3)	Advanced Hebrew
JWST 340D2	(3)	Advanced Hebrew
JWST 367	(3)	Studies in Hebrew Language and Literature
JWST 368	(3)	Studies in Hebrew Language and Literature
JWST 369	(3)	Studies in Hebrew Language and Literature
JWST 370	(3)	Studies in Hebrew Language and Literature
JWST 383	(3)	Holocaust Literature
JWST 403	(3)	Contemporary Hebrew Literature
JWST 404	(3)	Literary Response to Loss/Separation
JWST 411	(3)	Topics: Modern Hebrew Literature 1881-1948
JWST 412	(3)	Topics: Modern Hebrew Literature 2
JWST 429	(3)	Biblical Poetry
JWST 438	(3)	Survey of Hebrew Literature 1
JWST 439	(3)	Survey of Hebrew Literature 2
JWST 445	(3)	The Poetry of Nationalism

JWST 502	(3)	Modern Israeli Literature
JWST 550	(3)	The Bible in Hebrew Literature
JWST 582	(3)	Hebrew and Aramaic Philology

**Language and Literature - Yiddish**

JWST 206	(3)	Introduction to Yiddish Literature
JWST 280D1	(3)	Introductory Yiddish
JWST 280D2	(3)	Introductory Yiddish
JWST 351	(3)	Studies in Modern Jewish Literature
JWST 355	(3)	The Yiddish Canon
JWST 361	(3)	The Shtetl: 1500-1897
JWST 362	(3)	The Shtetl: 1897-1939
JWST 380D1	(3)	Intermediate Yiddish
JWST 380D2	(3)	Intermediate Yiddish
JWST 381	(3)	Modern Yiddish Literature
JWST 383	(3)	Holocaust Literature
JWST 387	(3)	Modern Jewish Authors
JWST 480	(3)	Advanced Yiddish 1
JWST 481	(3)	Advanced Yiddish 2
JWST 485	(3)	Tutorial in Yiddish Literature
JWST 486	(3)	Tutorial in Yiddish Literature
JWST 487	(3)	Tutorial in Yiddish Literature
JWST 488	(3)	Tutorial in Yiddish Literature
JWST 498D1	(3)	Tutorial in Yiddish Literature
JWST 498D2	(3)	Tutorial in Yiddish Literature
JWST 530	(3)	Topics in Yiddish Literature
JWST 531	(3)	Topics in Yiddish Literature
JWST 587	(3)	Tutorial in Yiddish Literature
JWST 588	(3)	Tutorial in Yiddish Literature

**Modern Jewish Studies**

HIST 219	(3)	Jewish History: 1000 - 2000
HIST 427	(3)	The Hasidic Movement
HIST 477D1	(3)	Seminar in Jewish History
HIST 477D2	(3)	Seminar in Jewish History
JWST 217	(3)	Jewish Studies 3: 1000 - 2000
JWST 240	(3)	The Holocaust
JWST 301	(3)	Hebrew Empire and Crisis
JWST 309	(3)	Jews in Film
JWST 346	(3)	Modern Jewish Studies
JWST 347	(3)	Modern Jewish Studies
JWST 348	(3)	Modern Jewish Studies





JWST 534	(3)	Homiletic Midrash
JWST 535	(3)	Exegetic Midrash
JWST 537	(3)	The Bible in the Talmud Bavli
JWST 538	(3)	Early Rabbinic Parshanut 1
JWST 541	(3)	Medieval Ashkenazi Parshanut
JWST 542	(3)	Abraham Ibn Ezra as Parshan
JWST 543	(3)	Maimonides as Parshan



JWST 541	(3)	Medieval Ashkenazi Parshanut
JWST 542	(3)	Abraham Ibn Ezra as Parshan
JWST 543	(3)	Maimonides as Parshan
	(3)	Nachmanides as Parshan

JWST 438	(3)	Survey of Hebrew Literature 1
JWST 439	(3)	Survey of Hebrew Literature 2
JWST 445	(3)	The Poetry of Nationalism
JWST 485	(3)	Tutorial in Yiddish Literature
JWST 486	(3)	Tutorial in Yiddish Literature
JWST 487	(3)	Tutorial in Yiddish Literature
JWST 488	(3)	Tutorial in Yiddish Literature
JWST 498D1	(3)	Tutorial in Yiddish Literature
JWST 498D2	(3)	Tutorial in Yiddish Literature
JWST 585	(3)	Tutorial: Eastern European Studies 1
JWST 586	(3)	Tutorial: Eastern European Studies 2

### **Jewish History**

HIST 207	(3)	Jewish History: 400 B.C.E. to 1000
HIST 219	(3)	Jewish History: 1000 - 2000
HIST 307	(3)	Jews in Poland
HIST 427	(3)	The Hasidic Movement
HIST 477D1	(3)	Seminar in Jewish History
HIST 477D2	(3)	Seminar in Jewish History
JWST 211	(3)	Jewish Studies 1: Biblical Period
JWST 216	(3)	Jewish Studies 2: 400 B.C.E. - 1000
JWST 217	(3)	Jewish Studies 3: 1000 - 2000
JWST 240	(3)	The Holocaust
JWST 305	(3)	American Jewish History / Colonial Era to WWI
JWST 306	(3)	The American Jewish Community
JWST 314	(3)	Denominations in North American Judaism
JWST 315	(3)	Modern Liberal Jewish Thought
JWST 356	(3)	Jewish Labour Movement/Eastern Europe
JWST 357	(3)	Jewish Labour Movement/North America
JWST 361	(3)	The Shtetl: 1500-1897
JWST 362	(3)	The Shtetl: 1897-1939
JWST 365	(3)	Modern Jewish Ideologies
JWST 366	(3)	History of Zionism
JWST 371D1	(3)	Jews and the Modern City
JWST 371D2	(3)	Jews and the Modern City

### **Jewish Thought**

EDER 318	(3)	Teaching the Jewish Liturgy
HIST 207	(3)	Jewish History: 400 B.C.E. to 1000
HIST 219	(3)	Jewish History: 1000 - 2000
HIST 427	(3)	The Hasidic Movement
JWST 201	(3)	Jewish Law

JWST 216	(3)	Jewish Studies 2: 400 B.C.E. - 1000
JWST 217	(3)	Jewish Studies 3: 1000 - 2000
JWST 261	(3)	History of Jewish Philosophy & Thought
JWST 301	(3)	Hebrew Empire and Crisis
JWST 310	(3)	Believers, Heretics and Critics
JWST 314	(3)	Denominations in North American Judaism
JWST 315	(3)	Modern Liberal Jewish Thought
JWST 337	(3)	Jewish Philosophy and Thought 1
JWST 338	(3)	Jewish Philosophy and Thought 2
JWST 358	(3)	Topics in Jewish Philosophy 1
JWST 359	(3)	Topics in Jewish Philosophy 2
JWST 365	(3)	Modern Jewish Ideologies
JWST 366	(3)	History of Zionism
JWST 474	(3)	Maimonides' Mishneh Torah
JWST 542	(3)	Abraham Ibn Ezra as Parshan
JWST 543	(3)	Maimonides as Parshan
JWST 544	(3)	Nachmanides as Parshan
JWST 558	(3)	Topics: Modern Jewish Thought

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JWST 429	(3)	Biblical Poetry
JWST 438	(3)	Survey of Hebrew Literature 1
JWST 439	(3)	Survey of Hebrew Literature 2
JWST 445	(3)	The Poetry of Nationalism
JWST 502	(3)	Modern Israeli Literature
JWST 550	(3)	The Bible in Hebrew Literature
JWST 582	(3)	Hebrew and Aramaic Philology

### Language and Literature - Yiddish

JWST 206	(3)	Introduction to Yiddish Literature
JWST 280D1	(3)	Introductory Yiddish
JWST 280D2	(3)	Introductory Yiddish
JWST 351	(3)	Studies in Modern Jewish Literature
JWST 355	(3)	The Yiddish Canon
JWST 361	(3)	The Shtetl: 1500-1897
JWST 362	(3)	The Shtetl: 1897-1939
JWST 380D1	(3)	Intermediate Yiddish
JWST 380D2	(3)	Intermediate Yiddish
JWST 381	(3)	Modern Yiddish Literature
JWST 383	(3)	Holocaust Literature
JWST 387	(3)	Modern Jewish Authors
JWST 480	(3)	Advanced Yiddish 1
JWST 481	(3)	Advanced Yiddish 2
JWST 485	(3)	Tutorial in Yiddish Literature
JWST 486	(3)	Tutorial in Yiddish Literature
JWST 487	(3)	Tutorial in Yiddish Literature
JWST 488	(3)	Tutorial in Yiddish Literature
JWST 498D1	(3)	Tutorial in Yiddish Literature
JWST 498D2	(3)	Tutorial in Yiddish Literature
JWST 530	(3)	Topics in Yiddish Literature
JWST 531	(3)	Topics in Yiddish Literature
JWST 587	(3)	Tutorial in Yiddish Literature
JWST 588	(3)	Tutorial in Yiddish Literature

### Modern Jewish Studies

HIST 219	(3)	Jewish History: 1000 - 2000
HIST 427	(3)	The Hasidic Movement
HIST 477D1	(3)	Seminar in Jewish History
HIST 477D2	(3)	Seminar in Jewish History
JWST 217	(3)	Jewish Studies 3: 1000 - 2000
JWST 240	(3)	The Holocaust
JWST 301	(3)	Hebrew Empire and Crisis

JWST 309	(3)	Jews in Film
JWST 346	(3)	Modern Jewish Studies
JWST 347	(3)	Modern Jewish Studies
JWST 348	(3)	Modern Jewish Studies
JWST 349	(3)	Modern Jewish Studies
JWST 351	(3)	Studies in Modern Jewish Literature
JWST 356	(3)	Jewish Labour Movement/Eastern Europe
JWST 357	(3)	Jewish Labour Movement/North America
JWST 359	(3)	Topics in Jewish Philosophy 2
JWST 361	(3)	The Shtetl: 1500-1897
JWST 362	(3)	The Shtetl: 1897-1939
JWST 365	(3)	Modern Jewish Ideologies
JWST 366	(3)	History of Zionism
JWST 371D1	(3)	Jews and the Modern City
JWST 371D2	(3)	Jews and the Modern City
JWST 383	(3)	Holocaust Literature
JWST 386	(3)	American Jewish Literature
JWST 387	(3)	Modern Jewish Authors
JWST 404	(3)	Literary Response to Loss/Separation
JWST 445	(3)	The Poetry of Nationalism
JWST 502	(3)	Modern Israeli Literature
JWST 556	(3)	Modern Parshanut 1
JWST 558	(3)	Topics: Modern Jewish Thought
JWST 585	(3)	Tutorial: Eastern European Studies 1
JWST 586	(3)	Tutorial: Eastern European Studies 2
POLI 347	(3)	Arab-Israel Conflict, Crisis, Peace
SOCI 327	(3)	Jews in North America

### **Rabbinic Studies**



JWST 402	(3)	Readings in Rabbinic Literature
JWST 474	(3)	Maimonides' Mishneh Torah
JWST 532	(3)	Narrative Midrash
JWST 533	(3)	Halakhic Midrash
JWST 534	(3)	Homiletic Midrash
JWST 535	(3)	Exegetic Midrash
JWST 537	(3)	The Bible in the Talmud Bavli
JWST 538	(3)	Early Rabbinic Parshanut 1
JWST 541	(3)	Medieval Ashkenazi Parshanut
JWST 542	(3)	Abraham Ibn Ezra as Parshan
JWST 543	(3)	Maimonides as Parshan
JWST 544	(3)	Nachmanides as Parshan
JWST 572	(3)	Aggadah in Modern Scholarship
JWST 574	(3)	Bible in Responsa Literature
JWST 576	(3)	Jewish Family Law

#### **Other Department Courses - History**

Many of the courses in Jewish Studies are related to other departments, e.g., History, Religious Studies. There are also related courses in other departments which students specializing in certain areas of Jewish Studies might be encouraged to include in their programs, e.g., Classical Greek, Arabic, theories of literature, etc.

The following History department courses may be used as Jewish Studies courses in the Department of Jewish Studies programs. These courses have been included in the areas of study course lists above.

HIST 207	(3)	Jewish History: 400 B.C.E. to 1000
HIST 219	(3)	Jewish History: 1000 - 2000
HIST 307	(3)	Jews in Poland
HIST 427	(3)	The Hasidic Movement
HIST 477D1	(3)	Seminar in Jewish History
HIST 477D2	(3)	Seminar in Jewish History

#### **25.10.33.8 Bachelor of Arts (B.A.) - Joint Honours Component Jewish Studies (36 credits)**



JWST 532	(3)	Narrative Midrash
JWST 533	(3)	Halakhic Midrash
JWST 534	(3)	Homiletic Midrash
JWST 535	(3)	Exegetic Midrash

JWST 371D1	(3)	Jews and the Modern City
JWST 371D2	(3)	Jews and the Modern City
JWST 381	(3)	Modern Yiddish Literature
JWST 383	(3)	Holocaust Literature
JWST 404	(3)	Literary Response to Loss/Separation
JWST 411	(3)	Topics: Modern Hebrew Literature 1881-1948
JWST 412	(3)	Topics: Modern Hebrew Literature 2
JWST 438	(3)	Survey of Hebrew Literature 1
JWST 439	(3)	Survey of Hebrew Literature 2
JWST 445	(3)	The Poetry of Nationalism
JWST 485	(3)	Tutorial in Yiddish Literature
JWST 486	(3)	Tutorial in Yiddish Literature
JWST 487	(3)	Tutorial in Yiddish Literature
JWST 488	(3)	Tutorial in Yiddish Literature
JWST 498D1	(3)	Tutorial in Yiddish Literature
JWST 498D2	(3)	Tutorial in Yiddish Literature
JWST 585	(3)	Tutorial: Eastern European Studies 1
JWST 586	(3)	Tutorial: Eastern European Studies 2

**Jewish History**

HIST 207	(3)	Jewish History: 400 B.C.E. to 1000
HIST 219	(3)	Jewish History: 1000 - 2000

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**Jewish Thought**

EDER 318	(3)	Teaching the Jewish Liturgy
HIST 207	(3)	Jewish History: 400 B.C.E. to 1000
HIST 219	(3)	Jewish History: 1000 - 2000
HIST 427	(3)	The Hasidic Movement
JWST 201	(3)	Jewish Law
JWST 216	(3)	Jewish Studies 2: 400 B.C.E. - 1000
JWST 217	(3)	Jewish Studies 3: 1000 - 2000
JWST 261	(3)	History of Jewish Philosophy & Thought
JWST 301	(3)	Hebrew Empire and Crisis
JWST 310	(3)	Believers, Heretics and Critics
JWST 314	(3)	Denominations in North American Judaism
JWST 315	(3)	Modern Liberal Jewish Thought
JWST 337	(3)	Jewish Philosophy and Thought 1
JWST 338	(3)	Jewish Philosophy and Thought 2
JWST 358	(3)	Topics in Jewish Philosophy 1
JWST 359	(3)	Topics in Jewish Philosophy 2
JWST 365	(3)	Modern Jewish Ideologies
JWST 366	(3)	History of Zionism
JWST 474	(3)	Maimonides' Mishneh Torah
JWST 542	(3)	Abraham Ibn Ezra as Parshan
JWST 543	(3)	Maimonides as Parshan
JWST 544	(3)	Nachmanides as Parshan
JWST 558	(3)	Topics: Modern Jewish Thought

**Language and Literature - Hebrew**

JWST 199	(3)	FYS: Images - Jewish Identities
JWST 200	(12)	Hebrew Language (Intensive)
JWST 220D1	(3)	Introductory Hebrew
JWST 220D2	(3)	Introductory Hebrew
JWST 225	(3)	Literature and Society
JWST 300	(3)	Charisma and Social Change
JWST 301	(3)	Hebrew Empire and Crisis
JWST 320D1	(3)	Intermediate Hebrew
JWST 320D2	(3)	Intermediate Hebrew
JWST 323	(3)	The Israeli Novel
JWST 325	(3)	Israeli Literature in Translation
JWST 340D1	(3)	Advanced Hebrew
JWST 340D2	(3)	Advanced Hebrew
JWST 367	(3)	Studies in Hebrew Language and Literature
JWST 368	(3)	Studies in Hebrew Language and Literature
JWST 369	(3)	Studies in Hebrew Language and Literature

JWST 370	(3)	Studies in Hebrew Language and Literature
JWST 383	(3)	Holocaust Literature
JWST 403	(3)	Contemporary Hebrew Literature
JWST 404	(3)	Literary Response to Loss/Separation
JWST 411	(3)	Topics: Modern Hebrew Literature 1881-1948
JWST 412	(3)	Topics: Modern Hebrew Literature 2
JWST 429	(3)	Biblical Poetry
JWST 438	(3)	Survey of Hebrew Literature 1
JWST 439	(3)	Survey of Hebrew Literature 2
JWST 445	(3)	The Poetry of Nationalism
JWST 502	(3)	Modern Israeli Literature
JWST 550	(3)	The Bible in Hebrew Literature
JWST 582	(3)	Hebrew and Aramaic Philology

### Language and Literature - Yiddish

JWST 206	(3)	Introduction to Yiddish Literature
JWST 280D1	(3)	Introductory Yiddish
JWST 280D2	(3)	Introductory Yiddish
JWST 351	(3)	Studies in Modern Jewish Literature
JWST 355	(3)	The Yiddish Canon
JWST 361	(3)	The Shtetl: 1500-1897
JWST 362	(3)	The Shtetl: 1897-1939
JWST 380D1	(3)	Intermediate Yiddish
JWST 380D2	(3)	Intermediate Yiddish
JWST 381	(3)	Modern Yiddish Literature
JWST 383	(3)	Holocaust Literature
JWST 387	(3)	Modern Jewish Authors
JWST 480	(3)	Advanced Yiddish 1
JWST 481	(3)	Advanced Yiddish 2
JWST 485	(3)	Tutorial in Yiddish Literature
JWST 486	(3)	Tutorial in Yiddish Literature
JWST 487	(3)	Tutorial in Yiddish Literature
JWST 488	(3)	Tutorial in Yiddish Literature
JWST 498D1	(3)	Tutorial in Yiddish Literature
JWST 498D2	(3)	Tutorial in Yiddish Literature
JWST 530	(3)	Topics in Yiddish Literature
JWST 531	(3)	Topics in Yiddish Literature
JWST 587	(3)	Tutorial in Yiddish Literature
JWST 588	(3)	Tutorial in Yiddish Literature

### Modern Jewish Studies

HIST 219	(3)	Jewish History: 1000 - 2000
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HIST 427	(3)	The Hasidic Movement
HIST 477D1	(3)	Seminar in Jewish History
HIST 477D2	(3)	Seminar in Jewish History
JWST 217	(3)	Jewish Studies 3: 1000 - 2000
JWST 240	(3)	The Holocaust
		Hebrew Empire and Crisis

JWST 333	(3)	The Hebrew Liturgy
JWST 345	(3)	Introduction to Rabbinic Literature
JWST 358	(3)	Topics in Jewish Philosophy 1
JWST 359	(3)	Topics in Jewish Philosophy 2
JWST 374	(3)	Talmud and Law 1: Bava Kamma
JWST 375	(3)	Talmud and Law 2: Bava Metzia
JWST 402	(3)	Readings in Rabbinic Literature
JWST 474	(3)	Maimonides' Mishneh Torah
JWST 532	(3)	Narrative Midrash
JWST 533	(3)	Halakhic Midrash
JWST 534	(3)	Homiletic Midrash
JWST 535	(3)	Exegetic Midrash
JWST 537	(3)	The Bible in the Talmud Bavli
JWST 538	(3)	Early Rabbinic Parshanut 1
JWST 541	(3)	Medieval Ashkenazi Parshanut
JWST 542	(3)	Abraham Ibn Ezra as Parshan
JWST 543	(3)	Maimonides as Parshan
JWST 544	(3)	Nachmanides as Parshan
JWST 572	(3)	Aggadah in Modern Scholarship
JWST 574	(3)	Bible in Responsa Literature
JWST 576	(3)	Jewish Family Law

### Other Department Courses - History

Many of the courses in Jewish Studies are related to other departments, e.g., History, Religious Studies. There are also related courses in other departments which students specializing in certain areas of Jewish Studies might be encouraged to include in their programs, e.g., Classical Greek, Arabic, theories of literature, etc.

The following History department courses may be used as Jewish Studies courses in the Department of Jewish Studies programs. These courses have been included in the areas of study course lists above.

HIST 207	(3)	Jewish History: 400 B.C.E. to 1000
HIST 219	(3)	Jewish History: 1000 - 2000
HIST 307	(3)	Jews in Poland
HIST 427	(3)	The Hasidic Movement
HIST 477D1	(3)	Seminar in Jewish History
HIST 477D2	(3)	Seminar in Jewish History

### 25.10.33.9 Jewish Studies (JWST) Related Programs

#### 25.10.33.9.1 Jewish Teacher Training Program

Established in 1973 in the Faculty of Education in conjunction with the Department of Jewish Studies, this program prepares students to teach at the elementary and secondary school levels.

Students are encouraged to acquire a strong general background in Bible, Jewish liturgy, traditions and history prior to registering in the program. Students lacking the ability to teach in Hebrew should consider spending a term at an Israeli university.

Further information can be obtained by contacting the Director, Dr. Eric Caplan, at 514-398-6544; by consulting *Faculty of Education > section 27.9.22: Bachelor of Education (B.Ed.) - Kindergarten and Elementary Jewish Studies (126 credits)*; and from the web: [www.mcgill.ca/edu-jtp](http://www.mcgill.ca/edu-jtp).



## 25.10.34 Latin-American and Caribbean Studies (LACS)

### 25.10.34.1 Location

Institute for the Study of International Development  
Peterson Hall  
3460 McTavish Street, Room 126  
Montreal, Quebec H3A 1X9

Telephone: 514-398-4804  
Fax: 514-398-2786  
Email: [ids@mcgill.ca](mailto:ids@mcgill.ca)  
Website: [www.mcgill.ca/lacs](http://www.mcgill.ca/lacs)

Adviser:  
Lisa Stanischewski

### 25.10.34.2 About Latin-American and Caribbean Studies

Established in 1971, the interdisciplinary Program in Latin-American and Caribbean Studies offers a comprehensive array of courses on the peoples, cultures, history, literature, politics, economy and geography of Latin America and the Caribbean, providing students with a broad-based understanding of this geographic region, and with the language and research skills required for advanced scholarship. The program in Latin-American and Caribbean Studies encourages the free exchange of ideas and perspectives in order to foster an environment suitable for serious reflection and critical analysis.

Students in the Program in Latin-American and Caribbean Studies are encouraged to consider the opportunities for foreign study and research made available by bilateral exchange agreements with leading universities in the Spanish and Portuguese-speaking world. These exchanges are open to all members of the McGill University community. Further information may be obtained from the Student Exchange and Study Abroad Office, James Administration Building. (*Note that this office will be moving in Summer 2010. See <http://www.mcgill.ca/students> for details.*)

An agreement of cooperation with the Center for Latin American Studies at Georgetown University (Washington, D.C.) permits Honours students in Latin-American and Caribbean Studies at McGill to count a portion of their undergraduate coursework toward the degree requirements for Georgetown's M.A. in Latin American Studies, thus permitting completion of the M.A. in one calendar year. See the Program Adviser for additional information.

### 25.10.34.3 Undergraduate Degree Programs

The program in Latin-American and Caribbean Studies offers an interdisciplinary Honours degree and an interdisciplinary Major Concentration as part of the Multi-track B.A. in Arts. Given the constraints of the Multi-track B.A. and our belief that an interdisciplinary program of area studies must include within it the language(s) used by the peoples and cultures under examination, there is at present no interdisciplinary Minor Concentration in Latin-American and Caribbean Studies.

### 25.10.34.4 Latin-American and Caribbean Studies (LACS) Faculty

#### Program Committee Chair

D. Studnicki-Gizbert (*History*)

#### Program Committee

O. Coomes (*Geography*)

J. Jouve-Martin (*Hispanic Studies*)

C. LeGrand (*History*)

T. Meredith (*Geography*)

P. Oxhorn (*Political Science*)

K. Sibbald (*Hispanic Studies*)

I. Vaccaro (*Anthropology*)

HISP 243*	(3)	Survey of Spanish-American Literature 1
HISP 244*	(3)	Survey of Spanish-American Literature 2
	(3)	History of Latin America to 1825



POLI 227	(3)	Developing Areas/Introduction
POLI 300D1	(3)	Developing Areas/Revolution Developing

HISP 220D1	(3)	Spanish Language: Intermediate
HISP 220D2	(3)	Spanish Language: Intermediate

**Cluster 1: Literature and Culture - Hispanic Studies**

HISP 225	(3)	Hispanic Civilization 1
HISP 226	(3)	Hispanic Civilization 2
HISP 243	(3)	Survey of Spanish-American Literature 1
HISP 244	(3)	Survey of Spanish-American Literature 2
HISP 302	(3)	Hispanic Literature - English Translation 2
HISP 328	(3)	Literature of Ideas: Spanish America
HISP 332	(3)	Spanish-American Literature of 19th Century
HISP 333	(3)	Spanish-American Drama
HISP 351	(3)	Spanish-American Novel 1
HISP 352	(3)	Spanish-American Novel 2
HISP 356	(3)	Spanish-American Short Story
HISP 358	(3)	Women Writers Fiction Spanish-America
		Literature - Discovery and Exploration Spain New

HIST 580D2	(3)	European and Native-American Encounters
POLI 227	(3)	Developing Areas/Introduction
POLI 300D1	(3)	Developing Areas/Revolution
POLI 300D2	(3)	Developing Areas/Revolution
POLI 319	(3)	Politics of Latin America
POLI 471	(3)	Democracy in the Modern World
POLI 472	(3)	Developing Areas/Social Movements
POLI 473	(3)	Democracy and the Market

### Cluster 3: Anthropology and Geography

\*Note: GEOG 404 may only count toward the requirements for this program when the topic is related to Panama.

ANTH 212	(3)	Anthropology of Development
ANTH 307	(3)	Andean Prehistory
ANTH 319	(3)	Inka Archaeology & Ethnohistory
ANTH 326	(3)	Anthropology of Latin America
ANTH 422	(3)	Contemporary Latin American Culture & Society
ANTH 439	(3)	Theories of Development
GEOG 310	(3)	Development and Livelihoods
GEOG 404*	(3)	Environmental Management 2
GEOG 408	(3)	Geography of Development
GEOG 410	(3)	Geography of Underdevelopment: Current Problems
GEOG 498	(3)	Humans in Tropical Environments
GEOG 510	(3)	Humid Tropical Environments

### 25.10.34.7 Bachelor of Arts (B.A.) - Honours Latin American and Caribbean Studies - Thematic (60 credits)

The Honours Latin-American and Caribbean Studies - Thematic option permits highly motivated students to combine the study of Latin America and the Caribbean with a theme or intellectual focus whose roots extend beyond the geographic confines of this area, and for which a high level of methodological and/or theoretical expertise is required.

Themes of study may include, but are not limited to: ethnography and ethnohistory; the age of European expansion; transnationalism; the concepts and practice of law and justice; nationalism and nation-building; ecology and the management of human and natural resources.

While the Faculty of Arts regulations require a minimum CGPA of 3.0 for Honours programs, in addition, students pursuing the Honours Latin-American and Caribbean Studies - Thematic option must normally maintain a B+ (3.30) average in all program courses. Students must also meet all additional Faculty of Arts requirements for graduation with Honours.

### Required Courses (21 credits)

\*Note: Successful completion of intermediate level Spanish (HISP 220D1/D2 or HISP 219 or equivalent) is a prerequisite for the required courses HISP 243 and HISP 244.

HISP 243*	(3)	Survey of Spanish-American Literature 1
HISP 244*	(3)	Survey of Spanish-American Literature 2

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**Complementary Courses (39 credits)**

39 credits selected in consultation with the program adviser with the following requirements.

- 1) 12 credits must be taken in Spanish or Portuguese (see the courses under the heading "Hispanic Studies" in the Complementary Course List).
- 2) 12 credits on Latin America and the Caribbean (exclusive of language courses) selected from the Complementary Course List.
- 3) 15 credits from outside the Complementary Course List, within a coherent theme of specialization.

**Complementary Course List****Anthropology**

ANTH 212	(3)	Anthropology of Development
ANTH 307	(3)	Andean Prehistory
ANTH 319	(3)	Inka Archaeology & Ethnohistory
ANTH 326	(3)	Anthropology of Latin America
ANTH 422	(3)	Contemporary Latin American Culture & Society
ANTH 439	(3)	Theories of Development

**Economics**

ECON 313	(3)	Economic Development 1
ECON 314	(3)	Economic Development 2

**English**

ENGL 321	(3)	Caribbean Fiction
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**Geography**

\*Note: GEOG 404 may only count toward the requirements for this program when the topic is related to Panama.

GEOG 310	(3)	Development and Livelihoods
GEOG 404*	(3)	Environmental Management 2
GEOG 408	(3)	Geography of Development
GEOG 410	(3)	Geography of Underdevelopment: Current Problems
GEOG 498	(3)	Humans in Tropical Environments
GEOG 510	(3)	Humid Tropical Environments

**Hispanic Studies**

HISP 202D1	(3)	Portuguese Language: Beginners'
HISP 202D2	(3)	Portuguese Language: Beginners'
HISP 204D1	(3)	Portuguese Language: Intermediate
HISP 204D2	(3)	Portuguese Language: Intermediate
HISP 210D1	(3)	Spanish Language: Beginners'
HISP 210D2	(3)	Spanish Language: Beginners'
HISP 218	(6)	Spanish Language Intensive - Elementary
HISP 219	(6)	Spanish Language Intensive - Intermediate
HISP 220D1	(3)	Spanish Language: Intermediate
HISP 220D2	(3)	Spanish Language: Intermediate





**25.10.35 Linguistics (LING)****25.10.35.1 Location**

1085 Dr. Penfield Avenue  
Montreal, Quebec H3A 1A7

Telephone: 514-398-4222

Website: [www.mcgill.ca/linguistics](http://www.mcgill.ca/linguistics)

**25.10.35.2 About Linguistics**

Linguistics is the scientific study of human language. Topics include: the structure of the world's languages at the level of sounds (phonetics and phonology), words (morphology), sentences (syntax), and meaning (semantics); how people learn languages (acquisition); how people use two languages (bilingualism); how language is processed and represented in the brain (psycho- and neurolinguistics); how languages change over time (historical linguistics); and how languages vary in relation to region and social identity (dialectology and sociolinguistics). In addition to preparing students for advanced academic work in linguistics and related disciplines (e.g., anthropology, cognitive neuroscience, computer science, philosophy, or psychology), courses in linguistics provide a useful background for many careers, for example, language teaching, translation, child psychology, speech-language pathology, communication, and speech technology.

The Linguistics Department offers a Minor Concentration, a Major Concentration, an Honours program, and a Joint Honours program with other departments in the Faculty of Arts.

**25.10.35.3 New Students**

Students who are registering with the Department for the first time must attend the Department orientation meeting before seeing an adviser ([www.mcgill.ca/linguistics/undergraduate](http://www.mcgill.ca/linguistics/undergraduate)).

**25.10.35.4 Requirements**

Linguistics students must do at least two-thirds of their Linguistics courses at McGill. Honours students must also do their Honours thesis at McGill.

Inquiries may be addressed to the departmental office or the advisers for undergraduate studies.

**25.10.35.5 Linguistics (LING) Faculty****Chair**

TBA

**Emeritus Professors**

C. Douglas Ellis; B.A.(Camb.), B.A.(McG.), M.A.(Tor.), M.A.(Yale), Ph.D.(McG.)

Myrna Gopnik; M.A., Ph.D.(Penn.)

Michel Paradis; B.A.(Montr.), M.A., Ph.D.(McG.), Ph.D.(Montr.), F.R.S.C.

Glyne L. Piggott; B.A.(W.I.), M.A., Ph.D.(Tor.)

**Professors**

Yosef Grodzinsky; B.Sc.(Hebrew), Ph.D.(Brandeis) (*Canada Research Chair*)

Lydia White; M.A.(Camb.), Ph.D.(McG.) (*James McGill Professor*)

**Associate Professors**

Charles Boberg; B.A.(Alta.), Ph.D.(Penn.)

Brendan Gillon; B.A., M.A.(Mich.), M.A.(Tor.), Ph.D.(MIT)

Heather Goad; B.A.(Br. Col.), M.A., Ph.D.(USC)

Bernhard Schwarz; M.A.(Tübingen), Ph.D.(Mass.)

Lisa de M. Travis; B.A.(Yale), Ph.D.(MIT)

## Assistant Professors

Junko Shimoyama; B.A., M.A.(Ochanomizu), Ph.D.(Mass.)

Michael W





Any course in statistics (from any department).

**25.10.35.9 Bachelor of Arts (B.A.) - Joint Honours Component Linguistics (36 credits)**

Students who wish to study at the Honours level in two disciplines can combine Joint Honours Program components in any two

### **25.10.36.2 About Mathematics and Statistics**

**The Department of Mathematics and Statistics offers programs in both Arts and Science. For a list of teaching staff and an outline of the nature of the discipline, refer to *Faculty of Science > Mathematics and Statistics*.**

A Desautels Faculty of Management B.Com. degree with a Major in Mathematics and a Schulich School of Music B.Mus. degree with Honours in Theory with Mathematics option are also available.

Students entering a Mathematics program are normally expected to hav

MATH 222	(3)	Calculus 3
MATH 223*	(3)	Linear Algebra
MATH 315	(3)	Ordinary Differential Equations

**Non-Expandable Version: Complementary Courses (9 credits)**

Students selecting the non-expandable version of this program complete 9 complementary courses from the Complementary Course List.

It is strongly recommended that students take MATH 323 as a complementary course.

**Complementary Course List**

\*Note: Either MATH 249 or MATH 316 may be taken but not both.

MATH 249*	(3)	Honours Complex Variables
MATH 314	(3)	Advanced Calculus
MATH 316*	(3)	Complex Variables
MATH 317	(3)	Numerical Analysis
MATH 318	(3)	Mathematical Logic
MATH 319	(3)	Introduction to Partial Differential Equations
MATH 320	(3)	Differential Geometry
MATH 323	(3)	Probability
MATH 324	(3)	Statistics
MATH 326	(3)	Nonlinear Dynamics and Chaos
MATH 327	(3)	Matrix Numerical Analysis

3 credits from:

\*Note: If either of MATH 249 or MATH 316 has been taken as part of the Major Concentration Mathematics, another 3-credit complementary course must be taken.

MATH 249*	(3)	Honours Complex Variables
MATH 316*	(3)	Complex Variables

12 credits from:

MATH 204	(3)	Principles of Statistics 2
MATH 317	(3)	Numerical Analysis
MATH 318	(3)	Mathematical Logic
MATH 319	(3)	Introduction to Partial Differential Equations
MATH 320	(3)	Differential Geometry
MATH 324	(3)	Statistics
MATH 326	(3)	Nonlinear Dynamics and Chaos
MATH 327	(3)	Matrix Numerical Analysis
MATH 329	(3)	Theory of Interest
MATH 335	(3)	Computational Algebra
MATH 338	(3)	History and Philosophy of Mathematics
MATH 339	(3)	Foundations of Mathematics
MATH 340	(3)	Discrete Structures 2
MATH 346	(3)	Number Theory
MATH 348	(3)	Topics in Geometry
MATH 352	(1)	Problem Seminar
MATH 407	(3)	Dynamic Programming
MATH 410	(3)	Majors Project
MATH 417	(3)	Mathematical Programming
MATH 423	(3)	Regression and Analysis of Variance
MATH 430	(3)	Mathematical Finance
MATH 447	(3)	Stochastic Processes
MATH 523	(4)	Generalized Linear Models
MATH 524	(4)	Nonparametric Statistics
MATH 525	(4)	Sampling Theory and Applications

**Bachelor of Arts (B.A.) - Minor Concentration Statistics (18Tj1 0 0m 0 0 1 70.364 4mor Concentrats (18Tj1 0 0m 0 0 1 70om:**



### Program Prerequisites

Students who have not completed the program prerequisite courses listed below or their equivalents will be required to make up any deficiencies in these courses over and above the 18 credits required for the program.

MATH 133	(3)	Linear Algebra and Geometry
MATH 140	(3)	Calculus 1
MATH 141	(4)	Calculus 2

### Required Courses (15 credits)

\*Note: If the Minor Concentration Statistics is combined with the Major Concentration Mathematics, the required courses MATH 222, MATH 223 and MATH 323 must be replaced by courses selected from the Complementary Courses. Credit cannot be received for both MATH 223 and MATH 236 (listed as a required course in the Major Concentration Mathematics).

MATH 222*	(3)	Calculus 3
MATH 223*	(3)	Linear Algebra
MATH 323*	(3)	Probability
MATH 324	(3)	Statistics
MATH 423	(3)	Regression and Analysis of Variance

### Complementary Courses (3 credits)

3 credits from:

COMP 202	(3)	Introduction to Computing 1
MATH 204	(3)	Principles of Statistics 2
MATH 317	(3)	Numerical Analysis
MATH 447	(3)	Stochastic Processes
MATH 523	(4)	Generalized Linear Models
MATH 524	(4)	Nonparametric Statistics
MATH 525	(4)	Sampling Theory and Applications

### 25.10.36.6 Bachelor of Arts (B.A.) - Major Concentration Mathematics (36 credits)

Students who have done well in MATH 242 and MATH 235 at the end of their first term should consider, in consultation with their adviser and the instructors of the courses involved, the possibility of entering into an Honours program in Mathematics, in Applied Mathematics, in Probability and Statistics, or a Joint Honours program in Mathematics and another discipline.

### Program Prerequisites

Students who have not completed the program prerequisite courses listed below or their equivalents will be required to make up any deficiencies in these courses over and above the 36 credits required for the program.

MATH 133	(3)	Linear Algebra and Geometry
MATH 140	(3)	Calculus 1
MATH 141	(4)	Calculus 2

### Guidelines for Course Selection

Where appropriate, Honours-level courses may be substituted for their Majors-level counterparts. Students planning to undertake graduate studies in mathematics are urged to make such substitutions.

Students interested in computer science should consider the courses MATH 317, MATH 318, MATH 327, MATH 328, MATH 340, MATH 407, MATH 417 and take a Minor Concentration Computer Science.

Students interested in probability and statistics should consider either taking the Minor Concentration Statistics under option C, or else including some or all of the courses MATH 423, MATH 447, MATH 523, MATH 524, and MATH 525.

Students interested in applied mathematics should consider the courses MATH 317, MATH 319, MATH 324, MATH 326, MATH 327, MATH 407 and MATH 417.

Students interested in careers in business, industry or government should consider the courses MATH 317, MATH 319, MATH 327, MATH 407, MATH 417, MATH 423, MATH 447, MATH 523, and MATH 525.

### Required Courses (21 credits)

MATH 222	(3)	Calculus 3
MATH 235	(3)	Algebra 1
MATH 236	(3)	Algebra 2
MATH 242	(3)	Analysis 1
MATH 243	(3)	Analysis 2
MATH 314	(3)	Advanced Calculus
MATH 323	(3)	Probability

### Complementary Courses (15 credits)

15 credits selected as follows:

At least 9 credits from:

\*Note: Either MATH 249 or MATH 316 may be taken but not both.

MATH 249*	(3)	Honours Complex Variables
MATH 315	(3)	Ordinary Differential Equations
MATH 316*	(3)	Complex Variables
MATH 317	(3)	Numerical Analysis
MATH 324	(3)	Statistics
MATH 340	(3)	Discrete Structures 2
MATH 423	(3)	Regression and Analysis of Variance

Remaining credits from:

MATH 204	(3)	Principles of Statistics 2
MATH 318	(3)	Mathematical Logic
MATH 319	(3)	Introduction to Partial Differential Equations
MATH 320	(3)	Differential Geometry

MATH 524	(4)	Nonparametric Statistics
MATH 525	(4)	Sampling Theory and Applications

### 25.10.36.7 Bachelor of Arts (B.A.) - Joint Honours Component Mathematics (36 credits)

Students who wish to study at the Honours level in two Arts disciplines may apply to combine Joint Honours Program components from two Arts disciplines. For a list of available Joint Honours programs, see "Overview of Programs Offered" and "Joint Honours Programs."

To remain in the Joint Honours program and receive the Joint Honours degree, a student must maintain the standards set by each discipline, as well as by the Faculty. In the Mathematics courses of the program a GPA of 3.00 and a CGPA of 3.00 must be maintained. Students who have difficulty in maintaining the required level should change to another program before entering their final year.

#### Program Prerequisites

Students who have not completed the program prerequisite courses listed below or their equivalents will be required to make up any deficiencies in these courses over and above the 36 credits required for the program.

MATH 133	(3)	Linear Algebra and Geometry
MATH 140	(3)	Calculus 1
MATH 141	(4)	Calculus 2
MATH 222	(3)	Calculus 3

#### Required Courses (15 credits)

MATH 235	(3)	Algebra 1
MATH 242	(3)	Analysis 1
MATH 248	(3)	Honours Advanced Calculus
MATH 251	(3)	Honours Algebra 2
MATH 255	(3)	Honours Analysis 2

#### Complementary Courses

21 credits with at 15 credits selected from the list below. The remaining credits are to be chosen from the full list of available Honours courses in Mathematics and Statistics.

MATH 325	(3)	Honours Ordinary Differential Equations
MATH 354	(3)	Honours Analysis 3
MATH 355	(3)	Honours Analysis 4
MATH 356	(3)	Honours Probability
MATH 357	(3)	Honours Statistics
MATH 366	(3)	Honours Complex Analysis
MATH 370	(3)	Honours Algebra 3
MATH 371	(3)	Honours Algebra 4
MATH 380	(3)	Honours Differential Geometry

### 25.10.37 Middle East Studies (MEST)

#### 25.10.37.1 Location

Morrice Hall  
3485 McTavish Street, Room 319  
Montreal, Quebec H3A 1Y1

Telephone: 514-398-6077

Fax: 514-398-6731

Website: [www.mcgill.ca/mes](http://www.mcgill.ca/mes)

**25.10.37.2 About Middle East Studies**

ISLA 511D1*	(3)	History: Islamic Civilization - Mediaeval Era
ISLA 511D2*	(3)	History: Islamic Civilization - Mediaeval Era
JWST 323	(3)	The Israeli Novel
JWST 366	(3)	History of Zionism

### Religion and Philosophy

\* Note: Core courses are marked by an asterisk ("\*") in the list below. Courses in the list may be offered by Islamic Studies (ISLA), Jewish Studies (JWST), Philosophy (PHIL), Philosophy and Western Religions (PHWR), or Religious Studies (RELG).

\*\* Note: RELG 204 and RELG 256 can only be taken for program credit if taken prior to any "core" courses.

ISLA 200*	(3)	Islamic Civilization
ISLA 345*	(3)	Science and Civilization in Islam
ISLA 380*	(3)	Islamic Philosophy and Theology
ISLA 383*	(3)	Central Questions in Islamic Law
ISLA 505*	(3)	Islam: Origin and Early Development
ISLA 506*	(3)	Islam: Later Developments
ISLA 531D1*	(3)	Survey Development of Islamic Thought
ISLA 531D2*	(3)	Survey Development of Islamic Thought
JWST 562	(3)	Medieval Islamic and Jewish Philosophy
PHIL 356	(3)	Early Medieval Philosophy
PHWR 300	(3)	Philosophy & Western Religions 1
PHWR 301	(3)	Philosophy & Western Religions 2
RELG 204**	(3)	Judaism, Christianity and Islam
RELG 256**	(3)	Women in Judaism and Islam

### Social Sciences

Courses in the list may be offered by Anthropology (ANTH), Islamic Studies (ISLA), or Political Science (POLI).

ANTH 340	(3)	Middle Eastern Society and Culture
ISLA 210	(3)	Muslim Societies
ISLA 360	(3)	Islam and Politics
ISLA 385	(3)	Poetics & Politics in Arabic Literature
ISLA 388	(3)	Persian Literature
ISLA 392	(3)	Arabic Literature as World Literature
ISLA 415	(3)	Modern Iran: Anthropological Approach
ISLA 585	(3)	Arab Women's Literature
POLI 340	(3)	Developing Areas/Middle East
POLI 341	(3)	Foreign Policy: The Middle East
POLI 347	(3)	Arab-Israel Conflict, Crisis, Peace
POLI 437	(3)	Politics in Israel

### Middle East Studies

MEST 375	(3)	Topics in Middle East Studies
MEST 495	(3)	Middle East Studies: Research Seminar
MEST 496	(3)	Independent Reading and Research

**Bachelor of Arts (B.A.) - Minor Concentration Middle East Language**

Students who need to take a third level in Turkish should consult the program adviser for course options.

ISLA 532D1	(3)	Introductory Turkish
ISLA 532D2	(3)	Introductory Turkish
ISLA 533D1	(3)	Lower Intermediate Turkish
ISLA 533D2	(3)	Lower Intermediate Turkish

**Bachelor of Ar**

JWST 439 (3) Survey of Hebrew Literature 2

**Middle East Languages - Persian**

ISLA 541D1 (3) Introductory Persian  
 ISLA 541D2 (3) Introductory Persian  
 ISLA 542D1 (3) Lower Intermediate Persian  
 ISLA 542D2 (3) Lower Intermediate Persian

**Middle East Languages - Turkish**

ISLA 532D1 (3) Introductory Turkish  
 ISLA 532D2 (3) Introductory Turkish  
 ISLA 533D1 (3) Lower Intermediate Turkish  
 ISLA 533D2 (3) Lower Intermediate Turkish

**History**

\* Note: Core courses are marked by an asterisk ("\*") in the list below. Courses in the list may be offered by History (HIST), Islamic Studies (ISLA), or Jewish Studies (JWST).

HIST 240 (3) Modern History of Islamic Movements  
 HIST 339\* (3) Arab-Israeli Conflict  
 HIST 448 (3) Women, Gender and Sexuality in the Middle East  
 ISLA 350\* (3) From Tribe to Dynasty  
 ISLA 355\* (3) Modern History of the Middle East  
 ISLA 410\* (3) History: Middle-East 1798-1918  
 ISLA 411\* (3) History: Middle-East 1918-1945  
 ISLA 510D1\* (3) History: Islamic Civilization - Classical  
 ISLA 510D2\* (3) History: Islamic Civilization - Classical  
 ISLA 511D1\* (3) History: Islamic Civilization - Mediaeval Era  
 ISLA 511D2\* (3) History: Islamic Civilization - Mediaeval Era  
 JWST 323 (3) The Israeli Novel  
 JWST 366 (3) History of Zionism

**Religion and Philosophy**

\* Note: Core courses are marked by an asterisk ("\*") in the list below. Courses in the list may be offered by Islamic Studies (ISLA), Jewish Studies (JWST), Philosophy (PHIL), Philosophy and Western Religions (PHWR), or Religious Studies (RELG).

\*\* Note: RELG 204 and RELG 256 can only be taken for program credit if taken prior to any "core" courses.

ISLA 200\* (3) Islamic Civilization  
 ISLA 345\* (3) Science and Civilization in Islam  
 ISLA 380\* (3) Islamic Philosophy and Theology  
 ISLA 383\* (3) Central Questions in Islamic Law  
 ISLA 505\* (3) Islam: Origin and Early Development  
 ISLA 506\* (3) Islam: Later Developments  
 ISLA 531D1\* (3) Survey Development of Islamic Thought  
 ISLA 531D2\* (3) Survey Development of Islamic Thought



JWST 562	(3)	Medieval Islamic and Jewish Philosophy
PHIL 356	(3)	Early Medieval Philosophy
PHWR 300	(3)	Philosophy & Western Religions 1
PHWR 301	(3)	Philosophy & Western Religions 2
RELG 204**	(3)	Judaism, Christianity and Islam
RELG 256**	(3)	Women in Judaism and Islam

### Social Sciences

Courses in the list may be offered by Anthropology (ANTH), Islamic Studies (ISLA), or Political Science (POLI).

ANTH 340	(3)	Middle Eastern Society and Culture
ISLA 210	(3)	Muslim Societies
ISLA 360	(3)	Islam and Politics
ISLA 385	(3)	Poetics & Politics in Arabic Literature
ISLA 388	(3)	Persian Literature
ISLA 392	(3)	Arabic Literature as World Literature
ISLA 415	(3)	Modern Iran: Anthropological Approach
ISLA 585	(3)	Arab Women's Literature
POLI 340	(3)	Developing Areas/Middle East
POLI 341	(3)	Foreign Policy: The Middle East
POLI 347	(3)	Arab-Israel Conflict, Crisis, Peace
POLI 437	(3)	Politics in Israel

### Middle East Studies

MEST 375	(3)	Topics in Middle East Studies
MEST 495	(3)	Middle East Studies: Research Seminar
MEST 496	(3)	Independent Reading and Research

### 25.10.37.7 Bachelor of Arts (B.A.) - Honours Middle East Studies (60 credits)

Honours students must maintain a program GPA of 3.30 in their Middle East Studies courses and, according to Faculty regulations, a minimum CGPA of 3.00 in general.

#### Required Courses (6 credits)

MEST 495	(3)	Middle East Studies: Research Seminar
MEST 496	(3)	Independent Reading and Research

#### Complementary Courses (54 credits)

54 credits of complementary courses selected from the Middle East Studies course lists as follows:

18 - 21 credits (3 levels) in one Middle Eastern language - Arabic, Hebrew, Persian, Turkish (lists below)

9 - 15 credits from the History list with at least 9 credits in "core" courses

9 - 15 credits from the Religion and Philosophy list with at least 6 credits in "core" courses

6 - 12 credits from the Social Sciences list

#### Middle East Languages - Arabic

ISLA 521D1	(4.5)	Introductory Arabic
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## Introductory Arabic

HIST 339*	(3)	Arab-Israeli Conflict
HIST 448	(3)	Women, Gender and Sexuality in the Middle East
ISLA 350*	(3)	From Tribe to Dynasty
ISLA 355*	(3)	Modern History of the Middle East
ISLA 410*	(3)	History: Middle-East 1798-1918
ISLA 411*	(3)	History: Middle-East 1918-1945
ISLA 510D1*	(3)	History: Islamic Civilization - Classical
ISLA 510D2*	(3)	History: Islamic Civilization - Classical
ISLA 511D1*	(3)	History: Islamic Civilization - Mediaeval Era
ISLA 511D2*	(3)	History: Islamic Civilization - Mediaeval Era

POLI 341	(3)	Foreign Policy: The Middle East
POLI 347	(3)	Arab-Israel Conflict, Crisis, Peace
POLI 437	(3)	Politics in Israel

**Middle East Studies**

MEST 375	(3)	Topics in Middle East Studies
MEST 495	(3)	Middle East Studies: Research Seminar
MEST 496	(3)	Independent Reading and Research

**25.10.37.8 Bachelor of Arts (B.A.) - Joint Honours Component Middle East Studies (36 credits)**

Students wishing to study at the Honours level in two disciplines can combine Joint Honours Program components in anyv

JWST 340D2	(3)	Advanced Hebrew
JWST 367	(3)	Studies in Hebrew Language and Literature
JWST 368	(3)	Studies in Hebrew Language and Literature
JWST 369	(3)	Studies in Hebrew Language and Literature
JWST 370	(3)	Studies in Hebrew Language and Literature
JWST 411	(3)	Topics: Modern Hebrew Literature 1881-1948
JWST 412	(3)	Topics: Modern Hebrew Literature 2
JWST 438	(3)	Survey of Hebrew Literature 1
JWST 439	(3)	Survey of Hebrew Literature 2

#### **Middle East Languages - Persian**

ISLA 541D1	(3)	Introductory Persian
ISLA 541D2	(3)	Introductory Persian
ISLA 542D1	(3)	Lower Intermediate Persian
ISLA 542D2	(3)	Lower Intermediate Persian

#### **Middle East Languages - Turkish**

ISLA 532D1	(3)	Introductory Turkish
ISLA 532D2	(3)	Introductory Turkish
ISLA 533D1	(3)	Lower Intermediate Turkish
		Lower Intermediate Turkish

ISLA 200*	(3)	Islamic Civilization
ISLA 345*	(3)	Science and Civilization in Islam
ISLA 380*	(3)	Islamic Philosophy and Theology
ISLA 383*	(3)	Central Questions in Islamic Law
ISLA 505*	(3)	Islam: Origin and Early Development
ISLA 506*	(3)	Islam: Later Developments
ISLA 531D1*	(3)	Survey Development of Islamic Thought
ISLA 531D2*	(3)	Survey Development of Islamic Thought
JWST 562	(3)	Medieval Islamic and Jewish Philosophy
PHIL 356	(3)	Early Medieval Philosophy
PHWR 300	(3)	Philosophy & Western Religions 1
PHWR 301	(3)	Philosophy & Western Religions 2
RELG 204**	(3)	Judaism, Christianity and Islam
RELG 256**	(3)	Women in Judaism and Islam

### Social Sciences

Courses in the list may be offered by Anthropology (ANTH), Islamic Studies (ISLA), or Political Science (POLI).

ANTH 340	(3)	Middle Eastern Society and Culture
ISLA 210	(3)	Muslim Societies
ISLA 360	(3)	Islam and Politics
ISLA 385	(3)	Poetics & Politics in Arabic Literature
ISLA 388	(3)	Persian Literature
ISLA 392	(3)	Arabic Literature as World Literature
ISLA 415	(3)	Modern Iran: Anthropological Approach
ISLA 585	(3)	Arab Women's Literature
POLI 340	(3)	Developing Areas/Middle East
POLI 341	(3)	Foreign Policy: The Middle East
POLI 347	(3)	Arab-Israel Conflict, Crisis, Peace
POLI 437	(3)	Politics in Israel

### Middle East Studies

MEST 375	(3)	Topics in Middle East Studies
MEST 495	(3)	Middle East Studies: Research Seminar
MEST 496	(3)	Independent Reading and Research

## 25.10.38 Music (MUAR)

### 25.10.38.1 Location

Strathcona Music Building  
555 Sherbrooke Street West  
Montreal, Quebec H3A 1E3

Telephone: 514-398-4535  
Fax: 514-398-8061

Website: [www.mcgill.ca/music](http://www.mcgill.ca/music)

### 25.10.38.2 About Music Programs in Arts

Available within the Faculty of Arts are a Major and a Minor Concentration in Music. Arts students may also apply to the Minor in Musical Applications of Technology and the Minor in Musical Science and Technology.

Admission to the B.A. program is granted according to criteria established by the Faculty of Arts.

Students in the B.A. Freshman Program who are considering a Music Concentration should see the Freshman Adviser in Arts OASIS in Dawson Hall. They should also see the Music Adviser in order to ensure that they include any necessary prerequisite Music courses (based on the results of placement examinations) in their first-year selection.

Students interested in a more intensive music program, including practical instruction on an instrument or in voice and additional ensemble participation, should consider the B.Mus. degree or the diplomas offered by the Schulich School of Music; see *Schulich School of Music > Degrees and Diplomas Offered*.

### 25.10.38.3 Music Ensembles

Arts students may, with the permission of the instructor and the Associate Dean (Student Affairs) of the Faculty of Arts, participate in one of the following ensembles in a given year. Auditions are held starting the week prior to the beginning of classes in September and continuing during that first week. The schedule and requirements for these auditions are available at the end of June from the Department of Performance office, 514-398-4542. Normally both the Fall and Winter sections of an ensemble are taken in the same academic year.

MUEN 496	(4)	Opera Studio
MUEN 560	(1)	Chamber Music Ensemble
MUEN 589	(1)	Woodwind Ensembles
MUEN 590	(2)	McGill Winds
MUEN 591	(1)	Brass Ensembles
MUEN 593	(2)	Choral Ensembles
MUEN 594	(2)	Contemporary Music Ensemble
MUEN 595	(2)	Jazz Ensembles
MUEN 597	(2)	Orchestral Ensembles
MUEN 598	(1)	Percussion Ensembles

### 25.10.38.4 Courses Offered by The Schulich School of Music as electives for students in the Faculties of Arts, Science, and Education

The courses referred to below are also open to students from other faculties. Other Music courses may be taken by qualified students from other faculties providing they obtain permission from the relevant department in the Schulich School of Music and from the Associate Dean of their own faculty.

#### All courses with the prefix MUAR.

These are considered to be courses taught in the Faculty of Arts, but they cannot be credited toward the B.A. or B.Sc. Music programs.

**The Music History and Literature (MUHL), Music Theory and Analysis (MUTH), and Music Technology (MUMT) courses listed below** are considered by the Faculty of Arts as courses taught in the Faculty; **however**, the Faculty of Science considers them to be courses taught outside of the Faculty.

These courses are intended for students who have at least high school matriculation music or the equivalent. Students who do not have the formal music prerequisites require the permission of the Chair of the Department of Music Research to register for any of these courses.

#### MUHL (Music History and Literature)

MUHL 186	(3)	Western Musical Traditions
MUHL 286	(3)	Critical Thinking about Music
MUHL 220	(3)	Women in Music

#### MUTH (Music Theory and Analysis)

Students not in the B.A. or B.Sc. Music programs are not required to take the corequisites for the following MUTH courses. However, students intending later to enter either the B.A. Major Concentration or the B.Mus. program would then be required to sit placement tests in Musicianship and Keyboard Proficiency and may be required to take the corequisite courses.

MUTH 150	(3)	Theory and Analysis 1
MUTH 151	(3)	Theory and Analysis 2

**MUTH (Music Theory and Analysis)**

MUTH 250	(3)	Theory and Analysis 3
MUTH 251	(3)	Theory and Analysis 4

**MUMT (Music Technology)**

MUMT 202	(3)	Fundamentals of New Media
MUMT 203	(3)	Introduction to Digital Audio
MUMT 301	(3)	Music and the Internet
MUMT 302	(3)	New Media Production 1
MUMT 303	(3)	New Media Production 2

**25.10.38.5 Music (MUAR) Faculty****Department of Music Research Chair**

Lloyd Whitesell

**Department of Performance Chair**

André Roy

**Adviser (B.A./B.Sc. Music programs)**

B. Minorgan  
514-398-4535, ext. 6333

**25.10.38.6 Bachelor of Arts (B.A.) - Minor Concentration Music (18 credits)**

Please note, changes are planned for the Minor Concentration Music for the Fall 2010 term. Please contact the program adviser Prof. Bruce Minorgan by telephone at 514-398-6333 for guidance on course selection. The revised program requirements should be published prior to the start of the Fall term.

This program may be expanded to the Major Concentration Music.

**Prerequisite Courses**

Students who have not successfully completed the diagnostic placement exams for the required courses for this program will be asked to register for one or both of the courses below. These courses may not be counted toward the 18 credits of the program requirements.

MUTH 110	(3)	Melody and Counterpoint
MUTH 111	(3)	Elementary Harmony and Analysis

**Required Courses (6 credits)**

Prior to registering for each required course, students must take a diagnostic placement exam. If the appropriate level is not achieved on the examination, students will be asked to register for one or both of the prerequisite courses.

MUTH 210	(3)	Tonal Theory and Analysis 1
MUTH 211	(3)	Tonal Theory and Analysis 2

**Complementary Courses (12 credits)**

12 credits selected as follows:

9 credits in Music History, Literature or Performance Practice chosen from courses with the MUHL subject code at the 300-level. An historical performance with the MUHL



**25.10.38.7 Bachelor of Arts (B.A.) - Major Concentration Music (36 credits)**

Please note, changes are planned for the Major Concentration Music for the Fall 2010 term. Please contact the program adviser Prof. Bruce Minorgan by telephone at 514-398-6333 for guidance on course selection.

MUCO 261	(2)	Orchestration 1
MUHL 220	(3)	Women in Music
MUTH 202	(3)	Modal Counterpoint 1
MUTH 204	(3)	Tonal Counterpoint 1
MUTH 302	(3)	Modal Counterpoint 2
MUTH 304	(3)	Tonal Counterpoint 2
MUTH 310*	(3)	Mid and Late 19th-Century Theory and Analysis
MUTH 311**	(3)	20th-Century Theory and Analysis
MUTH 327*	(4)	19th-Century Analysis
MUTH 427D1**	(2)	20th-Century Analysis
MUTH 427D2**	(2)	20th-Century Analysis
MUTH 522D1	(3)	Advanced Counterpoint
MUTH 522D2	(3)	Advanced Counterpoint
MUTH 523D1	(3)	Advanced Harmony
MUTH 523D2	(3)	Advanced Harmony
MUTH 528	(3)	Schenkerian Theory and Analysis

### **25.10.38.8 Music (MUAR) Related Programs**

#### **25.1038.81 Minor Concentration in Music Technology**

(18 credits) (Non-Expandable)

The Minor Concentration in Music Technology was retired effective Fall 2008. Students currently registered in the program should consult their program adviser for guidance.

#### **25.1038.82 Minor in Musical Applications of Technology**

(18 credits) (Non-Expandable)

[Program registration cannot be done via Minerva.]

Detailed information about this program is found under *Schulich School of Music > Bachelor of Music (B.Mus.) - Minor Musical Applications of Technology (18 credits)*.

#### **Minor in Musical Science and**

### **25.10.39.2 About North American Studies Program**

North American Studies provides a comprehensive view of civilization on this continent, with a special emphasis on the United States. The peoples of the continent are examined in the first instance from the perspective of economics, political science, literature, and history. Subsequent courses are available from several other disciplines as well. Foundation and capstone seminars constitute a vital part of the program. The goal is to attain mastery over diverse material and to develop an integrated knowledge of society on this continent.

Independent study, internships, and university exchange arrangements are available within the context of the program.

Graduates of the program are well prepared for several types of professional options, including those that require advanced degrees.

### **25.10.39.3 North American Studies Program (NAST) Faculty**

**Program Dir**

ENGL 327	(3)	Canadian Prose Fiction 1
ENGL 328	(3)	Development of Canadian Poetry 1
ENGL 333	(3)	Development of Canadian Poetry 2
HIST 221	(3)	United States since 1865
HIST 301	(3)	U.S. Presidential Campaigning
HIST 311	(3)	The Gilded Age and The Progressive Era
HIST 322	(3)	Canada: American Presence since 1939
HIST 331	(3)	The United States Between the Wars
HIST 341	(3)	The New Nation: U.S. 1800-1850
HIST 342	(3)	Canada: External Relations since 1867
HIST 351	(3)	Themes in U.S. History since 1865
HIST 360	(3)	Latin America since 1825
HIST 363	(3)	Canada 1870-1914
NAST 201**	(3)	Introduction to North American Studies
NAST 471	(3)	Topics in North American Studies 1
NAST 472	(3)	Topics in North American Studies 2
NAST 490	(3)	Independent Reading & Research
NAST 499	(3)	Arts Internships: North American Studies
POLI 318	(3)	Comparative Local Government
POLI 319	(3)	Politics of Latin America
POLI 325D1	(3)	Government and Politics: United States
POLI 325D2	(3)	Government and Politics: United States
POLI 342	(3)	Canadian Foreign Policy
POLI 346	(3)	American Foreign Policy
		Challenge of Canadian Federalism

ECON 223	(3)	Political Economy of Trade Policy
ENGL 225*	(3)	American Literature 1
ENGL 226*	(3)	American Literature 2
ENGL 227*	(3)	American Literature 3
HIST 211	(3)	American History to 1865
HIST 221	(3)	United States since 1865
POLI 325D1**	(3)	Government and Politics: United States
POLI 325D2**	(3)	Government and Politics: United States

### Group A

6 credits chosen from Group A:

ANTH 336	(3)	Ethnohistory: North Eastern North America
ANTH 338	(3)	Native Peoples of North America
CANS 305	(3)	Canadian Modernity
CANS 306	(3)	Issues in Native Studies
CANS 307	(3)	Canada in the World
ECON 302D1	(3)	Money and Banking
ECON 302D2	(3)	Money and Banking
ECON 311	(3)	United States Economic Development
ENGL 324	(3)	20th Century American Prose
ENGL 325	(3)	Modern American Fiction
ENGL 326	(3)	19th Century American Prose
ENGL 327	(3)	Canadian Prose Fiction 1
ENGL 328	(3)	Development of Canadian Poetry 1
ENGL 333	(3)	Development of Canadian Poetry 2
HIST 301	(3)	U.S. Presidential Campaigning
HIST 311	(3)	The Gilded Age and The Progressive Era
HIST 322	(3)	Canada: American Presence since 1939
HIST 331	(3)	The United States Between the Wars
HIST 341	(3)	The New Nation: U.S. 1800-1850
HIST 342	(3)	Canada: External Relations since 1867
HIST 351	(3)	Themes in U.S. History since 1865
HIST 360	(3)	Latin America since 1825
HIST 363	(3)	Canada 1870-1914
HIST 364	(3)	Canada 1914-1945
HIST 367	(3)	Canada since 1945
HIST 371	(3)	American Civil Rights 1877-1940
HIST 377	(3)	The United States, 1940-1965
HIST 392	(3)	The United States since 1965
HIST 393	(3)	Civil War and Reconstruction
	(3)	The American Jewish Community

NAST 472	(3)	Topics in North American Studies 2
NAST 490	(3)	Independent Reading & Research
NAST 499	(3)	Arts Internships: North American Studies
POLI 318	(3)	Comparative Local Government
POLI 319	(3)	Politics of Latin America
POLI 342	(3)	Canadian Foreign Policy
POLI 346	(3)	American Foreign Policy
POLI 371	(3)	Challenge of Canadian Federalism
POLI 425	(3)	Topics in American Politics
SOCI 327	(3)	Jews in North America

**Group B**

6 credits chosen from Group B:

\*Note: From Group B, either ECON 306D1/D2 or ECON 426 may be taken but not both.

BUSA 364	(3)	Business Law 1
BUSA 368	(3)	Business Law 2
CANS 409	(3)	Canadian Studies Seminar 9
CANS 412	(3)	Canada and Americas Seminar
COMS 300	(3)	Media and Modernity in the 20th Century
ECON 303	(3)	Canadian Economic Policy
ECON 305	(3)	Industrial Organization
ECON 306D1*	(3)	Labour Economics and Institutions
ECON 306D2*	(3)	Labour Economics and Institutions
ECON 308	(3)	Governmental Policy Towards Business
ECON 404	(3)	Transportation
ECON 406	(3)	Topics in Economic Policy
ECON 408	(3)	Public Sector Economics 1
ECON 409	(3)	Public Sector Economics 2
ECON 426*	(3)	Labour Economics
ECON 434	(3)	Current Economic Problems
ECON 440	(3)	Health Economics
ENGL 407	(3)	The 20th Century
ENGL 409	(3)	Studies in a Canadian Author
ENGL 410	(3)	Theme or Movement Canadian Literature
ENGL 411	(3)	Studies in Canadian Fiction
ENGL 414	(3)	Studies in 20th Century Literature 1
ENGL 415	(3)	Studies in 20th Century Literature 2
ENGL 418	(3)	A Major Modernist Writer
ENGL 419	(3)	Studies in 20th Century Literature
ENGL 422	(3)	Studies in 19th Century American Literature
ENGL 423	(3)	Studies in 19th Century Literature
ENGL 440	(3)	First Nations and Inuit Literature and Media
HISP 301	(3)	Hispanic Literature - English Translation 1

HIST 408	(3)	Colonialism and Native Peoples
HIST 409	(3)	Themes in Latin American History 2
HIST 424	(3)	Gender, Sexuality & Medicine
HIST 431	(3)	Topics in U.S. History
HIST 434	(3)	British North America 1760-1867
HIST 447	(3)	The Natural History of America
HIST 461D1	(3)	Topics in Modern U.S. History
HIST 461D2	(3)	Topics in Modern U.S. History
HIST 462D1	(3)	Topics: Canadian Conservatism
HIST 462D2	(3)	Topics: Canadian Conservatism
HIST 530	(3)	U.S. Foreign Relations
LING 320	(3)	Sociolinguistics 1
MGCR 352	(3)	Marketing Management 1
MRKT 354	(3)	Marketing Management 2
MRKT 452	(3)	Consumer Behaviour
POLI 416	(3)	Political Economy of Canada
POLI 427	(3)	Selected Topics: Canadian Politics
POLI 469	(3)	Politics of Regulation
POLI 478	(3)	The Canadian Constitution
SOCI 318	(3)	Television in Society
SOCI 435	(3)	Popular Culture

## 25.10.40 Philosophy (PHIL)

### 25.10.40.1 Location

Leacock Building, Room 908  
855 Sherbrooke Street West  
Montreal, Quebec H3A 2T7

Telephone: 514-398-6060

Fax: 514-398-7148

Email: [info.philosophy@mcgill.ca](mailto:info.philosophy@mcgill.ca)

Website: [www.mcgill.ca/philosophy](http://www.mcgill.ca/philosophy)

### 25.10.40.2 About Philosophy

Broadly speaking, the principal aim of philosophy is to increase our understanding of ourselves, the world, and our place in it. Philosophy differs from the empirical and social sciences in important respects. One way to characterize philosophy is by the sorts of questions it seeks to answer, and the ways in which it seeks to answer them. Different areas of philosophy are characterized by the questions they address. For example, Epistemology inquires into the nature of knowledge, Metaphysics is concerned with the fundamental nature of the world and of the types of things that it contains, Ethics investigates the nature of moral judgment and moral reasoning, while Political Philosophy examines sbl887he w

The B.A. in Philosophy is not a professional qualification. It prepares students for graduate work in philosophy and for study in other disciplines, e.g., Law. As the interdisciplinary discipline par excellence, philosophy also maintains and encourages ties with other fields, so many students will find that certain classes in philosophy are directly relevant to their major area of study. The department has a strong commitment to providing an intensive yet broad-based philosophical education. The research interests of members of the Department are wide-ranging.

See also the separate listing for [section 25.10.27: History and Philosophy of Science \(HPSC\)](#).



**Note:** Philosophy students may use either PHIL 200 or PHIL 201 towards their program requirements, but not both. Students may, however, take both for credit (using the second as an elective), as the content in PHIL 201 does not overlap with PHIL 200.

### 25.10.40.3 Philosophy (PHIL) Faculty

#### Chair

Natalie Stoljar

#### Emeritus Professors

Mario A. Bunge; Ph.D.(LaPlata), F.R.S.C. (*John Frothingham Emeritus Professor of Logic and Metaphysics*)

Alastair McKinnon; M.A.(Tor





PHIL 310	(3)	Intermediate Logic
PHIL 341	(3)	Philosophy of Science 1
PHIL 370	(3)	Problems in Analytic Philosophy
PHIL 410	(3)	Advanced Topics in Logic 1
PHIL 411	(3)	Topics in Philosophy of Logic and Mathematics
PHIL 415	(3)	Philosophy of Language
PHIL 419	(3)	Epistemology
PHIL 421	(3)	Metaphysics
PHIL 441	(3)	Philosophy of Science 2
PHIL 470	(3)	Topics in Contemporary Analytic Philosophy

### Group C

PHIL 375	(3)	Existentialism
PHIL 474	(3)	Phenomenology
PHIL 475	(3)	Topics in Contemporary European Philosophy

### Group D

PHIL 344	(3)	Medieval and Renaissance Political Theory
PHIL 345	(3)	Greek Political Theory
PHIL 350	(3)	History and Philosophy of Ancient Science
PHIL 353	(3)	The Presocratic Philosophers
PHIL 354	(3)	Plato
PHIL 355	(3)	Aristotle
PHIL 356	(3)	Early Medieval Philosophy
PHIL 357	(3)	Late Medieval and Renaissance Philosophy
PHIL 452	(3)	Later Greek Philosophy
PHIL 453	(3)	Ancient Metaphysics and Natural Philosophy
PHIL 454	(3)	Ancient Moral Theory

### Group E

PHIL 360	(3)	17th Century Philosophy
PHIL 361	(3)	18th Century Philosophy
PHIL 366	(3)	18th and Early 19th Century German Philosophy
PHIL 367	(3)	19th Century Philosophy
PHIL 444	(3)	Early Modern Political Theory
PHIL 445	(3)	19th Century Political Theory

## 25.10.40.5 Bachelor of Arts (B.A.) - Major Concentration Philosophy (36 credits)

### Required Course (3 credits)

Introduction to Deducti

**Complementary Courses (33 credits)**

33 credits, of which no more than 9 may be at the 200-level and at least 9 must be at the 400- or 500-level, distributed as follows:

18 credits from Groups A, B, C, D, E, and F:

3 credits from Group A

3 credits from Group B

6 credits, two courses from either Group C or Group D

3 credits from Group E

3 credits from Group F

15 additional credits from Groups A, B, C, D, E or F or from other Philosophy (PHIL) courses. Only one of PHIL 200 or PHIL 201 may be included in the program.

**Group A**

3 credits from:

PHIL 304	(3)	Chomsky
PHIL 306	(3)	Philosophy of Mind
PHIL 310	(3)	Intermediate Logic
PHIL 341	(3)	Philosophy of Science 1
PHIL 370	(3)	Problems in Analytic Philosophy
PHIL 410	(3)	Advanced Topics in Logic 1
PHIL 411	(3)	Topics in Philosophy of Logic and Mathematics
PHIL 415	(3)	Philosophy of Language
PHIL 419	(3)	Epistemology
PHIL 421	(3)	Metaphysics
PHIL 441	(3)	Philosophy of Science 2
PHIL 470	(3)	Topics in Contemporary Analytic Philosophy

**Group B**

3 credits from:

PHIL 375	(3)	Existentialism
PHIL 474	(3)	Phenomenology
PHIL 475	(3)	Topics in Contemporary European Philosophy

**Group C**

6 credits (two courses) from Group C OR Group D:

PHIL 344	(3)	Medieval and Renaissance Political Theory
PHIL 345	(3)	Greek Political Theory
PHIL 350	(3)	History and Philosophy of Ancient Science
PHIL 353	(3)	The Presocratic Philosophers
PHIL 354	(3)	Plato
PHIL 355	(3)	Aristotle
PHIL 356	(3)	Early Medieval Philosophy
PHIL 357	(3)	Late Medieval and Renaissance Philosophy
PHIL 452	(3)	Later Greek Philosophy



PHIL 410	(3)	Advanced Topics in Logic 1
PHIL 411	(3)	Topics in Philosophy of Logic and Mathematics
PHIL 415	(3)	Philosophy of Language
PHIL 419	(3)	Epistemology
PHIL 421	(3)	Metaphysics
PHIL 470	(3)	Topics in Contemporary Analytic Philosophy

3 credits from:

PHIL 230	(3)	Introduction to Moral Philosophy 1
PHIL 237	(3)	Contemporary Moral Issues
PHIL 240	(3)	Political Philosophy 1
PHIL 241	(3)	Political Philosophy 2
PHIL 242	(3)	Introduction to Feminist Theory

6 credits from:

PHIL 345	(3)	Greek Political Theory
PHIL 350	(3)	History and Philosophy of Ancient Science
PHIL 353	(3)	The Presocratic Philosophers
PHIL 354	(3)	Plato
PHIL 355	(3)	Aristotle
PHIL 452	(3)	Later Greek Philosophy
PHIL 453	(3)	Ancient Metaphysics and Natural Philosophy
PHIL 454	(3)	Ancient Moral Theory

6 credits from:

PHIL 360	(3)	17th Century Philosophy
PHIL 361	(3)	18th Century Philosophy
PHIL 366	(3)	18th and Early 19th Century German Philosophy
PHIL 367	(3)	19th Century Philosophy
PHIL 444	(3)	Early Modern Political Theory
PHIL 445	(3)	19th Century Political Theory

3 credits from:

PHIL 375	(3)	Existentialism
PHIL 474	(3)	Phenomenology
PHIL 475	(3)	Topics in Contemporary European Philosophy

24 additional credits in Philosophy (PHIL) with 12 credits at the 400- and 500-levels (not including the Honours tutorial PHIL 499) at least 3 credits of which must be at the 500-level.

A maximum of 15 credits from 200-level courses may be used toward the Honours program. Only one of PHIL 200 or PHIL 201 may be counted toward the program.

**25.10.40.7 Bachelor of Arts (B.A.) - Joint Honours Component Philosophy (36 credits)**

Students who wish to study at the Honours level in tir71

PHIL 454 (3) Ancient Moral Theory

**Group B**

6 credits from Group A or Group B.

PHIL 360 (3) 17th Century Philosophy

PHIL 361 (3) 18th Century Philosophy

PHIL 366 (3) 18th and Early 19th Century German Philosophy

PHIL 367 (3) 19th Century Philosophy

(3) Early Modern Political Theory

Christianity, and Islam), an encounter which shaped the basic patterns of Western and Musli



PHWR 300	(3)	Philosophy & Western Religions 1
PHWR 301	(3)	Philosophy & Western Religions 2

### History of Philosophy

3 - 6 credits, at least one of the following:

PHIL 354	(3)	Plato
PHIL 355	(3)	Aristotle

Students completing 6 credits in the History of Philosophy category, may select 3 credits from the following:

CLAS 415	(3)	Advanced Latin: Oratory
CLAS 426	(3)	Advanced Greek: Philosophy
PHIL 356	(3)	Early Medieval Philosophy
PHIL 357	(3)	Late Medieval and Renaissance Philosophy
PHIL 360	(3)	17th Century Philosophy
PHIL 452	(3)	Later Greek Philosophy

### Jewish, Christian, and Islamic Thought

3 - 6 credits from:

ISLA 531D1	(3)	Survey Development of Islamic Thought
ISLA 531D2	(3)	Survey Development of Islamic Thought
JWST 261	(3)	History of Jewish Philosophy & Thought
JWST 337	(3)	Jewish Philosophy and Thought 1
JWST 338	(3)	Jewish Philosophy and Thought 2
JWST 358	(3)	Topics in Jewish Philosophy 1
JWST 359	(3)	Topics in Jewish Philosophy 2
JWST 474	(3)	Maimonides' Mishneh Torah
JWST 543	(3)	Maimonides as Parshan
JWST 562	(3)	Medieval Islamic and Jewish Philosophy
RELG 334	(3)	The Christian Faith
RELG 341	(3)	Introduction: Philosophy of Religion
RELG 423	(3)	Reformation Thought
RELG 439	(3)	Religious Dialogues
RELG 532	(3)	History of Christian Thought 1
RELG 533	(3)	History of Christian Thought 2

### 25.10.41.5 Bachelor of Arts (B.A.) - Major Concentration Philosophy and Western Religions (36 credits)

The Major Concentration Philosophy and Western Religions has an option without a language requirement (Stream A), and one with a language requirement (Stream B). The latter was designed for students who wish to acquire the linguistic skills allowing them to read and research source te

RELG 307

(3)

Bible, Quran & Interpretations

**Complementary Courses (33 credits)**

33 credits selected as follows:

24 to 30 credits from Stream

PHIL 454	(3)	Ancient Moral Theory
PHIL 551	(3)	Seminar: Ancient Philosophy 2
PHIL 556	(3)	Seminar: Medieval Philosophy
PHIL 560	(3)	Seminar: 17th Century Philosophy

### Stream A and B - Scriptures and History of the Western Religious Traditions

Stream A: Students take 3 to 6 credits from the Scriptures and History of the Western Religious Traditions course list below.

Stream B: Students take 0 to 3 credits from the Scriptures and History of the Western Religious Traditions course list below.

CATH 200	(3)	Introduction to Catholicism
CATH 310	(3)	Catholic Intellectual Traditions
CATH 320	(3)	Scripture and Catholicism
HIST 207	(3)	Jewish History: 400 B.C.E. to 1000
HIST 219	(3)	Jewish History: 1000 - 2000
ISLA 505	(3)	Islam: Origin and Early Development
ISLA 506	(3)	Islam: Later Developments
ISLA 510D1	(3)	History: Islamic Civilization - Classical
ISLA 510D2	(3)	History: Islamic Civilization - Classical
ISLA 511D1	(3)	History: Islamic Civilization - Mediaeval Era
ISLA 511D2	(3)	History: Islamic Civilization - Mediaeval Era
JWST 201	(3)	Jewish Law
JWST 211	(3)	Jewish Studies 1: Biblical Period
JWST 216	(3)	Jewish Studies 2: 400 B.C.E. - 1000
JWST 217	(3)	Jewish Studies 3: 1000 - 2000
JWST 310	(3)	Believers, Heretics and Critics
JWST 316	(3)	Social and Ethical Issues Jewish Law 1
JWST 331	(3)	Bible Interpretation/Medieval Ashkenaz
JWST 332	(3)	Bible Interpretation/Sefardic Tradition
JWST 345	(3)	Introduction to Rabbinic Literature
JWST 510	(3)	Jewish Bible Interpretation 1
JWST 511	(3)	Jewish Bible Interpretation 2
JWST 523	(3)	Ancient Bible Interpretation
JWST 534	(3)	Homiletic Midrash
JWST 535	(3)	Exegetic Midrash
JWST 538	(3)	Early Rabbinic Parshanut 1
JWST 539	(3)	Biblical Interpretation 1
JWST 540	(3)	Biblical Interpretation 2
JWST 546	(3)	Innovative Medieval Parshanut
JWST 548	(3)	Medieval Parshanut
JWST 575	(3)	Topics in Parshanut
RELG 203	(3)	Bible and Western Culture
RELG 210	(3)	Jesus of Nazareth
RELG 300	(3)	Second Temple Judaism
RELG 302	(3)	Literature of Ancient Israel 1

RELG 303	(3)	Literature of Ancient Israel 2
RELG 306	(3)	Rabbinic Judaism
RELG 311	(3)	New Testament Studies 1
RELG 312	(3)	New Testament Studies 2
RELG 322	(3)	The Church in History 1
RELG 323	(3)	The Church in History 2
RELG 326	(3)	Ancient Christian Church AD54 - AD604
RELG 330	(3)	Reformed Theology
RELG 399	(3)	Christian Spirituality
RELG 404	(3)	Post Exilic Biblical Literature
RELG 407	(3)	The Writings
RELG 408	(3)	The Prophets
RELG 411	(3)	New Testament Exegesis
RELG 482	(3)	Exegesis of Greek New Testament
RELG 491	(3)	Hebrew Texts
RELG 492	(3)	Hebrew Texts
RELG 500	(3)	Methodology Colloquium

**Stream A and B - Jewish, Christian, and Islamic Thought**

Stream A: Students take 9 to 12 credits from the Jewish, Christian, and Islamic

RELG 439	(3)	Religious Dialogues
RELG 532	(3)	History of Christian Thought 1
RELG 533	(3)	History of Christian Thought 2

### Stream B - Languages

Stream B (only): Students take 12 to 15 credits (two years: 12 credits, or in the case of Arabic, 15 credits) in one language (Arabic, Greek, Hebrew, or Latin) from the list below.

Arabic, ISLA courses:

ISLA 521D1	(4.5)	Introductory Arabic
ISLA 521D2	(4.5)	Introductory Arabic
ISLA 522D1	(3)	Lower Intermediate Arabic
ISLA 522D2	(3)	Lower Intermediate Arabic

Greek, CLAS and RELG courses:

CLAS 220D1	(3)	Introductory Ancient Greek
CLAS 220D2	(3)	Introductory Ancient Greek
CLAS 321	(3)	Intermediate Greek: Plato/Xenophon
CLAS 322	(3)	Intermediate Greek: Orators
CLAS 323	(3)	Intermediate Greek: Homer
CLAS 324	(3)	Intermediate Greek: Poetry
CLAS 325	(3)	Intermediate Greek: Later Prose
CLAS 326	(3)	Intermediate Greek: Selections
RELG 280D1	(3)	Elementary New Testament Greek
RELG 280D2	(3)	Elementary New Testament Greek
RELG 381	(3)	Advanced New Testament Greek

Hebrew, JWST and RELG courses:

JWST 200	(12)	Hebrew Language (Intensive)
JWST 220D1	(3)	Introductory Hebrew
JWST 220D2	(3)	Introductory Hebrew
JWST 320D1	(3)	Intermediate Hebrew
JWST 320D2	(3)	Intermediate Hebrew
RELG 390D1	(3)	Elementary Biblical Hebrew
RELG 390D2	(3)	Elementary Biblical Hebrew

Latin, CLAS courses:

CLAS 210D1	(3)	Introductory Latin 1
CLAS 210D2	(3)	Introductory Latin 1
CLAS 311	(3)	Catullus/Ovid
CLAS 312	(3)	Intermediate Latin: Poetry
CLAS 313	(3)	Intermediate Latin: Cicero





RELG 300	(3)	Second Temple Judaism
RELG 302	(3)	Literature of Ancient Israel 1
RELG 303	(3)	Literature of Ancient Israel 2
RELG 306	(3)	Rabbinic Judaism
RELG 311	(3)	New Testament Studies 1
RELG 312	(3)	New Testament Studies 2
RELG 322	(3)	The Church in History 1
RELG 323	(3)	The Church in History 2
RELG 326	(3)	Ancient Christian Church AD54 - AD604
RELG 330	(3)	Reformed Theology
RELG 399	(3)	Christian Spirituality
RELG 404	(3)	Post Exilic Biblical Literature
RELG 407	(3)	The Writings
RELG 408	(3)	The Prophets
RELG 411	(3)	New Testament Exegesis
RELG 482	(3)	Exegesis of Greek New Testament
RELG 491	(3)	Hebrew Texts
RELG 492	(3)	Hebrew Texts
RELG 500	(3)	Methodology Colloquium

### **Jewish, Christian, and Islamic Thought**

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RELG 439	(3)	Religious Dialogues
RELG 532	(3)	History of Christian Thought 1
RELG 533	(3)	History of Christian Thought 2

### Languages

18 to 21 credits (two years: 12 credits, or in the case of Arabic, 15 credits) in one language (Arabic, Greek, Hebrew, or Latin)

and

6 to 9 credits (one year: 6 credits, or in the case of Arabic, 9 credits) in a second language relevant to the program selected from the language lists below.

Arabic, ISLA courses:

ISLA 521D1	(4.5)	Introductory Arabic
ISLA 521D2	(4.5)	Introductory Arabic
ISLA 522D1	(3)	Lower Intermediate Arabic
ISLA 522D2	(3)	Lower Intermediate Arabic

Greek, CLAS and RELG courses:

CLAS 220D1	(3)	Introductory Ancient Greek
CLAS 220D2	(3)	Introductory Ancient Greek
CLAS 321	(3)	Intermediate Greek: Plato/Xenophon
CLAS 322	(3)	Intermediate Greek: Orators
CLAS 323	(3)	Intermediate Greek: Homer
CLAS 324	(3)	Intermediate Greek: Poetry
CLAS 325	(3)	Intermediate Greek: Later Prose
CLAS 326	(3)	Intermediate Greek: Selections
RELG 280D1	(3)	Elementary New Testament Greek
RELG 280D2	(3)	Elementary New Testament Greek
RELG 381	(3)	Advanced New Testament Greek

Hebrew, JWST and RELG courses:

JWST 200	(12)	Hebrew Language (Intensive)
JWST 220D1	(3)	Introductory Hebrew
JWST 220D2	(3)	Introductory Hebrew
JWST 320D1	(3)	Intermediate Hebrew
JWST 320D2	(3)	Intermediate Hebrew

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Elementary Biblical Hebrew

CLAS 312	(3)	Intermediate Latin: Poetry
CLAS 313	(3)	Intermediate Latin: Cicero
CLAS 314	(3)	Intermediate Latin: Historians
CLAS 315	(3)	Intermediate Latin: Selections
CLAS 316	(3)	Intermediate Latin: Medieval

### **Specialized Research Skills**

6 credits of courses in specialized skills for conducting research, chosen from:

PHWR 400	(3)	Joint Honours/Honours Tutorial
PHWR 401	(3)	Honours Thesis Tutorial 1
PHWR 402	(3)	Honours Thesis Tutorial 2
PHWR 500D1	(1.5)	Interdisciplinary Seminar
PHWR 500D2	(1.5)	Interdisciplinary Seminar

### **25.10.41.7 Bachelor of Arts (B.A.) - Joint Honours Component Philosophy and Western Religions (36 credits)**

Students who wish to study at the Honours level in two Arts disciplines may apply to combine Joint Honours Program comly to :10.41.7

Remaining credits, if any, from:

CLAS 415	(3)	Advanced Latin: Oratory
CLAS 426	(3)	Advanced Greek: Philosophy

RELG 300	(3)	Second Temple Judaism
RELG 302	(3)	Literature of Ancient Israel 1
RELG 303	(3)	Literature of Ancient Israel 2
RELG 306	(3)	Rabbinic Judaism
RELG 311	(3)	New Testament Studies 1
RELG 312	(3)	New Testament Studies 2
RELG 322	(3)	The Church in History 1
RELG 323	(3)	The Church in History 2
RELG 326	(3)	Ancient Christian Church AD54 - AD604
RELG 330	(3)	Reformed Theology
RELG 399	(3)	Christian Spirituality
RELG 404	(3)	Post Exilic Biblical Literature
RELG 407	(3)	The Writings
RELG 408	(3)	The Prophets
RELG 411	(3)	New Testament Exegesis
RELG 482	(3)	Exegesis of Greek New Testament
RELG 491	(3)	Hebrew Texts
RELG 492	(3)	Hebrew Texts
RELG 500	(3)	Methodology Colloquium

**Jewish, Christian, and Islamic Thought**

6 credits from the Jewish, Christian, and Islamic Thought course list below.

Group 1 - Islamic Studies (ISLA)

ISLA 531D1	(3)	Survey Development of Islamic Thought
ISLA 531D2	(3)	Survey Development of Islamic Thought

Group 2 - Jewish Studies (JWST)

JWST 261	(3)	History of Jewish Philosophy & Thought
JWST 337	(3)	Jewish Philosophy and Thought 1
JWST 338	(3)	Jewish Philosophy and Thought 2
JWST 358	(3)	Topics in Jewish Philosophy 1
JWST 359	(3)	Topics in Jewish Philosophy 2
JWST 474	(3)	Maimonides' Mishneh Torah
JWST 543	(3)	Maimonides as Parshan
JWST 558	(3)	Topics: Modern Jewish Thought
JWST 562	(3)	Medieval Islamic and Jewish Philosophy

Group 3 - Religious Studies (RELG)

RELG 334	(3)	The Christian Faith
RELG 341	(3)	Introduction: Philosophy of Religion
RELG 423	(3)	Reformation Thought



CLAS 314	(3)	Intermediate Latin: Historians
CLAS 315	(3)	Intermediate Latin: Selections
CLAS 316	(3)	Intermediate Latin: Medieval

### Specialized Research Skills

3 credits of courses in specialized skills for conducting research, chosen from:

PHWR 400	(3)	Joint Honours/Honours Tutorial
PHWR 500D1	(1.5)	Interdisciplinary Seminar
PHWR 500D2	(1.5)	Interdisciplinary Seminar

## 25.10.42 Political Science (POLI)

### 25.10.42.1 Location

Stephen Leacock Building, Room 414  
855 Sherbrooke Street West  
Montreal, Quebec H3A 2T7

Telephone: 514-398-4800  
Fax: 514-398-1770

Website: [www.mcgill.ca/politicalscience](http://www.mcgill.ca/politicalscience)

### 25.10.42.2 About Political Science

Students wishing to do an Honours degree or a Major or Minor Concentration in Political Science should consult with a Political Science Departmental Adviser each year in order to devise a suitable program. Proper selection of courses is required if a student wishes to graduate on time.

### 25.10.42.3 Procedure for New Students

All new students entering the Political Science Program (including Minor Concentrations) are strongly urged to attend an information meeting scheduled at the end of August. The date and location of the meeting will be posted on the web. Attendance will help students prepare for their session with an adviser. It is the student's responsibility to be in Montreal for the meeting. The following brochures are available on the web: *Major and Honours Programs in Political Science* and *Minor Concentrations in Political Science*. It is essential to read through these prior to attending the information meeting.

### 25.10.42.4 For All Political Science Students

The brochures *Major and Honours Programs in Political Science* and *Minor Concentrations in Political Science* are both available in the Department as well as on the web. Students wishing to have courses taken at other universities counted as satisfying program requirements must bring copies of their transcripts and course syllabi to the Director of the Major or Honours Program or the Director of Undergraduate Studies. Students are not accepted into the Honours Program in Political Science until their second year in Political Science; an exception is made for those in Joint Honours Programs.

As course and personnel changes may have occurred after this publication was prepared, students should not use it to plan their program of studies without first consulting the Department Office for updated information.

### 25.10.42.5 Political Science (POLI) Faculty

#### Chair

Richard Schultz

#### Emeritus Professors

Baldev Raj Nayar; B.A., M.A.(Punjab), M.A., Ph.D.(Chic.)

Blema Steinberg; B.A.(McG.), M.A.(C' nell), Ph.D.(McG.)

#### Professors

Mark R. Brawley; B.A.(Calif.), M.A., Ph.D.(Calif.-LA)

Michael Brecher; B.A.(McG.), M.A., Ph.D.(Yale), F.R.S.C. (*R.B. Angus Professor of Economics and Political Science*) (on leave Winter 2011)

## Professors

Rex Brynen; B.A.(Vic., BC), M.A., Ph.D.(Calg.)

Elisabeth Gidengil; B.A.(LSE), M.A.(NYU), Ph.D.(McG.)

Jody Heymann; B.A.(Yale), M.D., Ph.D.(Harv.) (*Canada Research Chair*)

Christopher Manfredi; B.A., M.A.(Calg.), M.A., Ph.D.(Claremont)

T.V. P

**Canadian Politics**

POLI 221	(3)	Government of Canada
POLI 222	(3)	Political Process and Behaviour in Canada
POLI 226	(3)	La vie politique québécoise

**Comparative Politics**

POLI 211	(3)	Comparative Government and Politics
POLI 212	(3)	Government and Politics - Developed World
POLI 227	(3)	Developing Areas/Introduction

**International Relations**

POLI 243	(3)	International Politics of Economic Relations
POLI 244	(3)	International Politics: State Behaviour

**Political Theory**

POLI 231	(3)	Introduction to Political Theory
POLI 232	(3)	Modern Political Thought

9 to 12 credits above the 200-level from at least two of four fields:

**Canadian Politics**

POLI 320	(3)	Issues in Canadian Democracy
POLI 321	(3)	Issues: Canadian Public Policy
POLI 326	(3)	Provincial Politics
POLI 336	(3)	Le Québec et le Canada
POLI 337	(3)	Canadian Public Administration
POLI 342	(3)	Canadian Foreign Policy
POLI 371	(3)	Challenge of Canadian Federalism
POLI 372	(3)	Aboriginal Politics in Canada
POLI 378	(3)	The Canadian Judicial Process
POLI 379	(3)	Topics in Canadian Politics
POLI 410	(3)	Canadian Political Parties
POLI 411	(3)	Immigration and Multiculturalism in Canada
POLI 412	(3)	Canadian Voting/Public Opinion
POLI 415	(3)	Political Parties
POLI 416	(3)	Political Economy of Canada
POLI 417	(3)	Health Care in Canada
POLI 421	(3)	Social Movements in Canada
POLI 426	(3)	Partis politiques et comportements électoraux au Québec
POLI 427	(3)	Selected Topics: Canadian Politics
POLI 446	(3)	Les politiques publiques au Québec



POLI 447	(3)	Canadian Constitutional Politics
POLI 467	(3)	Politique et société à Montréal
POLI 469	(3)	Politics of Regulation
POLI 478	(3)	The Canadian Constitution

### **Comparative Politics (Developed and Developing)**

POLI 300D1	(3)	Developing Areas/Revolution
POLI 300D2	(3)	Developing Areas/Revolution
POLI 315	(3)	Approaches to Political Economy
POLI 318	(3)	Comparative Local Government
POLI 319	(3)	Politics of Latin America
POLI 322	(3)	Political Change in South Asia
POLI 323	(3)	Developing Areas/China and Japan
POLI 324	(3)	Developing Areas/Africa
POLI 325D1	(3)	Government and Politics: United States
POLI 325D2	(3)	Government and Politics: United States
POLI 328	(3)	Modern Politics in Western Europe
POLI 329	(3)	Russian and Soviet Politics
POLI 330	(3)	Law and Courts in Europe
POLI 331	(3)	Politics in East Central Europe
POLI 332	(3)	Politics of Former Soviet Republics
POLI 338	(3)	Developing Areas/Topics 1
POLI 339	(3)	Comparative Developed: Topics 1
POLI 340	(3)	Developing Areas/Middle East
POLI 356	(3)	Public Policy: Western Europe
POLI 357	(3)	Politics: Contemporary Europe
POLI 361	(3)	Political Participation in Comparative Perspective
POLI 369	(3)	Politics of Southeast Asia
POLI 411	(3)	Immigration and Multiculturalism in Canada
POLI 414	(3)	Society and Politics in Italy
POLI 419	(3)	Transitions from Communism
POLI 422	(3)	Developing Areas/Topics 2
POLI 423	(3)	Politics of Ethno-Nationalism
POLI 424	(3)	Media and Politics
POLI 425	(3)	Topics in American Politics
POLI 428	(3)	Politics of France
POLI 429	(3)	The Politics of South Africa
POLI 430	(3)	The Politics of Scandinavia
POLI 431	(3)	Nations and States/Developed World
POLI 432	(3)	Selected Topics: Comparative Politics
POLI 435	(3)	Identity and Inequality
POLI 437	(3)	Politics in Israel

POLI 438

British Politics

POLI 450

Peacebuilding

POLI 451

The European Union

POLI 454

British Political Thought

POLI 463

Politics of Germany

POLI 466

Public Policy Analysis

POLI 471

(3)

Democracy in the Modern World

POLI 472

(3)

Developing Areas/Social Movements

Democrac

POLI 433	(3)	History of Political/Social Theory 3
POLI 434	(3)	History of Political/Social Theory 4
POLI 454	(3)	British Political Thought
POLI 455	(3)	American Political Thought
POLI 459	(3)	Topics in Political Theory 2
POLI 470	(3)	Philosophy, Economy and Society

Other political sciences courses may be used to satisfy this minor concentration subject to approval.

### **25.10.42.7 Bachelor of Arts (B.A.) - Minor Concentration Political Science: Canada/Québec (18 credits)**

This program may not be expanded to the Major Concentration Political Science.

#### **Complementary Courses (18 credits)**

18 credits of complementary courses selected with the specifications described below.

\* Note: Courses marked with an asterisk ("\*") are on Québec.

6 credits at the introductory level from:

POLI 221	(3)	Government of Canada
POLI 222	(3)	Political Process and Behaviour in Canada
POLI 226*	(3)	La vie politique québécoise

12 credits, of which 3 credits must be on Québec; no more than 6 credits may be taken in courses outside the Department of Political Science (courses with a subject code other than "POLI"); and no more than 6 credits may be taken at the 200-level from:

ANTH 306	(3)	Native Peoples' History in Canada
CANS 200	(3)	Introduction to the Study of Canada
CANS 304*	(3)	Nationalism in Canada
CANS 413*	(3)	Canada and Quebec Seminar
ECON 308	(3)	Governmental Policy Towards Business
FREN 329*	(3)	Civilisation québécoise
HIST 202	(3)	Survey: Canada to 1867
HIST 203	(3)	Survey: Canada since 1867
HIST 300	(3)	Nationalisms in Canada
HIST 303*	(3)	History of Quebec
HIST 322	(3)	Canada: American Presence since 1939
HIST 333*	(3)	Natives and French
HIST 334*	(3)	History of New France
HIST 353*	(3)	History of Montreal
HIST 357	(3)	Religion and Canadian Society in Historical Perspective
HIST 363	(3)	Canada 1870-1914
HIST 364	(3)	Canada 1914-1945
HIST 367	(3)	Canada since 1945
HIST 370	(3)	Canadian Party Politics 1867-2000
HIST 397	(3)	Canada: Ethnicity, Migration
HIST 403*	(3)	History of Quebec Institutions

POLI 226*	(3)	La vie politique québécoise
POLI 320	(3)	Issues in Canadian Democracy
POLI 321	(3)	Issues: Canadian Public Policy
POLI 326	(3)	Provincial Politics
POLI 336*	(3)	Le Québec et le Canada
POLI 337	(3)	Canadian Public Administration
POLI 342	(3)	Canadian Foreign Policy
POLI 371	(3)	Challenge of Canadian Federalism
POLI 372	(3)	Aboriginal Politics in Canada
POLI 378	(3)	The Canadian Judicial Process
POLI 379	(3)	Topics in Canadian Politics
POLI 410	(3)	Canadian Political Parties
POLI 411	(3)	Immigration and Multiculturalism in Canada
POLI 412	(3)	Canadian Voting/Public Opinion
POLI 415	(3)	Political Parties
POLI 416	(3)	Political Economy of Canada
POLI 417	(3)	Health Care in Canada
POLI 421	(3)	Social Movements in Canada
POLI 426*	(3)	Partis politiques et comportements électoraux au Québec
POLI 427	(3)	Selected Topics: Canadian Politics
POLI 446*	(3)	Les politiques publiques au Québec
POLI 447	(3)	Canadian Constitutional Politics
POLI 467*	(3)	Politique et société à Montréal
POLI 469	(3)	Politics of Regulation
POLI 478	(3)	The Canadian Constitution

**25.10.42.8 Bachelor of Arts (B.A.) - Minor Concentration Comparative Politics (18 credits)**

This program may not be expanded to the Major Concentration Political Science.

**Required Course (3 credits)**

POLI 211	(3)	Comparative Government and Politics
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**Complementary Courses (15 credits)**

15 credits

3 credits from:

POLI 212	(3)	Government and Politics - Developed World
POLI 227	(3)	Developing Areas/Introduction

12 credits from:

POLI 300D1	(3)	Developing Areas/Revolution
POLI 300D2	(3)	Developing Areas/Revolution
POLI 315	(3)	Approaches to Political Economy

POLI 318	(3)	Comparative Local Government
POLI 319	(3)	Politics of Latin America
POLI 322	(3)	Political Change in South Asia
POLI 323	(3)	Developing Areas/China and Japan
POLI 324	(3)	Developing Areas/Africa
POLI 325D1	(3)	Government and Politics: United States
POLI 325D2	(3)	Government and Politics: United States
POLI 328	(3)	Modern Politics in Western Europe
POLI 329	(3)	Russian and Soviet Politics
POLI 330	(3)	Law and Courts in Europe
POLI 331	(3)	Politics in East Central Europe
POLI 332	(3)	Politics of Former Soviet Republics
POLI 338	(3)	Developing Areas/Topics 1
POLI 339	(3)	Comparative Developed: Topics 1
POLI 340	(3)	Developing Areas/Middle East
POLI 356	(3)	Public Policy: Western Europe
POLI 357	(3)	Politics: Contemporary Europe
POLI 361	(3)	Political Participation in Comparative Perspective
POLI 369	(3)	Politics of Southeast Asia
POLI 411	(3)	Immigration and Multiculturalism in Canada
POLI 414	(3)	Society and Politics in Italy
POLI 419	(3)	Transitions from Communism
POLI 422	(3)	Developing Areas/Topics 2
POLI 423	(3)	Politics of Ethno-Nationalism
POLI 424	(3)	Media and Politics
POLI 425	(3)	Topics in American Politics
POLI 428	(3)	Politics of France
POLI 429	(3)	The Politics of South Africa
POLI 430	(3)	The Politics of Scandinavia
POLI 431	(3)	Nations and States/Developed World
POLI 432	(3)	Selected Topics: Comparative Politics
POLI 435	(3)	Identity and Inequality
POLI 437	(3)	Politics in Israel
POLI 438	(3)	British Politics
POLI 450	(3)	Peacebuilding
POLI 451	(3)	The European Union
POLI 463	(3)	Politics of Germany
POLI 466	(3)	Public Policy Analysis
		Democracy in the Modern OLI 438

**25.10.42.9 Bachelor of Arts (B.A.) - Minor Concentration International Relations (18 credits)**

This program may not be expanded to the Major Concentration Political Science.

**Required Courses (6 credits)**

POLI 243	(3)	International Politics of Economic Relations
POLI 244	(3)	International Politics: State Behaviour

**Complementary Courses (12 credits)**

12 credits selected as follows:

**Thematic Courses**

6 credits must be from Thematic courses:

POLI 345	(3)	International Organizations
POLI 347	(3)	Arab-Israel Conflict, Crisis, Peace
POLI 351	(3)	The Causes of Major Wars
POLI 354	(3)	Approaches to International Political Economy
POLI 360	(3)	Security: War and Peace
POLI 362	(3)	Political Theory and International Relations
POLI 440	(3)	Civil-Military Relations
POLI 441	(3)	IPE: Trade
POLI 442	(3)	International Relations of Ethnic Conflict
POLI 445	(3)	International Political Economy: Monetary Relations
POLI 450	(3)	Peacebuilding
POLI 451	(3)	The European Union

**Regional Courses**

Remaining credits may also be from Regional courses:

POLI 341	(3)	Foreign Policy: The Middle East
POLI 342	(3)	Canadian Foreign Policy
POLI 344	(3)	Foreign Policy: Europe
POLI 346	(3)	American Foreign Policy
POLI 349	(3)	Foreign Policy: Asia

**25.10.42.10 Bachelor of Arts (B.A.) - Minor Concentration Political Theory (18 credits)**

This program offers a specialization in the subfield of political theory and allows students the opportunity to draw on closely-related courses in moral and political philosophy offered by the Department of Philosophy. Students who have completed the appropriate introductory work in the disciplines of classics, economics, history, or sociology may take specified courses in these disciplines toward the program requirements.

**Complementary Courses (18 credits)**

18 credits selected as follows:

**Category A**

9 credits from Category A.

3 credits at the introductory level from:

PHIL 240	(3)	Political Philosophy 1
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POLI 231	(3)	Introduction to Political Theory
POLI 232	(3)	Modern Political Thought

At least 6 credits selected from:

POLI 333	(3)	Western Political Theory 1
POLI 334	(3)	Western Political Theory 2
POLI 433	(3)	History of Political/Social Theory 3
POLI 434	(3)	History of Political/Social Theory 4

### Category B

9 credits from Category B.

Note: A course can only be used once in the program; a course used toward Category A may not also be used toward Category B.

CLAS 416	(3)	Advanced Latin: Philosophy
CLAS 426	(3)	Advanced Greek: Philosophy
ECON 334	(3)	History of Economic Doctrines
HIST 320	(3)	European Thought and Culture 1
HIST 321	(3)	European Thought and Culture 2
PHIL 334	(3)	Ethical Theory
PHIL 344	(3)	Medieval and Renaissance Political Theory
PHIL 345	(3)	Greek Political Theory
PHIL 348	(3)	Philosophy of Law 1
PHIL 442	(3)	Topics in Feminist Theory
PHIL 444	(3)	Early Modern Political Theory
PHIL 445	(3)	19th Century Political Theory
PHIL 454	(3)	Ancient Moral Theory
POLI 333	(3)	Western Political Theory 1
POLI 334	(3)	Western Political Theory 2
POLI 362	(3)	Political Theory and International Relations
POLI 363	(3)	Contemporary Political Theory
POLI 364	(3)	Radical Political Thought
POLI 365	(3)	Democratic Theory
POLI 366	(3)	Topics in Political Theory 1
POLI 367	(3)	Liberal Political Theory
POLI 433	(3)	History of Political/Social Theory 3
POLI 434	(3)	History of Political/Social Theory 4
POLI 455	(3)	American Political Thought
POLI 459	(3)	Topics in Political Theory 2
POLI 470	(3)	Philosophy, Economy and Society
SOCI 330	(3)	Sociological Theory

### 25.104211 Bachelor of Arts (B.A.) - Minor Concentration Political Economy (18 credits)

This program may not be expanded to the Major Concentration Political Science.

**Complementary Courses (18 credits)**

18 credits selected as follows:

3 credits from introductory political science courses:

POLI 211	(3)	Comparative Government and Politics
POLI 227	(3)	Developing Areas/Introduction
POLI 243	(3)	International Politics of Economic Relations

3 credits from introductory economics courses:

ECON 208	(3)	Microeconomic Analysis and Applications
ECON 209	(3)	Macroeconomic Analysis and Applications

Note: Students who take or have taken ECON 230D1/D2 or ECON 250D1/D2 are deemed to have fulfilled the economics requirement. However, the 3 complementary economics credits must be replaced with an additional political science course from the list below.

12 credits from:

POLI 243	(3)	International Politics of Economic Relations
POLI 315	(3)	Approaches to Political Economy



ISLA 383	(3)	Central Questions in Islamic Law
JWST 201	(3)	Jewish Law
JWST 316	(3)	Social and Ethical Issues Jewish Law 1
LEEL 482*	(3)	Law and Poverty
PHIL 348	(3)	Philosophy of Law 1
POLI 318	(3)	Comparative Local Government
POLI 321	(3)	Issues: Canadian Public Policy
POLI 330	(3)	Law and Courts in Europe
POLI 337	(3)	Canadian Public Administration
POLI 417	(3)	Health Care in Canada
POLI 447	(3)	Canadian Constitutional Politics
POLI 466	(3)	Public Policy Analysis
POLI 469	(3)	Politics of Regulation
POLI 478	(3)	The Canadian Constitution
PRV2 500*	(3)	Children and the Law
SOCI 388	(3)	Crime
SOCI 488	(3)	Punishment and Prisons

\* Note: To register for the courses offered by the Faculty of Law, LEEL 482 and PRV2 500, a student must apply to the Faculty of Law as a special student and provide the following: a curriculum vitae, a copy of his/her academic record, and the reason for wanting to take the course.

### **25.104213 Bachelor of Arts (B.A.) - Minor Concentration South Asia (18 credits)**

This program may not be expanded to the Major Concentration Political Science.

#### **Required Courses (6 credits)**

POLI 227	(3)	Developing Areas/Introduction
POLI 322	(3)	Political Change in South Asia

#### **Complementary Courses (12 credits)**

12 credits selected as follows:

3 to 6 credits from:

ANTH 327	(3)	Peoples of South Asia
ISLA 500D1	(3)	History of Islamic India
ISLA 500D2	(3)	History of Islamic India
RELG 252	(3)	Hinduism and Buddhism
RELG 344	(3)	Mahayana Buddhism
RELG 348	(3)	Classical Hinduism
RELG 350	(3)	Bhakti Hinduism
RELG 454	(3)	Modern Hindu Thought

6 to 9 credits from:

ANTH 212	(3)	Anthropology of Development
ANTH 327	(3)	Peoples of South Asia
ANTH 427	(3)	Social Change in South Asia

ISLA 505	(3)	Islam: Origin and Early Development
ISLA 506	(3)	Islam: Later Developments
RELG 339	(3)	Gender & Sexuality in Buddhism
RELG 342	(3)	Theravada Buddhist Literature
RELG 371	(3)	Ethics of Violence/Non-Violence
SOCI 254	(3)	Development and Underdevelopment

**25.104214 Bachelor of Arts (B.A.) - Major Concentration Political Science (36 credits)**

**Complementary Courses (36 credits)**

36 credits of courses selected from the four main fields of political science (Canadian Politics, Comparative Politics (Developed Areas and Developing



POLI 227	(3)	Developing Areas/Introduction
POLI 300D1	(3)	Developing Areas/Revolution
POLI 300D2	(3)	Developing Areas/Revolution
POLI 319	(3)	Politics of Latin America
POLI 322	(3)	Political Change in South Asia
POLI 323	(3)	Developing Areas/China and Japan
POLI 324	(3)	Developing Areas/Africa
POLI 338	(3)	Developing Areas/Topics 1
POLI 340	(3)	Developing Areas/Middle East
POLI 369	(3)	Politics of Southeast Asia
POLI 421	(3)	Social Movements in Canada
POLI 422	(3)	Developing Areas/Topics 2
POLI 423	(3)	Politics of Ethno-Nationalism
POLI 429	(3)	The Politics of South Africa

POLI 450	(3)	Peacebuilding
POLI 451	(3)	The European Union
POLI 575	(3)	Seminar: International Politics

### **Political Theory**

POLI 231	(3)	Introduction to Political Theory
POLI 232	(3)	Modern Political Thought
POLI 333	(3)	Western Political Theory 1
POLI 334	(3)	Western Political Theory 2
POLI 362	(3)	Political Theory and International Relations
POLI 363	(3)	Contemporary Political Theory
POLI 364	(3)	Radical Political Thought
POLI 365	(3)	Democratic Theory
POLI 366	(3)	Topics in Political Theory 1
POLI 367	(3)	Liberal Political Theory
POLI 433	(3)	History of Political/Social Theory 3
POLI 434	(3)	History of Political/Social Theory 4
POLI 454	(3)	British Political Thought
POLI 455	(3)	American Political Thought
POLI 459	(3)	Topics in Political Theory 2
POLI 470	(3)	Philosophy, Economy and Society
POLI 561	(3)	Seminar: Political Theory

### **Bachelor of Arts (B.A.) - Honours Political Science (54 credits)**

At least 3 credits must be taken in Political Theory (see the course list for this field below).

No more than one-half of a student's political science credits may be in any one field (Canadian Politics, Comparative Politics (Developed Areas and Developing Areas), International Relations, Political Theory). However, if the field is Comparative Politics and if courses are taken in both Developed Areas and Developing Areas, the maximum is 30 credits. Refer to the lists below for course choices in each field.

12 credits of political science must be at the 400-level or above including a 500-level Honours Seminar or a 600-level Graduate Seminar. This one-quarter rule may be satisfied by taking one 400-, one 500-, and one 600-level course. Refer to the lists below for course choices at the 400- and 500-levels in each field. Consult the brochure "Major and Honours Programs in Political Science" for 600-level course choices.

### Canadian Politics

POLI 221	(3)	Government of Canada
POLI 222	(3)	Political Process and Behaviour in Canada
POLI 226	(3)	La vie politique québécoise
POLI 320	(3)	Issues in Canadian Democracy
POLI 321	(3)	Issues: Canadian Public Policy
POLI 326	(3)	Provincial Politics
POLI 336	(3)	Le Québec et le Canada
POLI 337	(3)	Canadian Public Administration
POLI 342	(3)	Canadian Foreign Policy
POLI 371	(3)	Challenge of Canadian Federalism
POLI 372	(3)	Aboriginal Politics in Canada
POLI 378	(3)	The Canadian Judicial Process
POLI 379	(3)	Topics in Canadian Politics
POLI 410	(3)	Canadian Political Parties
POLI 411	(3)	Immigration and Multiculturalism in Canada
POLI 412	(3)	Canadian Voting/Public Opinion
POLI 415	(3)	Political Parties
POLI 416	(3)	Political Economy of Canada
POLI 417	(3)	Health Care in Canada
POLI 421	(3)	Social Movements in Canada
POLI 424	(3)	Media and Politics
POLI 426	(3)	Partis politiques et comportements électoraux au Québec
POLI 427	(3)	Selected Topics: Canadian Politics
POLI 446	(3)	Les politiques publiques au Québec
POLI 447	(3)	Canadian Constitutional Politics

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POLI 325D2	(3)	Government and Politics: United States
POLI 328	(3)	Modern Politics in Western Europe
POLI 329	(3)	Russian and Soviet Politics
POLI 330	(3)	Law and Courts in Europe
POLI 331	(3)	Politics in East Central Europe
POLI 332	(3)	Politics of Former Soviet Republics
POLI 339	(3)	Comparative Developed: Topics 1
POLI 356	(3)	Public Policy: Western Europe
POLI 357	(3)	Politics: Contemporary Europe
POLI 361	(3)	Political Participation in Comparative Perspective
POLI 411	(3)	Immigration and Multiculturalism in Canada
POLI 414	(3)	Society and Politics in Italy
POLI 419	(3)	Transitions from Communism
POLI 424	(3)	Media and Politics
POLI 425	(3)	Topics in American Politics
POLI 428	(3)	Politics of France
POLI 430	(3)	The Politics of Scandinavia
POLI 431	(3)	Nations and States/Developed World
POLI 432	(3)	Selected Topics: Comparative Politics
POLI 437	(3)	Politics in Israel
POLI 438	(3)	British Politics
POLI 451	(3)	The European Union
POLI 463	(3)	Politics of Germany
POLI 466	(3)	Public Policy Analysis
POLI 475	(3)	Social Capital in Comparative Perspective
POLI 524	(3)	Seminar: Developed Areas

#### **Comparative Politics - Developing Areas**

POLI 227	(3)	Developing Areas/Introduction
POLI 300D1	(3)	Developing Areas/Revolution
POLI 300D2	(3)	Developing Areas/Revolution
POLI 319	(3)	Politics of Latin America
POLI 322	(3)	Political Change in South Asia
POLI 323	(3)	Developing Areas/China and Japan
POLI 324	(3)	Developing Areas/Africa
POLI 338	(3)	Developing Areas/Topics 1
POLI 340	(3)	Developing Areas/Middle East
POLI 369	(3)	Politics of Southeast Asia
POLI 421	(3)	Social Movements in Canada
POLI 422	(3)	Developing Areas/Topics 2
POLI 423	(3)	Politics of Ethno-Nationalism
POLI 429	(3)	The Politics of South Africa

POLI 435	(3)	Identity and Inequality
POLI 450	(3)	Peacebuilding
POLI 471	(3)	Democracy in the Modern World
POLI 472	(3)	Developing Areas/Social Movements
POLI 473	(3)	Democracy and the Market
POLI 474	(3)	Inequality and Development
POLI 522	(3)	Seminar: Developing Areas

**International Relations**

POLI 243	(3)	International Politics of Economic Relations
POLI 244	(3)	International Politics: State Behaviour
POLI 341	(3)	Foreign Policy: The Middle East
POLI 342	(3)	Canadian Foreign Policy
POLI 344	(3)	Foreign Policy: Europe
POLI 345	(3)	International Organizations
POLI 346	(3)	American Foreign Policy
POLI 347	(3)	Arab-Israel Conflict, Crisis, Peace
POLI 349	(3)	Foreign Policy: Asia
POLI 351	(3)	The Causes of Major Wars
POLI 354	(3)	Approaches to International Political Economy
POLI 359	(3)	Topics in International Politics 1
POLI 360	(3)	Security: War and Peace
POLI 362	(3)	Political Theory and International Relations
POLI 440	(3)	Civil-Military Relations
POLI 441	(3)	IPE: Trade
POLI 442	(3)	International Relations of Ethnic Conflict
POLI 444	(3)	Topics in International Politics 2
POLI 445	(3)	International Political Economy: Monetary Relations
POLI 450	(3)	Peacebuilding
POLI 451	(3)	The European Union
POLI 575	(3)	Seminar: International Politics

**Political Theory**

\*Note: Courses that may be used to complete the requirement for 3 credits in Political Theory are marked with an asterisk ("\*") in the list below.

POLI 231*	(3)	Introduction to Political Theory
POLI 232*	(3)	Modern Political Thought
POLI 333*	(3)	Western Political Theory 1
POLI 334*	(3)	Western Political Theory 2
POLI 362*	(3)	Political Theory and International Relations
POLI 363*	(3)	Contemporary Political Theory
POLI 364*	(3)	Radical Political Thought
POLI 365*	(3)	Democratic Theory





POLI 337

(3)

Canadian Public Administration  
Canadian Foreign Polic

POLI 424	(3)	Media and Politics
POLI 425	(3)	Topics in American Politics
POLI 428	(3)	Politics of France
POLI 430	(3)	The Politics of Scandinavia
POLI 431	(3)	Nations and States/Developed World
POLI 432	(3)	Selected Topics: Comparative Politics
POLI 437	(3)	Politics in Israel
POLI 438	(3)	British Politics
POLI 451	(3)	The European Union
POLI 463	(3)	Politics of Germany
POLI 466	(3)	Public Policy Analysis
POLI 475	(3)	Social Capital in Comparative Perspective
POLI 524	(3)	Seminar: Developed Areas

### Comparative Politics - Developing Areas

POLI 227	(3)	Developing Areas/Introduction
POLI 300D1	(3)	Developing Areas/Revolution
POLI 300D2	(3)	Developing Areas/Revolution
POLI 319	(3)	Politics of Latin America
POLI 322	(3)	Political Change in South Asia
POLI 323	(3)	Developing Areas/China and Japan
POLI 324	(3)	Developing Areas/Africa
POLI 338	(3)	Developing Areas/Topics 1
POLI 340	(3)	Developing Areas/Middle East
POLI 369	(3)	Politics of Southeast Asia
POLI 421	(3)	Social Movements in Canada
POLI 422	(3)	Developing Areas/Topics 2
POLI 423	(3)	Politics of Ethno-Nationalism
POLI 429	(3)	The Politics of South Africa
POLI 435	(3)	Identity and Inequality
POLI 450	(3)	Peacebuilding
POLI 471	(3)	Democracy in the Modern World
POLI 472	(3)	Developing Areas/Social Movements
POLI 473	(3)	Democracy and the Market
POLI 474	(3)	Inequality and Development
POLI 522	(3)	Seminar: Developing Areas

### International Relations

POLI 243	(3)	International Politics of Economic Relations
POLI 244	(3)	International Politics: State Behaviour
POLI 341	(3)	Foreign Policy: The Middle East
POLI 342	(3)	Canadian Foreign Policy

POLI 344

(3)

Foreign Policy: Europe

POLI 345

(3)

International Organizations

POLI 346

(3)

American Foreign Policy

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## 25.10.43 Psychology (PSYC)

### 25.10.43.1 Location

Stewart Biology Building, Room W8/1  
1205 Dr. Penfield Avenue  
Montreal, Quebec H3A 1B1

Telephone: 514-398-6100  
Fax: 514-398-4896  
Email: [info@psych.mcgill.ca](mailto:info@psych.mcgill.ca)  
Website: [www.psych.mcgill.ca](http://www.psych.mcgill.ca)

### 25.10.43.2 About Psychology

**The Psychology department offers programs in both Arts and Science. For a list of teaching staff and an outline of the nature of Psychology, refer to *Faculty of Science > Psychology (PSYC)*. Programs which may be taken by Arts students are described in this section, those listed under the Faculty of Science may be taken by Science students only.**



**Note:** The B.A. (or B.Sc.) with a Major Concentration or Honours degree in psychology is not a professional qualification. It does not qualify the individual to carry on professional work in psychology.

### 25.10.43.3 Information Meetings for New Students

All new students entering the Psychology undergraduate program are required to attend an Information Meeting prior to registration. Students planning to pursue a Bachelor of

PSYC 215

(3)

Social Psychology

12 credits in Psychology at the 300-lev

PSYC 522	(3)	Neurochemistry and Behaviour
PSYC 526	(3)	Advances in Visual Perception
PSYC 529	(3)	Music Cognition
PSYC 531	(3)	Structural Equation Models
PSYC 532	(3)	Cognitive Science
PSYC 536	(3)	Correlational Techniques
PSYC 537	(3)	Advanced Seminar in Psychology of Language
PSYC 541	(3)	Multilevel Modelling
PSYC 545	(3)	Topics in Language Acquisition
PSYC 561	(3)	Methods: Developmental Psycholinguistics
PSYC 562	(3)	Measurement of Psychological Processes

**List B - (Social, Health and Developmental Psychology)**

PSYC 304	(3)	Child Development
PSYC 316	(3)	Psychology of Deafness
PSYC 331	(3)	Inter-Group Relations
PSYC 332	(3)	Introduction to Personality
PSYC 333	(3)	Personality and Social Psychology
PSYC 337	(3)	Introduction: Abnormal Psychology 1
PSYC 338	(3)	Introduction: Abnormal Psychology 2
PSYC 343	(3)	Language Learning in Children
PSYC 351	(3)	Research Methods in Social Psychology
PSYC 408	(3)	Principles of Cognitive Behaviour Therapy
PSYC 409	(3)	Positive Psychology
PSYC 412	(3)	Developmental Psychopathology
PSYC 414	(3)	Social Development
PSYC 416	(3)	Topics in Child Development
PSYC 429	(3)	Health Psychology
PSYC 436	(3)	Human Sexuality and Its Problems
PSYC 471	(3)	Human Motivation
PSYC 473	(3)	Social Cognition and the Self
PSYC 474	(3)	Interpersonal Relationships
PSYC 483	(3)	Seminar in Experimental Psychopathology
PSYC 491D1	(3)	Advanced Study: Behavioural Disorders
PSYC 491D2	(3)	Advanced Study: Behavioural Disorders
PSYC 507	(3)	Emotions, Stress, and Illness
PSYC 511	(3)	Infant Competence
PSYC 512	(3)	Advanced Personality Seminar
PSYC 528	(3)	Vulnerability to Depression
PSYC 530	(3)	Applied Topics in Deafness
PSYC 533	(3)	International Health Psychology
PSYC 535	(3)	Advanced Topics in Social Psychology





PSYC 305\*\* (3) Statistics for Experimental Design

\*\*Note: Students who wish to apply to the Honours Program in Psychology must complete the required courses above apart from PSYC 305 in their U1 year to be eligible for admission. Students who have been exempted from PSYC 204 are advised to complete PSYC 305 in U1. All students must complete a minimum of 27 graded credits in U1 to be eligible for admission to the Honours Program. For additional information about applying to Honours, please refer to the Honours program description.

**Complementary Courses (18 credits)**

18 credits selected as follows:

3 credits in Psychology from List

PSYC 541	(3)	Multilevel Modelling
PSYC 545	(3)	Topics in Language Acquisition
PSYC 561	(3)	Methods: Developmental Psycholinguistics
PSYC 562	(3)	Measurement of Psychological Processes

**List B - (Social, Health and Developmental Psychology)**

PSYC 304	(3)	Child Development
PSYC 316	(3)	Psychology of Deafness
PSYC 331	(3)	Inter-Group Relations
PSYC 332	(3)	Introduction to Personality
PSYC 333	(3)	Personality and Social Psychology
PSYC 337	(3)	Introduction: Abnormal Psychology 1
PSYC 338	(3)	Introduction: Abnormal Psychology 2
PSYC 343	(3)	Language Learning in Children
PSYC 351	(3)	Research Methods in Social Psychology
PSYC 408	(3)	Principles of Cognitive Behaviour Therapy
PSYC 409	(3)	Positive Psychology
PSYC 412	(3)	Developmental Psychopathology
PSYC 414	(3)	Social Development
PSYC 416	(3)	Topics in Child Development
PSYC 429	(3)	Health Psychology
PSYC 436	(3)	Human Sexuality and Its Problems
PSYC 471	(3)	Human Motivation
PSYC 473	(3)	Social Cognition and the Self
PSYC 474	(3)	Interpersonal Relationships
PSYC 483	(3)	Seminar in Experimental Psychopathology
PSYC 491D1	(3)	Advanced Study: Behavioural Disorders
PSYC 491D2	(3)	Advanced Study: Behavioural Disorders
PSYC 507	(3)	Emotions, Stress, and Illness
PSYC 511	(3)	Infant Competence
PSYC 512	(3)	Advanced Personality Seminar
PSYC 528	(3)	Vulnerability to Depression
PSYC 530	(3)	Applied Topics in Deafness
PSYC 533	(3)	International Health Psychology
PSYC 535	(3)	Advanced Topics in Social Psychology

**Unclassified Courses**

Students may also select complementary courses from the research and topics courses below:

PSYC 395	(6)	Psychology Research Project 1
PSYC 450D1	(4.5)	Research Project and Seminar
PSYC 450D2	(4.5)	Research Project and Seminar
PSYC 488D1	(1.5)	Special Topics Seminar

PSYC 488D2	(1.5)	Special Topics Seminar
PSYC 492	(3)	Special Topics Seminar 1
PSYC 493	(3)	Special Topics Seminar 2
PSYC 494D1	(4.5)	Psychology Research Project
PSYC 494D2	(4.5)	Psychology Research Project
PSYC 495	(6)	Psychology Research Project 2
PSYC 499	(1)	Reading Project

### 25.10.43.7 Bachelor of Arts (B.A.) - Honours Psychology (60 credits)

Honours Psychology prepares students for graduate study, and so emphasizes practice in the research techniques which are used in graduate school and professionally later on. Students are normally accepted into Honours at the beginning of their U2 year, and the two-year sequence of Honours courses continues through U3.

Admission to Honours is selective. Students with a cumulative grade point average of 3.00 or better are eligible to apply; since enrolment is limited the usual GPA for admission to this program is 3.50. Students must complete a minimum of 27 graded credits in two terms in their U1 year to be eligible to apply to the Honours Program. These credits must include: PSYC 204, PSYC 211, PSYC 212, PSYC 213 and PSYC 215. Students are advised to complete PSYC 305 in their U1 year to apply to the Honours Program. Once in the Honours Program, the student must obtain a GPA of 3.00 in the U2 year in order to continue in the program for U3. Students in the Honours Program are encouraged to complete a minimum of 27 graded credits per academic year. This is also the minimum number of credits required to be eligible for fellowships and awards.

Applications can be obtained from the Undergraduate Office of the Department of Psychology, Room N7/9A, Stewart Biological Sciences Building. The applications must be completed and returned to the Undergraduate Office by August 1 for September admission. Candidates will be informed of the Department's decision via email before classes begin in September.

Students should note that awarding of the Honours degree will depend on both cumulative grade point average and a minimum grade of B on PSYC 380D1/PSYC 380D2, PSYC 482. "First Class Honours" is awarded to students who obtain a minimum CGPA of 3.50 and a minimum grade of A- in the required honours courses, namely PSYC 380D1/D2, PSYC 482. "Honours" is awarded to students with a minimum CGPA of 3.00 and a minimum grade of B in the required honours courses, namely PSYC 380D1/D2, PSYC 482. Moreover, the awarding of the Honours degree normally requires completion of two full years of study, U2 and U3, in the Honours Program in the Psychology Department. Students with particularly strong academic records may be admitted for the U3 year only on the basis of their marks and research experience. These students must complete all Honours Program requirements.

#### Program Prerequisites

Students planning on entering the Honours Psychology program are required to complete courses in Introductory Psychology and Human Biology at the collegial level or in their first year of study at McGill University.

Students are required to register for PSYC 100 during their first year at McGill University. Students who have completed 350-101 or 350-102 in CEGEP are exempt from the PSYC 100 requirement.

Bachelor of Arts students are required to complete BIOL 115 or BIOL 111 or BIOL 112 during their first year. Students who have completed one of Biology 101-301, 101-401, 101-911 or 101-921 in CEGEP are exempt from the Biology requirement.

BIOL 111	(3)	Principles: Organismal Biology
BIOL 112	(3)	Cell and Molecular Biology
BIOL 115	(3)	Essential Biology
PSYC 100	(3)	Introduction to Psychology

#### U1 Required Courses (18 credits)

\*Advising note for PSYC 204: Students who have completed in CEGEP either Mathematics 201-307 or 201-337 or equivalent, or the combination of Quantitative Methods 360-300 with Mathematics 201-300, and who obtained a minimum grade of 75%, will be exempt from the U1 required course PSYC 204.

Bachelor of Arts students will replace this requirement with 3 credits at the 300-level in one of the following disciplines: Psychology (PSYC), Anthropology (ANTH), Linguistics (LING) or Sociology (SOCl).

Bachelor of Arts and Science students will replace this requirement with 3 credits in Psychology at the 300-level or above.

\*\*Note: PSYC 305 may be taken in U1 or U2.

PSYC 204*	(3)	Introduction to Psychological Statistics
PSYC 211	(3)	Introductory Behavioural Neuroscience

PSYC 212	(3)	Perception
PSYC 213	(3)	Cognition
PSYC 215	(3)	Social Psychology
PSYC 305**	(3)	Statistics for Experimental Design

### U2 Required Courses (9 credits)

PSYC 380D1	(4.5)	Honours Research Project Seminar
PSYC 380D2	(4.5)	Honours Research Project Seminar

### U3 Required Course (3 credits)

PSYC 482	(3)	Advanced Honours Seminar
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### Complementary Courses (30 credits)

30 credits of complementary courses with the following specifications:

12 credits to be selected from the list below and any Psychology course at the 500-level.

PSYC 403	(3)	Modern Psychology in Historical Perspective
PSYC 483	(3)	Seminar in Experimental Psychopathology
PSYC 495	(6)	Psychology Research Project 2
PSYC 496	(6)	Senior Honours Research 1
PSYC 497	(6)	Senior Honours Research 2
PSYC 498D1	(4.5)	Senior Honours Research
PSYC 498D2	(4.5)	Senior Honours Research

### List A - (Behavioural Neuroscience, Cognition and Quantitative Methods)

6 credits in Psychology from List A:

NSCI 201	(3)	Introduction to Neuroscience 2
PSYC 301	(3)	Animal Learning & Theory
PSYC 310	(3)	Human Intelligence
PSYC 311	(3)	Human Cognition and the Brain
PSYC 315	(3)	Computational Psychology Genes and Behaviour

PSYC 413

(3)

Cognitive Development

PSYC 427

(3)

Sensorimotor Behaviour

Human Factors Research and T

PSYC 491D1	(3)	Advanced Study: Behavioural Disorders
PSYC 491D2	(3)	Advanced Study: Behavioural Disorders
PSYC 507	(3)	Emotions, Stress, and Illness
PSYC 511	(3)	Infant Competence
PSYC 512	(3)	Advanced Personality Seminar
PSYC 528	(3)	Vulnerability to Depression
PSYC 530	(3)	Applied Topics in Deafness
PSYC 533	(3)	International Health Psychology
PSYC 535	(3)	Advanced Topics in Social Psychology

6 credits at 0 8 Tocial Psychoence



et, au besoin, à consulter les départements concernés, d'autant plus que tous les cours ne se donnent pas nécessairement à chaque année. Veuillez noter que les conseillers pédagogiques ou les directeurs de programmes peuvent suggérer l'inscription à un cours sans toutefois imposer ce choix. La décision finale revient à l'étudiant(e) en ce qui concerne l'inscription à un cours en autant que l'étudiant(e) répond aux conditions d'admission pour ce cours.

Le titre de chaque cours indique s'il est donné en français ou en anglais, mais les travaux et examens peuvent toujours être rédigés dans l'une ou l'autre de ces deux langues (sauf au Département de langue et littérature françaises, où le français est de rigueur).

### 25.10.44.3 About Quebec Studies

The Quebec Studies Program is intended to stimulate interdisciplinary studies and exchanges centering on Quebec society.

With departmental support, a Major Concentration and a Minor Concentration are offered, both of which consist of a coherent series of courses providing an interdisciplinary perspective on Quebec society in a Canadian and an international context.

Except for the general course Quebec Culture and Society (QCST 300), the Tutorial (QCST 472D1/QCST 472D2) and the seminar Contemporary Issues in Quebec (QCST 440), courses included in the Major Concentration or Minor Concentration are the responsibility of the departments. To obtain a complete description of these courses and the admission requirements (where applicable), students should read the relevant sections of this publication and, if necessary, consult with the departments concerned, bearing in mind that not all courses are available in any given year. Please take note that an adviser or a director of a program can recommend registration in a course without imposing this choice. The final decision belongs to the student if the student has successfully completed the course prerequisites.

The title of each course indicates whether it is given in French or English, but term papers and exams can be written in either of these two languages (except in the French Language and Literature Department, where French is the rule).

### 25.10.44.4 Quebec Studies/Études sur le Québec (QCST) Faculty

#### Director

Jarrett Rudy (*History*)

#### Coordinator

Stéphan Gervais (*Quebec Studies*)

#### Program Committee Chair

Catherine Desbarats (*History*)

#### Program Committee

Éric Bélanger (*Political Science*)

Pascal Brissette (*French Language and Literature*)

Catherine Leclerc (*French Language and Literature*)

Amélie Quesnel-Vallee (*Sociology/Epidemiology*)

Jarrett Rudy (*History*) *Director of Quebec Studies Program*

Emine Sarigollu (*Desautels Faculty of Management*)

Christa Scholtz (*Political Science*)

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Normally, the required courses (6 credits) are completed in the following order: QCST 300 (3 credits) in U1 and QCST 440 (3 credits) in U2 or in U3. The complementary courses (12 credits) can be completed in U1, U2, or U3.

- QCST 300                   (3)            Quebec Culture and Society
- (3)            Contemporary Issues in Quebec

FREN 329	(3)	Civilisation québécoise
FREN 372	(3)	Littérature québécoise 1
FREN 382	(3)	Littérature québécoise 2
FREN 480	(3)	Littérature québécoise contemporaine

### **French as a Second Language / Français langue seconde**

FRSL 216	(3)	Découvrons Montréal en français
FRSL 326	(3)	Découvrons le Québec en français

### **History / Histoire**

HIST 202	(3)	Survey: Canada to 1867
HIST 203	(3)	Survey: Canada since 1867
HIST 303	(3)	History of Quebec
HIST 333	(3)	Natives and French
HIST 334	(3)	History of New France
HIST 353	(3)	History of Montreal
HIST 403	(3)	History of Quebec Institutions
HIST 483D1	(3)	History of Montreal
HIST 483D2	(3)	History of Montreal

### **Political Science / Science politique**

POLI 221	(3)	Government of Canada
POLI 222	(3)	Political Process and Behaviour in Canada
POLI 226	(3)	La vie politique québécoise
POLI 336	(3)	Le Québec et le Canada
POLI 371	(3)	Challenge of Canadian Federalism
POLI 372	(3)	Aboriginal Politics in Canada

POLI 4172 Tm(History of Montreal)Tj3d57.4 Tm(FSociolog /f CEthnic Relations)Tj1 0 0 1 165.864

Normally, the required courses (12 credits) are completed in the following order: QCST 300 (3 credits) in U1, QCST 440 (3 credits) in U2, and QCST 472D1/D2 (6 credits) in U3. The complementary courses (24 credits) can be completed in U1, U2, or U3.

QCST 300	(3)	Quebec Culture and Society
QCST 440	(3)	Contemporary Issues in Quebec
QCST 472D1	(3)	Tutorial/Travaux dirigés
QCST 472D2	(3)	Tutorial/Travaux dirigés

**ComplementarCoCST 472D2CoCST 472D2**

FREN 252	(3)	Littérature québécoise
FREN 315	(3)	Cinéma québécois

Website: [www.mcgill.ca/religiousstudies](http://www.mcgill.ca/religiousstudies)

**25.10.45.2 Religious Studies Programs in Arts**

Available within the Faculty of Arts are a Major Concentration and a Minor Concentration in World Religions, a Major Concentration in Scriptures and

**Assistant Professors**

Devesh Soneji; B.A.(Manit.), Ph.D.(McG.) (*South Asian Religion*)

**Faculty Lecturers**

Jim Kanaris; B.A.(C' dia), M.A., Ph.D.(McG.) (*Philosophy of Religion*)

Fabian Udoh; B.Phil.(Institut de Philosophie, Kinshasa), S.T.B.(Pontificia Universitas Gregoriana), M.Phil.(Oxf.), Ph.D.(Duke) (*New Testament Studies*)

**Numata Visiting Professor**

Dr. Dorji Wangchuk; M.A., Ph.D.(Hamburg)

**Adjunct Professors**

Paul Jennings; B.A., M.A.(Tor.), B.Th.(McG.)

Elizabeth Jones; M.Div., Th.M., B.A.(Hons)(York, UK), M.Div., Th.M.(Vancouver School of Theology), Th.D.(cand)(Univ. de Genève)

Philip Joudrey; B.A., M.Div.(Acad.), D.Min.(Andover Newton Theological School)

William Klempa; B.A.(Manit.), M.A.(Tor.), B.D., D.D.(Knox, Tor.), Ph.D.(Edin.)

T. Jinpa Langri; B.A., Dr. Div.(King's Coll., Lond.), Ph.D.(Camb.)

Lucille Marr; B.A., M.A., Ph.D.(Wat.)

Vanessa Sasson; B.A., M.A., Ph.D.(McG.)

John M. Simons; B.A.(Bishop's), S.T.B.(Trin. Coll., Tor.), Ph.D.(G'town) (PT)

John Vissers; B.A.(Tor.), M.Div.(Knox), Th.M.(Prin.), Th.D.(Knox) (PT)

Dale Woods; B.A.(Alta.), M.C.S.(Regent), M.Div.(Vancouver School of Theology), D.Min.(Luther Seminary)

**Course Lecturers (2010-2011)**

Cory Labrecque; B.Sc., M.A., Ph.D. Candidate(McG.)

Lucille Marr; B.A., M.A., Ph.D.(Wat.)

Manjit Singh; B.A., M.A.(Delhi)

Glenn Smith; B.A.(Mich.), M.A.(Ott.), D.Min.(Northern Baptist Seminary, Ill.), D.Hon.(Union des universités privées d'Haïti)

**25.10.45.5 Bachelor of Arts (B.A.) - Minor Concentration World Religions (18 credits)**

The Minor Concentration World Religions introduces students to the major world religions and to the academic study of religion.

This program may be expanded to the Major Concentration World Religions.

**Complementary Courses (18 credits)**

18 credits, no more than 12 of which may be taken at the 200-level, selected with the following specifications:

12 credits in Religious Traditions chosen from the course lists on "Judaism and Christianity" and/or "Hinduism and Buddhism."

6 credits from the course list on "Comparative Studies."

**Judaism and Christianity**

RELG 201	(3)	Religions of the Ancient Near East
RELG 202	(3)	Religion of Ancient Israel
RELG 203	(3)	Bible and Western Culture
RELG 204	(3)	Judaism, Christianity and Islam
RELG 210	(3)	Jesus of Nazareth
RELG 300	(3)	Second Temple Judaism
RELG 302	(3)	Literature of Ancient Israel I

RELG 303	(3)	Literature of Ancient Israel 2
RELG 306	(3)	Rabbinic Judaism
RELG 307	(3)	Bible, Quran & Interpretations
	(3)	New Testament Studies 1

RELG 453	(3)	Vajrayana Buddhism
RELG 454	(3)	Modern Hindu Thought
RELG 545	(3)	Ramayana: Multiple Lives
RELG 546	(3)	Indian Philosophy
RELG 547	(3)	Special Topics in Hinduism
RELG 548	(3)	Indian Buddhist Philosophy
RELG 549	(3)	Japanese Buddhist Philosophy
RELG 551	(3)	Special Topics in Buddhism
RELG 552	(3)	Advaita Vedanta
RELG 553	(3)	Religions of South India 1
RELG 554	(3)	Religions of South India 2
RELG 556	(3)	Issues in Buddhist Studies
RELG 557	(3)	Asian Ethical Systems
RELG 560	(3)	Buddhist Poetry

**Comparative Studies**

RELG 207	(3)	The Study of World Religions 1
RELG 256	(3)	Women in Judaism and Islam
RELG 270	(3)	Religious Ethics and the Environment
RELG 271	(3)	Sexual Ethics
RELG 315	(3)	Special Topics in Religion 1
RELG 316	(3)	New Religious Movements
RELG 317	(3)	Special Topics in Religion 2
RELG 318	(3)	Special Topics in Religion 3
RELG 319	(3)	Special Topics in Religion 4
RELG 341	(3)	Introduction: Philosophy of Religion
RELG 345	(3)	Religion and the Arts 1
RELG 347	(3)	Topics in Religion and the Arts
RELG 355	(3)	Religion and the Arts 2
RELG 361	(3)	Religious Behaviour
RELG 370	(3)	Religion and Human Rights
RELG 371	(3)	Ethics of Violence/Non-Violence
RELG 376	(3)	Religious Ethics
RELG 555	(3)	Honours Seminar
RELG 571	(3)	Religion and Medicine

**25.10.45.6 Bachelor of Arts (B.A.) - Minor Concentration Scriptural Languages (18 credits)**

The Minor Concentration Scriptural Languages is designed to provide students with the skills necessary to read scriptural sources in their original languages. This minor concentration is recommended to be followed in conjunction with the Major Concentration Scriptures and Interpretations.

This program may not be expanded to one of the major concentrations offered in Religious Studies.

Students will choose from one of two streams:

Stream I: Biblical Languages

Stream II: Indo-Tibetan Languages



**Stream I - Biblical Languages**

18 credits chosen from among courses on Biblical Hebrew and Biblical Greek.

**Biblical Hebrew**

\*Note: Students with advanced standing in Hebrew may take Aramaic as part of their program.

JWST 327	(3)	A Book of the Bible
JWST 328	(3)	A Book of the Bible
JWST 329	(3)	A Book of the Bible
JWST 330	(3)	A Book of the Bible
RELG 390D1*	(3)	Elementary Biblical Hebrew
RELG 390D2*	(3)	Elementary Biblical Hebrew
RELG 491	(3)	Hebrew Texts
RELG 492	(3)	Hebrew Texts

**Biblical Greek**

RELG 280D1	(3)	Elementary New Testament Greek
RELG 280D2	(3)	Elementary New Testament Greek
RELG 381	(3)	Advanced New Testament Greek
RELG 482	(3)	Exegesis of Greek New Testament
RELG 583	(3)	Hellenistic Religious Texts

**Stream II - Indo-Tibetan Languages**

Sanskrit is the language of classical Indian civilization and is recommended for students interested in gaining access to religious texts, philosophical works, academic treatises on all subjects and poetry written in classical and medieval India.

Classical Tibetan is one of the main scriptural languages of Buddhism. Many texts originally composed in Sanskrit are only extant in their Tibetan translations, and a vast body of philosophical, devotional, poetic and academic works composed in Classical Tibetan is only accessible to one who has a firm grasp of the language.

Tamil is a language spoken by over 75,000,000 people around the world. It is an ancient South Indian language that, unlike Sanskrit, has a vital, living tradition. It has a classical literary canon and yet is also part of the everyday lives of millions of people.

18 credits chosen from among courses on Sanskrit, Tibetan, and Tamil.

**Sanskrit**

RELG 257D1	(3)	Introductory Sanskrit
RELG 257D2	(3)	Introductory Sanskrit
RELG 357D1	(3)	Sanskrit 2
RELG 357D2	(3)	Sanskrit 2
RELG 457D1	(3)	Advanced Sanskrit
RELG 457D2	(3)	Advanced Sanskrit

**Tibetan**

RELG 264	(3)	Introductory Tibetan 1
RELG 265	(3)	Introductory Tibetan 2
RELG 364	(3)	Intermediate Tibetan 1
RELG 365	(3)	Intermediate Tibetan 2

RELG 464	(3)	Advanced Tibetan 1
RELG 465	(3)	Advanced Tibetan 2

**Tamil**

RELG 266	(3)	Introductory Tamil 1
RELG 267	(3)	Introductory Tamil 2

**25.10.45.7 Bachelor of Arts (B.A.) - Major Concentration World Religions (36 credits)**

The Major Concentration World Religions offers students a broad introduction to the study of the world's major religions, with the possibility for concentration in a student's specific areas of interest. Developing an understanding of methods and problems in comparative approaches to the academic study of religion will be encouraged.

**Required Course (3 credits)**

RELG 456	(3)	Theories of Religion
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**Complementary Courses (33 credits)**

33 credits, no more than 12 of which may be taken at the 200 level, selected with the following specifications:

24 credits in World Religions chosen from the course lists on "Judaism and Christianity" and/or "Hinduism and Buddhism" according to the student's area of interest.

9 credits from the course list on "Comparative Studies" according to the student's area of interest.

**Judaism and Christianity**

RELG 201	(3)	Religions of the Ancient Near East
RELG 202	(3)	Religion of Ancient Israel
RELG 203	(3)	Bible and Western Culture
RELG 204	(3)	Judaism, Christianity and Islam
RELG 210	(3)	Jesus of Nazareth
RELG 300	(3)	Second Temple Judaism
RELG 302	(3)	Literature of Ancient Israel 1
RELG 303	(3)	Literature of Ancient Israel 2
RELG 306	(3)	Rabbinic Judaism
RELG 307	(3)	Bible, Quran & Interpretations
RELG 311	(3)	New Testament Studies 1
RELG 312	(3)	New Testament Studies 2
RELG 313	(3)	Topics in Biblical Studies 1
RELG 314	(3)	Topics in Biblical Studies 2
RELG 322	(3)	The Church in History 1
RELG 323	(3)	The Church in History 2
RELG 324	(3)	Armenian Apostolic Tradition
RELG 325	(3)	Varieties Religious Experience in Christianity
RELG 326	(3)	Ancient Christian Church AD54 - AD604
RELG 333	(3)	Principles of Christian Theology 1
RELG 334	(3)	The Christian Faith
RELG 336	(3)	Contemporary Theological Issues



RELG 554	(3)	Religions of South India 2
RELG 556	(3)	Issues in Buddhist Studies
RELG 557	(3)	Asian Ethical Systems
RELG 558	(3)	Indian Tantric Traditions
RELG 560	(3)	Buddhist Poetry

**Comparative Studies**

RELG 207	(3)	The Study of World Religions 1
RELG 256	(3)	Women in Judaism and Islam Religious Ethics and the En

(c) Hindu and Buddhist Scriptures and the Histories of Their Interpretations

No more than 12 credits may be taken at the 200-level.

**(a) Jewish Scriptures and the Histor**

RELG 407	(3)	The Writings
RELG 408	(3)	The Prophets
RELG 411	(3)	New Testament Exegesis
RELG 482	(3)	Exegesis of Greek New Testament
RELG 583	(3)	Hellenistic Religious Texts

**(c) Hindu and Buddhist Scriptures and the Histories of Their Interpretations**

RELG 252	(3)	Hinduism and Buddhism
RELG 253	(3)	Religions of East Asia
RELG 254	(3)	Introduction to Sikhism
RELG 257D1	(3)	Introductory Sanskrit
RELG 257D2	(3)	Introductory Sanskrit
RELG 264	(3)	Introductory Tibetan 1
RELG 265	(3)	Introductory Tibetan 2
RELG 266	(3)	Introductory Tamil 1
RELG 267	(3)	Introductory Tamil 2
RELG 337	(3)	Themes in Buddhist Studies
RELG 342	(3)	Theravada Buddhist Literature
RELG 344	(3)	Mahayana Buddhism

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RELG 553	(3)	Religions of South India 1
RELG 554	(3)	Religions of South India 2
RELG 560	(3)	Buddhist Poetry

**25.10.45.9 Bachelor of Arts (B.A.) - Honours Religious Studies - Asian Religions (60 credits)**

The Honours Religious Studies offers a degree of analysis and concentration beyond that of the Major program through coursework, intensive research and discussion with peer groups.

There are no prerequisites for entry to the program. Students must, however, maintain a program GPA and a CGPA of 3.00 (or 3.50 for First Class Honours).

While gaining general knowledge of the study of religion, students also develop more concentrated expertise in either the Western Religions or Asian Religions option.

The requirements set out below pertain to the Asian Religions option. A anIslamry(3)REL1 254ctratis:n.

REL357D154	(3)	
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RELG 465 (3) Advanced Tibetan 2

**Religion and Culture**

9 credits selected from:

RELG 256	(3)	Women in Judaism and Islam
RELG 270	(3)	Religious Ethics and the Environment
RELG 271	(3)	Sexual Ethics
RELG 338	(3)	Women and the Christian Tradition
RELG 339	(3)	Gender & Sexuality in Buddhism
RELG 340	(3)	Religion and the Sciences





**25.1045.10 Bachelor of Arts (B.A.) - Honours Religious Studies - Western Religions (60 credits)**

The Honours Religious Studies offers a degree of analysis and concentration beyond that of the Major program through coursework, intensive research and discussion with peer groups.

There are no prerequisites for entry to the program. Students must, however, maintain a program GPA and a CGPA of 3.00 (or 3.50 for First Class Honours).

While gaining general knowledge of the study of religion, students also develop more concentrated expertise in either the Western Religions or Asian Religions option.

The requirements set out below pertain to the Western Religions option.

**Required Courses**

RELG 204	(3)	Judaism, Christianity and Islam
RELG 456	(3)	Theories of Religion
RELG 555	(3)	Honours Seminar

**Complementary Courses (51 credits)**

51 credits selected with the following specifications:

3 credits introductory courses on Asian Religious Traditions

6 credits of Scriptural Languages related to Western religious traditions (selected in consultation with the program adviser)

9 credits of courses on Religion and Culture

12 credits from the list of Approved Courses from Other Departments, of which at least 6 credits must be related to Asian Religions

21 credits chosen from courses on Western Religions, of which 3 credits must be a 500-level research seminar

**Introductory - Asian Religious Traditions**

3 credits from:

RELG 252	(3)	Hinduism and Buddhism
RELG 253	(3)	Religions of East Asia

**Western Religions - Scriptural Languages**

6 credits of scriptural languages (Biblical Greek or Biblical Hebrew) chosen in consultation with the program adviser.

JWST 327	(3)	A Book of the Bible
JWST 328	(3)	A Book of the Bible
JWST 329	(3)	A Book of the Bible
JWST 330	(3)	A Book of the Bible
RELG 280D1	(3)	Elementary New Testament Greek
RELG 280D2	(3)	Elementary New Testament Greek
RELG 381	(3)	Advanced New Testament Greek
RELG 390D1	(3)	Elementary Biblical Hebrew
RELG 390D2	(3)	Elementary Biblical Hebrew
RELG 482	(3)	Exegesis of Greek New Testament
RELG 491	(3)	Hebrew Texts
RELG 492	(3)	Hebrew Texts
RELG 583	(3)	Hellenistic Religious Texts

**Religion and Culture**

9 credits selected from:

RELG 256	(3)	Women in Judaism and Islam
RELG 270	(3)	Religious Ethics and the Environment

JWST 510	(3)	Jewish Bible Interpretation 1
JWST 511	(3)	Jewish Bible Interpretation 2
JWST 535	(3)	Exegetic Midrash
JWST 543	(3)	Maimonides as Parshan
JWST 550	(3)	The Bible in Hebrew Literature
JWST 556	(3)	Modern Parshanut 1
JWST 573	(3)	History of Hebrew Bible Text

### Western Religions

21 credits chosen from the list below, 3 credits of which must be a 500-level research seminar.

JWST 510	(3)	Jewish Bible Interpretation 1
RELG 201	(3)	Religions of the Ancient Near East
RELG 202	(3)	Religion of Ancient Israel
RELG 203	(3)	Bible and Western Culture
RELG 204	(3)	Judaism, Christianity and Islam
RELG 210	(3)	Jesus of Nazareth
RELG 300	(3)	Second Temple Judaism
RELG 301	(3)	Jewish Thought 200 B.C.E - 200 C.E
RELG 302	(3)	Literature of Ancient Israel 1
RELG 303	(3)	Literature of Ancient Israel 2
RELG 306	(3)	Rabbinic Judaism
RELG 307	(3)	Bible, Quran & Interpretations
RELG 308	(3)	Ancient Bible Translations
RELG 311	(3)	New Testament Studies 1
RELG 312	(3)	New Testament Studies 2
RELG 313	(3)	Topics in Biblical Studies 1
RELG 314	(3)	Topics in Biblical Studies 2
RELG 322	(3)	The Church in History 1
RELG 323	(3)	The Church in History 2
RELG 326	(3)	Ancient Christian Church AD54 - AD604
RELG 334	(3)	The Christian Faith
RELG 336	(3)	Contemporary Theological Issues
RELG 379	(3)	Eastern Orthodox Christianity
RELG 381	(3)	Advanced New Testament Greek
RELG 399	(3)	Christian Spirituality
RELG 407	(3)	The Writings
RELG 408	(3)	The Prophets
RELG 423	(3)	Reformation Thought
RELG 438	(3)	Topics in Jewish Theology
RELG 482	(3)	Exegesis of Greek New Testament
RELG 491	(3)	Hebrew Texts
RELG 492	(3)	Hebrew Texts
RELG 502	(3)	Greco-Roman Judaism





The following approv

**Sources of Western Religious Traditions**

RELG 201	(3)	Religions of the Ancient Near East
RELG 202	(3)	Religion of Ancient Israel
RELG 302	(3)	Literature of Ancient Israel 1
RELG 303	(3)	Literature of Ancient Israel 2
RELG 311	(3)	New Testament Studies 1
RELG 312	(3)	New Testament Studies 2

**History and Theology of the Christian Tradition**

RELG 322	(3)	The Church in History 1
RELG 323	(3)	The Church in History 2
RELG 326	(3)	Ancient Christian Church AD54 - AD604
RELG 334	(3)	The Christian Faith
RELG 532	(3)	History of Christian Thought 1
RELG 533	(3)	History of Christian Thought 2

**Religion and Culture**

6 credits from:

RELG 256	(3)	Women in Judaism and Islam
RELG 271	(3)	Sexual Ethics
RELG 338	(3)	Women and the Christian Tradition
RELG 340	(3)	Religion and the Sciences
RELG 341	(3)	Introduction: Philosophy of Religion
RELG 347	(3)	Topics in Religion and the Arts
RELG 361	(3)	Religious Behaviour
RELG 370	(3)	Religion and Human Rights
RELG 371	(3)	Ethics of Violence/Non-Violence
RELG 375	(3)	Religion and Society
RELG 376	(3)	Religious Ethics
RELG 377	(3)	Religious Controversies

**Religious Studies (RELG)**

15 credits, selected in consultation with the program adviser, from Religious Studies (RELG) courses at the 300-level or above, of which 9 credits must be at the 400-level or above.

A maximum of 6 credits from other departments may be used toward this requirement (see list below).

**Approved Related Courses in Other Departments**

The list below is NOT comprehensive. Students may take approved related courses in other departments of the Faculty of Arts, such as Anthropology, Art History, Classics, English, History, Italian Studies, Philosophy, and Sociology selected in consultation with the program adviser.

EAST 354	(3)	Taoist and Buddhist Apocalypses
EAST 551	(3)	Technologies of Self in Early China
ISLA 410	(3)	History: Middle-East 1798-1918
ISLA 411	(3)	History: Middle-East 1918-1945



ISLA 505	(3)	Islam: Origin and Early Development
ISLA 510D1	(3)	History: Islamic Civilization - Classical
ISLA 510D2	(3)	History: Islamic Civilization - Classical
ISLA 511D1	(3)	History: Islamic Civilization - Mediaeval Era
ISLA 511D2	(3)	History: Islamic Civilization - Mediaeval Era
ISLA 531D1	(3)	Survey Development of Islamic Thought
ISLA 531D2	(3)	Survey Development of Islamic Thought
JWST 211	(3)	Jewish Studies 1: Biblical Period
JWST 252	(3)	Interdisciplinary Lectures
JWST 316	(3)	Social and Ethical Issues Jewish Law 1
JWST 359	(3)	Topics in Jewish Philosophy 2

The following approved courses offered by Jewish Studies require a reading knowledge of Hebrew:

JWST 330	(3)	A Book of the Bible
JWST 345	(3)	Introduction to Rabbinic Literature
JWST 510	(3)	Jewish Bible Interpretation 1
JWST 511	(3)	Jewish Bible Interpretation 2
JWST 535	(3)	Exegetic Midrash
JWST 543	(3)	Maimonides as Parshan
JWST 550	(3)	The Bible in Hebrew Literature
JWST 556	(3)	Modern Parshanut 1
JWST 573	(3)	History of Hebrew Bible Text

## 25.10.46 Russian and Slavic Studies (RUSS)

### 25.10.46.1 Location

688 Sherbrooke Street West, Suite 425  
Montreal, Quebec H3A 3R1

Telephone: 514-398-3639

Fax: 514-398-1748

Email: [russian.slavicstudies@mcgill.ca](mailto:russian.slavicstudies@mcgill.ca)

Website: [www.mcgill.ca/russian](http://www.mcgill.ca/russian)

### 25.10.46.2 About Russian and Slavic Studies

Many opportunities are open to students with qualifications in Russian and other Slavic studies. Students may be interested in the organization of human society, comparative

### **25.10.46.3 Russian and Slavic Studies (RUSS) Faculty**

#### **Chair**

Laura Beraha

#### **Associate Professors**

Laura Beraha; B.A., M.A., Ph.D.(McG.)

Lyudmila Parts; M.A., Ph.D.(Col.)

### **25.10.46.4 Bachelor of Arts (B.A.) - Minor Concentration Russian (18 credits)**

The Minor Concentration Russian has four streams and students choose one of them based on their academic interests and proficiency in the language.

- Russian Language and Literature
- Russian Language and Culture
- Advanced Russian Literature
- Advanced Russian Language

This program may be expanded to the Major Concentration Russian.

Students who wish to follow the Advanced Russian Literature or Advanced Russian Language stream must receive Departmental approval; they are designed primarily for students also intending to complete a Major Concentration Russian.

Enrolment in courses above

**Russian Language and Culture Stream**

RUSS 218	(3)	Russian Literature in Revolution
RUSS 219	(3)	Russian Literature in Recovery
RUSS 223	(3)	Russian 19th Century: Literary Giants 1
RUSS 224	(3)	From War to Revolution

**Advanced Russian Literature Stream**

By arrangement with the Department and subject to University approval, transfer credits will be accepted from Department-approved exchange/immersion programs.

RUSS 327	(3)	Outlines 19th Century Russian Literature: Romantic Period
R	(3)	Outlines 19th Century Russian Literature: Russian Realism

**25.10.46.5 Bachelor of Arts (B.A.) - Minor Concentration Russian Culture (18 credits)**

The Minor Concentration Russian Culture is designed primarily as an adjunct to area studies and/or programs in the humanities or social sciences. As there are no Russian language requirements, this program may not be expanded to the Major Concentration Russian.

There are no prerequisites for Russian (RUSS) courses in the program. For pre/corequisites and availability of Anthropology (ANTH), Economics (ECON), History (HIST), Jewish Studies (JWST), Political Science (POLI) and Sociology (SOVI) courses, students should consult the offering department and Class Schedule.

**Complementary Courses (18 credits)**

18 credits selected with the following specifications:

12 credits from Group A

6 credits from Group B

**Group A**

12 credits from:

RUSS 217	(3)	Russia's Eternal Questions
RUSS 218	(3)	Russian Literature in Revolution
RUSS 219	(3)	Russian Literature in Recovery
RUSS 223	(3)	Russian 19th Century: Literary Giants I
RUSS 224	(3)	From War to Revolution
RUSS 510	(3)	High Stalinist Culture
RUSS 585	(3)	Woman in Russian Culture

**Group B**

6 credits from:

ANTH 303	(3)	Ethnographies of Post-socialism
ECON 331	(3)	Economic Development: Russia and USSR
ECON 340	(3)	Ex-Socialist Economies
HIST 216	(3)	History of Russia to 1801
HIST 226	(3)	Eastern Europe in 20th Century
HIST 236	(3)	Russia from 1801 to 1991
HIST 306	(3)	East Central Europe Since 1944
HIST 312	(3)	Hist of Consumption in Canada
HIST 313	(3)	Eastern Europe: 1740-1914
HIST 316	(3)	Russia: Revolutions 1905 and 1917
HIST 326	(3)	Russia from 1905 to Present
HIST 329	(3)	Eastern Europe: 4th Century - 1453
HIST 406	(3)	Petrine and Catherinian Russia
HIST 446	(3)	Russian Thought to 1825
HIST 456	(3)	Russian Intellectual History 1825-1917
HIST 476D1	(3)	Seminar: Topics in Russian History
HIST 476D2	(3)	Seminar: Topics in Russian History
JWST 303	(3)	The Soviet Jewish Experience
POLI 329	(3)	Russian and Soviet Politics
POLI 331	(3)	Politics in East Central Europe

POLI 332	(3)	Politics of Former Soviet Republics
POLI 419	(3)	Transitions from Communism
SOCI 455	(3)	Post-Socialist Societies

### **25.10.46.6 Bachelor of Arts (B.A.) - Major Concentration Russian (36 credits)**

Enrolment in courses above the 200-level is by permission of the Department only.

By arrangement with the Department and subject to University approval, transfer credits will be accepted from Department-approved exchange/immersion programs.

#### **Required Courses (18 credits)**

The required courses are designed to give students a basic working knowledge of Russian. Students who can demonstrate to the Department that they have acquired the equivalent competence elsewhere will replace these credits with courses chosen from the complementary course lists.

RUSS 210	(3)	Elementary Russian Language 1
RUSS 211	(3)	Elementary Russian Language 2
RUSS 310	(3)	Intermediate Russian Language 1
RUSS 311	(3)	Intermediate Russian Language 2
RUSS 400	(3)	Advanced Russian Language 1
RUSS 401	(3)	Advanced Russian Language 2

#### **Complementary Courses (18 credits)**

18 credits selected from two lists.

12 credits from:

RUSS 217	(3)	Russia's Eternal Questions
RUSS 218	(3)	Russian Literature in Revolution
RUSS 219	(3)	Russian Literature in Recovery
RUSS 223	(3)	Russian 19th Century: Literary Giants 1
RUSS 224	(3)	From War to Revolution
RUSS 300	(3)	Russian for Heritage Speakers 1
RUSS 301	(3)	Russian for Heritage Speakers 2
RUSS 327	(3)	Outlines 19th Century Russian Literature: Romantic Period
RUSS 328	(3)	Outlines 19th Century Russian Literature: Russian Realism
RUSS 330	(3)	Introduction to Soviet Russian Literature before WWII
RUSS 331	(3)	Introduction to Soviet Russian Literature after WWII

6 credits from:

RUSS 385	(3)	Russian Drama
RUSS 390	(3)	Special Topics in Russian
RUSS 450	(3)	Reading the 20th Century
RUSS 455	(3)	History of Modern Russian Language
RUSS 458	(3)	Development Russian Novel before Turgenev
RUSS 460	(3)	Russian Novel 1860-1900 1
RUSS 461	(3)	Russian Novel 1860-1900 2

RUSS 465	(3)	Russian Modernism 1
RUSS 466	(3)	Russian Modernism 2
RUSS 468	(3)	The Age of Pushkin
RUSS 470*	(3)	Individual Reading Course
RUSS 471*	(3)	Independent Research
RUSS 475	(3)	Special Topics in Russ Culture
RUSS 500	(3)	Special Topics
RUSS 510	(3)	High Stalinist Culture
RUSS 585	(3)	Woman in Russian Culture

\*Note: Students must submit project proposals to their Departmental Adviser by March 15th or November 15th of the preceding term for individual reading and independent research courses.

### **25.10.46.7 Bachelor of Arts (B.A.) - Honours Russian (60 credits)**

The Honours Russian program is for students intending to pursue graduate studies or advanced careers in the field. Students must complete 60 credits in the Program, and according to Faculty regulations, Honours students must maintain a minimum CGPA of 3.00 and maintain a minimum program GPA of 3.00. By arrangement with the Department and subject to University approval, transfer credits will be accepted from Department-approved exchange/immersion programs.

Students who have acquired language competency elsewhere will replace lower-level courses with upper-level courses. A total of 9 credits may be taken in courses offered by other departments in the Faculty; these are listed at the end of this section.

For admission into the Honours Program and approval of all course selections, students must regularly consult with an academic adviser in the Department. Honours students, according to Faculty regulations, also must complete at least a Minor Concentration (18 credits) in another academic unit.

#### **U1 Required Courses (12 credits)**

RUSS 215	(6)	Elementary Russian Language Intensive 1
RUSS 316	(6)	Intermediate Russian Language Intensive 2

#### **U1 Complementary Courses (6 credits)**

6 credits from:

RUSS 217	(3)	Russia's Eternal Questions
RUSS 218	(3)	Russian Literature in Revolution
RUSS 219	(3)	Russian Literature in Recovery
RUSS 223	(3)	Russian 19th Century: Literary Giants 1
RUSS 224	(3)	From War to Revolution
RUSS 300	(3)	Russian for Heritage Speakers 1
RUSS 301	(3)	Russian for Heritage Speakers 2

#### **U2 Required Courses (24 credits)**

RUSS 327	(3)	Outlines 19th Century Russian Literature: Romantic Period
RUSS 328	(3)	Outlines 19th Century Russian Literature: Russian Realism
RUSS 330	(3)	Introduction to Soviet Russian Literature before WWII
RUSS 331	(3)	Introduction to Soviet Russian Literature after WWII
RUSS 415	(6)	Advanced Russian Language Intensive 1
RUSS 416	(6)	Advanced Russian Language Intensive 2

#### **U3 Required Courses (12 credits)**

RUSS 452	(3)	Advanced Russian Language and Syntax 1
RUSS 453	(3)	Advanced Russian Language and Syntax 2
RUSS 490*	(3)	Honours Seminar 01
RUSS 491*	(3)	Honours Seminar 02

\*Note: Students must submit project proposals to their Departmental Adviser by March 15th or November 15th of the preceding term.

### **Additional Complementary Courses (6 credits)**

6 credits selected from courses offered by Russian Studies and other departments.

RUSS 385	(3)	Russian Drama
RUSS 390	(3)	Special Topics in Russian
RUSS 450	(3)	Reading the 20th Century
RUSS 455	(3)	History of Modern Russian Language
RUSS 458	(3)	Development Russian Novel before Turgenev
RUSS 459	(3)	Russian Novel Pushkin-Gogol
RUSS 460	(3)	Russian Novel 1860-1900 1
RUSS 461	(3)	Russian Novel 1860-1900 2
RUSS 465	(3)	Russian Modernism 1
RUSS 468	(3)	The Age of Pushkin
RUSS 470*	(3)	Individual Reading Course
RUSS 471*	(3)	Independent Research
RUSS 475	(3)	Special Topics in Russ Culture
RUSS 500	(3)	Special Topics
RUSS 510	(3)	High Stalinist Culture
RUSS 585	(3)	Woman in Russian Culture

\*Note: Students must submit project proposals to their Departmental Adviser by March 15th or November 15th of the preceding term for individual reading and independent research courses.

For pre/corequisites and availability of Anthropology (ANTH), Economics (ECON), History (HIST), Jewish Studies (JWST), Political Science (POLI) and Sociology (SOCL) courses, students should consult the offering department and Class Schedule.

ANTH 303	(3)	Ethnographies of Post-socialism
ECON 331	(3)	Economic Development: Russia and USSR
ECON 340	(3)	Ex-Socialist Economies
HIST 216	(3)	History of Russia to 1801
HIST 226	(3)	Eastern Europe in 20th Century
HIST 236	(3)	Russia from 1801 to 1991
HIST 306	(3)	East Central Europe Since 1944
		Hist of Consumption in Canada

HIST 476D1	(3)	Seminar: Topics in Russian History
HIST 476D2	(3)	Seminar: Topics in Russian History
JWST 303	(3)	The Soviet Jewish Experience
POLI 329	(3)	Russian and Soviet Politics
POLI 331	(3)	Politics in East Central Europe
POLI 332	(3)	Politics of Former Soviet Republics
POLI 419	(3)	Transitions from Communism
SOCI 455	(3)	Post-Socialist Societies

**25.10.46.8 Bachelor of Arts (B.A.) - Joint Honours Component Russian (36 credits)**

Students wishing to study at the Honours level in two disciplines can combine Joint Honours Program components in any two Arts disciplines. For a list of available Joint Honours programs, see "Overview of Programs Offered" and "Joint Honours Programs."

Prior to registering for each Joint Honours Component, students should consult an adviser in each department for approval of their course selection and their interdisciplinary research project (if applicable). Twelve credits in Russian and twelve credits in the cooperating department are normally taken each year.

According to Faculty regulations, Joint Honours students must maintain a minimum CGPA of 3.00 and maintain a minimum program GPA of 3.00. Departments may require a higher program GPA. Joint Honours students must meet the requirements of both components of their program.

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**25.104723 Chemistry**

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CHEM 180	(3)	World of Chemistry: Environment
CHEM 181	(3)	World of Chemistry: Food
CHEM 182	(3)	World of Chemistry: Technology
CHEM 183	(3)	World of Chemistry: Drugs

**25.104724 Computer Science**

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COMP 102	(3)	Computers and Computing
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**25.104725 Earth and Planetary Sciences**

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EPSC 180	(3)	The Terrestrial Planets
EPSC 201	(3)	Understanding Planet Earth
EPSC 210	(3)	Introductory Mineralogy
EPSC 233	(3)	Earth and Life History
EPSC 243	(3)	Environmental Geology
EPSC 334	(3)	Invertebrate Paleontology

**25.104726 Geography**

Earth and Planetary Science

Geography

Mathematics and Statistics

Microbiology and Immunology

Pathology

Physics

Physiology

Psychology

This Minor Concentration is administered by the Department of Biology. For more information contact the Biology adviser, Nancy Nelson, in Room

BIOC 312 (3) Biochemistry of Macromolecules

The courses below are 200-level prerequisites for courses in the above lists.

BIOL 201 (3) Cell Biology and Metabolism

CHEM 222 (4) Introductory Organic Chemistry 2

### **Biology**

Students interested in Biology can choose between two streams. One is oriented toward cell and molecular biology and leads to upper-level courses in developmental biology, human genetics, molecular biology, or allied fields. The other is oriented more toward organismal biology and leads to upper level courses in biodiversity, ecology, sociobiology, neurobiology, behaviour, or conservation biology. See Ms. Nancy Nelson in the Biology Department, Room W4/13, Stewart Biology Building, to arrange a session for counsel on choice of courses above the 200-level.

Prerequisites which cannot be counted towards the Minor Concentration: BIOL 111 and BIOL 112 plus CHEM 120 (or CHEM 121) or their CEGEP equivalents.

### **Biology - Cell and Molecular Stream**

Note: BIOL 111 and BIOL 112 plus CHEM 110, CHEM 120 and CHEM 212 or their CEGEP equivalents are prerequisites for these courses.

BIOL 200 (3) Molecular Biology

BIOL 201 (3) Cell Biology and Metabolism

BIOL 202 (3) Basic Genetics

Chemistry courses, with the exception of the World of Chemistry series, require CHEM 110, 120 and CHEM 212 or their CEGEP equivalents. CHEM 110 and CHEM 120 may not be counted toward the program.

The 100-level World of Chemistry series can enrich a concentration in this area but the obligation to take 12 credits at the 200-level or higher remains in force.

The department also strongly encourages students forming a concentration in chemistry to take one or more courses involving a laboratory because the science of chemistry is rooted in laboratory experience.

Only one of the World of Chemistry courses below may be counted toward the program.

CHEM 180	(3)	World of Chemistry: Environment
CHEM 181	(3)	World of Chemistry: Food
CHEM 182	(3)	World of Chemistry: Technology
CHEM 183	(3)	World of Chemistry: Drugs

Students select 200- and 300-level courses from the lists below. A minimum of 12 credits at the 200-level or higher is required.

CHEM 212	(4)	Introductory Organic Chemistry 1
CHEM 222	(4)	Introductory Organic Chemistry 2
CHEM 281	(3)	Inorganic Chemistry 1
CHEM 302	(3)	Introductory Organic Chemistry 3
CHEM 381	(3)	Inorganic Chemistry 2

One of:

CHEM 203	(3)	Survey of Physical Chemistry
CHEM 204	(3)	Physical Chemistry/Biological Sciences 1

One of:

CHEM 307	(3)	Analytical Chemistry of Pollutants
CHEM 334	(3)	Advanced Materials

Both of:

CHEM 287	(2)	Introductory Analytical Chemistry
CHEM 297	(1)	Introductory Analytical Chemistry Laboratory

### Computer Science

Students in any Computer Science Minor Concentration, Major Concentration or Honours program cannot choose this disciplinary area.

Prerequisites which cannot be counted towards the Minor Concentration: MATH 139 or MATH 140, MATH 141, and MATH 133 and COMP 102 or their CEGEP equivalents.

Students select from:

COMP 202	(3)	Introduction to Computing 1
COMP 203	(3)	Introduction to Computing 2
COMP 250	(3)	Introduction to Computer Science
COMP 251	(3)	Data Structures and Algorithms

Plus any of the courses below to total 15 credits of Computer Science.

COMP 273	(3)	Introduction to Computer Systems
COMP 302	(3)	Programming Languages and Paradigms

### **Earth and Planetary Sciences**

A combination of Earth and Planetary Sciences EPSC 210, EPSC 212, and one or more of EPSC 180, EPSC 201, and EPSC 181 provide a grounding in these inter-related disciplines in preparation for more specialized courses. Students should verify all prerequisites as some courses may have additional Science prerequisites, for example MATH 222 is a prerequisite for EPSC 320.

\*Note: EPSC 182 and ANAT 182 are double-prefix courses and identical in content.

Students select 15 credits from the list below.

ANAT 182*	(3)	Astrobiology
EPSC 180	(3)	The Terrestrial Planets
EPSC 181	(3)	Environmental Geology
EPSC 182*	(3)	Astrobiology
EPSC 201	(3)	Understanding Planet Earth
EPSC 203	(3)	Structural Geology
EPSC 210	(3)	Introductory Mineralogy
EPSC 212	(3)	Introductory Petrology
EPSC 220	(3)	Principles of Geochemistry
EPSC 231	(3)	Field School 1

MATH 133	(3)	Linear Algebra and Geometry
MATH 203	(3)	Principles of Statistics 1
MATH 204	(3)	Principles of Statistics 2
MATH 222	(3)	Calculus 3
MATH 338	(3)	History and Philosophy of Mathematics

### **Microbiology and Immunology**

Prerequisites which cannot be counted towards the Minor Concentration: BIOL 111 and BIOL 112, CHEM 120 (CHEM 121) or their CEGEP equivalents.

Students select 15 credits from the following MIMM courses and their associated prerequisites for this area:

MIMM 211	(3)	Introductory Microbiology
MIMM 314	(3)	Immunology
MIMM 323	(3)	Microbial Physiology
MIMM 324	(3)	Fundamental Virology

Associated 200-level prerequisites for the above MIMM courses:

BIOL 200	(3)	Molecular Biology
CHEM 212	(4)	Introductory Organic Chemistry 1

One of:

BIOC 212	(3)	Molecular Mechanisms of Cell Function
BIOL 201	(3)	Cell Biology and Metabolism

### **Pathology**

Prerequisites which cannot be counted towards the Minor Concentration: BIOL 111 and BIOL 112 plus CHEM 120 (or CHEM 121) or their CEGEP equivalents.

15 credits including PATH 300 and its associated pre- and corequisites from the list below comprise a disciplinary area well-suited to students with an interest in medicine.

BIOC 212*	(3)	Molecular Mechanisms of Cell Function
BIOL 200	(3)	Molecular Biology
BIOL 201*	(3)	Cell Biology and Metabolism
		Introductory Organic Chemistry 1



PSYC 213	(3)	Cognition
PSYC 215	(3)	Social Psychology

Plus Psychology courses at the 300-level or higher (excluding PSYC 305) to complete 15 credits for the area.

## **25.10.48 Sexual Diversity Studies**

### **25.10.48.1 Location**

Institute for Gender, Sexuality



COMS 310

(3)

Media and Feminist Studies

EAST 350

(3)

Gender and Sexuality in Chinese Literature

(3)

History of Sexuality in Japan

**25.10.49.3 Social Studies of Medicine (SSMD) Faculty**

**Chair**

Alberto Cambrosio

**Emeritus Pr**

HIST 449	(3)	Medicine in the Ancient World
HIST 452	(3)	Medicine in Europe 1500-1700
HIST 457	(3)	Topics in Medical History
HIST 458	(3)	Modern Medicine: Seminar
HIST 459	(3)	Modern Medicine: Research
HIST 466	(3)	Seminar: Medieval Medicine
HIST 496	(3)	Research: Medieval Medicine
WMST 513	(3)	Gender, Race and Science

### **Anthropology of Medicine**

6 credits from:

ANTH 227	(3)	Medical Anthropology
ANTH 302	(3)	New Horizons in Medical Anthropology
ANTH 314	(3)	Psychological Anthropology 01
ANTH 407	(3)	Anthropology of the Body
ANTH 438	(3)	Topics in Medical Anthropology
ANTH 439	(3)	Theories of Development
ANTH 443	(3)	Medical Anthropological Theory
ANTH 480	(3)	Special Topic 5
ANTH 481	(3)	Special Topic 6
ANTH 482	(3)	Special Topic 7
ANTH 483	(3)	Special Topic 8
ANTH 484	(3)	Special Topic 9
ANTH 485	(3)	Special Topic 10

### **Sociology of Medicine**

6 credits from:

SOCI 225	(3)	Medicine and Health in Modern Society
SOCI 309	(3)	Health and Illness
SOCI 310	(3)	Sociology of Mental Disorder
SOCI 338	(3)	Introduction to Biomedical Knowledge
SOCI 365	(3)	Health and Development
SOCI 390	(3)	Gender and Health
SOCI 425	(3)	Sociology of the Body
SOCI 508	(3)	Medical Sociology and Social Psychiatry
SOCI 515	(3)	Medicine and Society
SOCI 525	(3)	Health Care Systems in Comparative Perspective
SOCI 538	(3)	Selected Topics in Sociology of Biomedical Knowledge

## 25.10.50 Social Work (SWRK)

### 25.10.50.1 Location

School of Social Work  
Wilson Hall  
3506 University Street  
Montreal, Quebec H3A 2A7

Telephone: 514-398-7070

Fax: 514-398-4760

Email: [undergraduate.socialwork@mcgill.ca](mailto:undergraduate.socialwork@mcgill.ca)

Website: [www.mcgill.ca/socialwork](http://www.mcgill.ca/socialwork)

### 25.10.50.2 About Social Work

The School of Social Work offers an undergraduate program leading to a Bachelor of Social Work (B.S.W.) degree. The B.S.W. program:

1. prepares students for generalist social work practice in a range of health and social service positions (the B.S.W. represents the point of admission into the *Ordre des Travailleurs Sociaux et des Thérapeutes Conjugaux et Familiaux du Québec* (OTSTCFQ) and the Canadian Association of Social Workers);
2. prepares students for entry into specialized professional studies at the graduate level.

A 90-credit program is offered to students entering from CEGEP or equivalent, students who transfer from within McGill or other universities, and mature students. A 60-credit program is offered to students who already have an undergraduate degree.



**Note:** Quebec law requires that candidates seeking admission to the OTSTCFQ possess a working knowledge of the French language, i.e., be able to communicate verbally and in writing in that language. For further information, refer to *University Regulations and Information > Language Requirements for Professions*.

Applications are encouraged from persons of diverse backgrounds, including members of minority groups and persons of low income.

The objectives of the B.S.W. program are to provide an academic environment within which students will develop:

- integrated social work knowledge pertaining to its history, its role in society, and the needs of diverse populations.

Residents of Canada who are 23 years of age or older, and who lack the academic background normally required for admission, may apply for entrance as mature students. To be considered for the B.S.W. program, applicants must have had significant paid or volunteer community work experience in related fields, and must also have completed, within the last 3 years, a minimum of two appropriate courses at the college or university level, achieving a grade of B or better in each.

Enrolment in the B.S.W. program is limited. Candidates whether entering or transferring are expected to have better than average grades. Within the group of applicants who meet the academic requirements, preference is given to those who have had social work-related experience, paid or volunteer, and also to those who demonstrate personal suitability for the social work profession.

More details on entrance requirements can be found on the web at [www.mcgill.ca/applying](http://www.mcgill.ca/applying).

#### **25.10.50.4 Bachelor of Social Work (B.S.W.) – Two-Year Program – Admission**

##### **Admission Requirements**

The minimum requirements for admission to the two-year Bachelor of Social Work program are as follows:

1. Bachelor's degree (DCS/DEC from CEGEP plus a minimum of a 90-credit, or three-year university degree; or, a high school diploma plus a minimum of a 120-credit or four-year university degree).
2. Completion of at least 9 credits (3 courses) in social sciences (including Anthropology, Economics, Political Science, Psychology, Sociology, or Human Geography).
3. 3 credits (one course) in Human Development and 3 credits (one course) in Research Methods at university level.
4. 3 credits (one course) in Statistics at university or CEGEP level.
5. Minimum CGPA of 3.0 out of 4.0 (or equivalent).
6. Paid and/or voluntary work experience.

While not a prerequisite for admission, working knowledge of the French language is important not only for candidates who intend to seek admission to the OTSTCFQ, but also for those who will be completing a field placement in the province of Quebec.

More details on entrance requirements are available on the web at [www.mcgill.ca/applying](http://www.mcgill.ca/applying).

#### **25.10.50.5 Social Work (SWRK) Faculty**

##### **Director**

Wendy Thomson

##### **Emeritus Professor**

David E. Woodsworth; B.A., Dipl.S.W.(Tor.), M.A.(Mich.), Ph.D.(Brandeis)

##### **Professors**

Linda Davies; B.S.W., M.S.W.(McG.), Ph.D.(N. Lond. Poly.)

Peter Leonard; B.Sc., M.Sc., Dip. Mental Health(Lond.)

Wendy Thomson; B.S.W., M.S.W.(McG.), Ph.D.(Brist.)

James Torczyner; B.H.L.(Yeshiva), M.S.W., D.S.W.(Calif.)

Nico Trocmé; B.A., M.S.W., Ph.D.(Tor.) (*The Philip Fisher Chair in Social Work*)

##### **Associate Professors**

Shari Brotman; B.S.W., M.S.W.(McG.), Ph.D.(Tor.)

Myriam Denov; B.A.(Tor.), B.S.W.(McG.), M.A.(Ott.), Ph.D.(Camb.)

Sydney Duder; B.Sc., M.S.W., Dip.Adv.Soc.Wk.Pr., Ph.D.(McG.)

Amanda Grenier; B.S.W.(Windsor), M.S.W., Ph.D.(McG.)

Estelle Hopmeyer; B.A., M.S.W.(McG.)

Julia Krane; B.A.(Ott.), B.S.W.(McG.), M.S.W., Ph.D.(Tor.)

Lucyna Lach; B.A., M.S.W., Ph.D.(Tor.)

##### **Assistant Professors**

Sharon Bond; B.A.(Sir G. Wms.), B.Sc.(Montr.), M.S.W., Ph.D.(McG.)

### **Assistant Professors**

Delphine Collin-Vézina; B.Sc., Ph.D.(Montr.)

Isabelle Dumont; B.A., M.A., PhD.(Laval)

Jill Hanley; B.A., B.S.W.(McG.), M.A.(Tufts), Ph.D.(Montr.)

Nicole Ives; B.A.(Col.), M.S.W., Ph.D.(Penn.)

David Rothwell; B.A.(Pitzer), M.S.W.(Tulane), Ph.D.(Hawaii)

Tamara Sussman; B.A., B.S.W., M.S.W.(McG.), Ph.D.(Tor.)

### **Professor of Practice in Public Policy and Global Health Diplomacy**

Nick Drager; B.Sc., M.D.,C.M.(McG.), Ph.D.(Geneva)

### **Field Education Program**

Francine Granner; B.S.W., M.S.W.(McG.)

Karen Hetherington; B.A.(C'dia), M.A.(Montr.)

### **25.10.50.6 Bachelor of Social Work (B.S.W.) - Social Work (Three-Year Program) (90 credits)**

#### **Field Practicum**

Students in the three-year B.S.W. program complete a field placement during their second and third years, 2 days per week, in different settings each year. Students must have completed a minimum of 24 credits of the 90 credits of study before commencing their second year placement, and 54 credits before commencing their third year placement.

#### **Grading Policy**

Social

**Complementary Courses (12 credits)**

12 credits of Social Work (SWRK) courses only.

**Elective Course (3 credits)**

3 credits to be taken in a discipline other than Social Work.

Only in an elective course will the grade of D be counted for credit toward the program.

Satisfactory/Unsatisfactory (S/U) Option Policy

Please note, according to University regulations, the S/U option can only be selected for an elective course. See "Registration" and "Courses Taken under the Satisfactory/Unsatisfactory (S/U) Option."

**Sociology (SOCL)**



**25.10.51.3 Orientation Session for New Students**

The Sociology Department Orientation Session will be held in Leacock 738 (7th floor of the Stephen Leacock Building, directly opposite the elevators).

**25.10.51.4 Sociology (SOCI) Faculty**

## Associate Members

Gregory Baum (*Religious Studies*)

Jennifer Fishman (*Social Studies of Medicine - Biomedical Ethics Unit*)

### **25.10.51.5 Bachelor of Arts (B.A.) - Minor Concentration Sociology (18 credits)**

The purpose of the Minor Concentration Sociology is to give the student a basic understanding of the field of sociology. Th94 64

SOCI 388	(3)	Crime
SOCI 425	(3)	Sociology of the Body
SOCI 435	(3)	Popular Culture
SOCI 460	(3)	Responses to Social Problems
SOCI 488	(3)	Punishment and Prisons
SOCI 489	(3)	Gender, Deviance and Social Control
SOCI 495	(3)	Social Problems and Conflicts
SOCI 508	(3)	Medical Sociology and Social Psychiatry
SOCI 515	(3)	Medicine and Society
SOCI 525	(3)	Health Care Systems in Comparative Perspective
SOCI 535	(3)	Sociology of the Family
SOCI 538	(3)	Selected Topics in Sociology of Biomedical Knowledge
SOCI 571	(3)	Deviance and Social Control
SOCI 588	(3)	Sociology of Knowledge

### **Politics and Social Change**

SOCI 222	(3)	Urban Sociology
SOCI 234	(3)	Population and Society
SOCI 254	(3)	Development and Underdevelopment
SOCI 265	(3)	War, States and Social Change
SOCI 307	(3)	Sociology of Globalization
SOCI 326	(3)	Political Sociology 01
SOCI 345	(3)	Topics in Sociology
SOCI 354	(3)	Dynamics of Industrial Societies
SOCI 365	(3)	Health and Development
SOCI 370	(3)	Sociology: Gender and Development
		Contemporary Social Movements

SOCI 230	(3)	Sociology of Ethnic Relations
SOCI 270	(3)	Sociology of Gender Comparati

SOCI 343	(3)	Independent Study 2
SOCI 440	(3)	Current Problems
SOCI 441	(3)	Current Problems in Sociology 03
SOCI 442	(3)	Independent Reading and Research 01
SOCI 443	(3)	Independent Reading and Research 02

### Areas of Sociology

The Department of Sociology offers courses in four substantive areas of study:

Institutions, Deviance, and Culture

Politics and Social Change

Social Stratification: Class, Ethnicity, and Gender

Work, Organizations, and the Economy

The following lists indicate the courses which are included within each substantive area. Students should use these lists when selecting their complementary courses.

The 500-level seminars in each substantive area are open to social science Major Concentration students in their final year and to Honours students. Minor Concentration students may only register for these with the permission of the instructor.

### Institutions, Deviance, and Culture

SOCI 216	(3)	Social Psychology
SOCI 219	(3)	Sociology of Culture
SOCI 225	(3)	Medicine and Health in Modern Society
SOCI 247	(3)	Family and Modern Society
SOCI 250	(3)	Social Problems
SOCI 305	(3)	Socialization
SOCI 309	(3)	Health and Illness
SOCI 310	(3)	Sociology of Mental Disorder
SOCI 315	(3)	Sociology of Religion
SOCI 318	(3)	Television in Society
SOCI 322	(3)	Sociology of Literature
SOCI 338	(3)	Introduction to Biomedical Knowledge
SOCI 377	(3)	Deviance
SOCI 388	(3)	Crime
SOCI 425	(3)	Sociology of the Body
SOCI 435	(3)	Popular Culture
SOCI 460	(3)	Responses to Social Problems
SOCI 488	(3)	Punishment and Prisons
SOCI 489	(3)	Gender, Deviance and Social Control
SOCI 495	(3)	Social Problems and Conflicts
SOCI 508	(3)	Medical Sociology and Social Psychiatry
SOCI 515	(3)	Medicine and Society
SOCI 525	(3)	Health Care Systems in Comparative Perspective
SOCI 535	(3)	Sociology of the Family
SOCI 538	(3)	Selected Topics in Sociology of Biomedical Knowledge
SOCI 571	(3)	Deviance and Social Control

## Sociology of Kno

**Work, Organizations, and the Economy**

SOCI 235	(3)	Technology and Society
SOCI 304	(3)	Sociology of the Welfare State
SOCI 312	(3)	Sociology of Work and Industry
SOCI 420	(3)	Organizations
SOCI 422	(3)	Health Care Providers
SOCI 470	(3)	Topics in Economic Sociology

**25.10.51.7 Bachelor of Arts (B.A.) - Honours Sociology (51 credits)**

Students may register for the Honours Program at the beginning of their second year (U2).

To remain in the Honours Program and receive an Honours degree, students must maintain a GP Honours de

SOCI 216	(3)	Social Psychology
SOCI 219	(3)	Sociology of Culture
SOCI 225	(3)	Medicine and Health in Modern Society
SOCI 247	(3)	Family and Modern Society
SOCI 250	(3)	Social Problems
SOCI 305	(3)	Socialization
SOCI 309	(3)	Health and Illness
SOCI 310	(3)	Sociology of Mental Disorder
SOCI 315	(3)	Sociology of Religion
SOCI 318	(3)	Television in Society
SOCI 322	(3)	Sociology of Literature
SOCI 338	(3)	Introduction to Biomedical Knowledge
SOCI 377	(3)	Deviance
SOCI 388	(3)	Crime
SOCI 425	(3)	Sociology of the Body
SOCI 435	(3)	Popular Culture
SOCI 460	(3)	Responses to Social Problems
SOCI 488	(3)	Punishment and Prisons
SOCI 489	(3)	Gender, Deviance and Social Control
SOCI 495	(3)	Social Problems and Conflicts
SOCI 508	(3)	Medical Sociology and Social Psychiatry
SOCI 515	(3)	Medicine and Society
SOCI 525	(3)	Health Care Systems in Comparative Perspective
SOCI 535	(3)	Sociology of the Family
SOCI 538	(3)	Selected Topics in Sociology of Biomedical Knowledge
SOCI 571	(3)	Deviance and Social Control
SOCI 588	(3)	Sociology of Knowledge

### **Politics and Social Change**

SOCI 222	(3)	Urban Sociology
SOCI 234	(3)	Population and Society
SOCI 254	(3)	Development and Underdevelopment
SOCI 265	(3)	War, States and Social Change
SOCI 307	(3)	Sociology of Globalization
SOCI 326	(3)	Political Sociology 01
SOCI 345	(3)	Topics in Sociology
SOCI 354	(3)	Dynamics of Industrial Societies
SOCI 365	(3)	Health and Development
SOCI 370	(3)	Sociology: Gender and Development
SOCI 386	(3)	Contemporary Social Movements
SOCI 390	(3)	Gender and Health
SOCI 424	(3)	Networks and Social Structures



SOCI 446	(3)	Colonialism and Society
SOCI 455	(3)	Post-Socialist Societies
SOCI 484	(3)	Emerging Democratic States
SOCI 495	(3)	Social Problems and Conflicts
SOCI 507	(3)	Social Change
SOCI 511	(3)	Movements/Collective Action
SOCI 513	(3)	Social Aspects HIV/AIDS in Africa
SOCI 519	(3)	Gender and Globalization
SOCI 545	(3)	Sociology of Population
SOCI 550	(3)	Developing Societies
SOCI 565	(3)	Social Change in Panama

### **Social Stratification: Class, Ethnicity, and Gender**

SOCI 230	(3)	Sociology of Ethnic Relations
SOCI 270	(3)	Sociology of Gender
SOCI 301	(3)	Comparative Ethnic Relations
SOCI 327	(3)	Jews in North America
SOCI 333	(3)	Social Stratification
SOCI 353	(3)	Inequality and Social Conflict
SOCI 475	(3)	Canadian Ethnic Studies Seminar
SOCI 510	(3)	Seminar in Social Stratification
SOCI 512	(3)	Ethnicity & Public Policy
SOCI 520	(3)	Migration and Immigrant Groups
SOCI 530	(3)	Sex and Gender
SOCI 555	(3)	Comparative Historical Sociology

### **Work, Organizations, and the Economy**

SOCI 235	(3)	Technology and Society
SOCI 304	(3)	Sociology of the Welfare State
SOCI 312	(3)	Sociology of Work and Industry
SOCI 420	(3)	Organizations
SOCI 422	(3)	Health Care Providers
SOCI 470	(3)	Topics in Economic Sociology

### **25.10.51.8 Bachelor of Arts (B.A.) - Joint Honours Component Sociology (36 credits)**

Students wishing to study at the Honours level in two disciplines can combine Joint Honours Program components in any two Arts disciplines. For a list of available Joint Honours programs, see "Overview of Programs Offered" and "Joint Honours Programs".

Students may register for Joint Honours at the beginning of their second year (U2).

Joint Honours students should consult an adviser in each department to discuss their course selection and their interdisciplinary research project (if applicable).

Joint honours students must maintain a GPA of 3.30 in their program courses, and, according to Faculty regulations, a minimum CGPA of 3.00 in general.

### **Required Courses (18 credits)**

Note: Students who are exempted from SOCI 350 must replace it with another 300-level or higher sociology course.

SOCI 210	(3)	Sociological Perspectives
SOCI 211	(3)	Sociological Inquiry
SOCI 330	(3)	Sociological Theory
SOCI 350	(3)	Statistics in Social Research
SOCI 461	(3)	Quantitative Data Analysis
SOCI 480	(3)	Honours Project

**Complementary Courses (18 credits)**

18 credits of complementary sociology (SOCI) courses approved by the Departmental Honours Adviser.

500-Level Seminars:

Seminars at the 500-level are open to Honours/Joint Honours students in their final year.

**Areas of Sociology**

The Department of Sociology offers courses in four substantive areas of study:

Institutions, Deviance, and Culture

Politics and Social Change

Social Stratification: Class, Ethnicity, and Gender

Work, Organizations, and the Economy

The following lists indicate the courses which are included within each substantive area. Students should use these lists when selecting their complementary courses.

The 500-level seminars in each substantive area are open to social science Major Concentration students in their final year and to Honours/Joint Honours students. Minor Concentration students may only register for these with the permission of the instructor.

**Institutions, Deviance, and Culture**

SOCI 216	(3)	Social Psychology
SOCI 219	(3)	Sociology of Culture
SOCI 225	(3)	Medicine and Health in Modern Society
SOCI 247	(3)	Family and Modern Society
SOCI 250	(3)	Social Problems
SOCI 305	(3)	Socialization
SOCI 309	(3)	Health and Illness
SOCI 310	(3)	Sociology of Mental Disorder
SOCI 315	(3)	Sociology of Religion
SOCI 318	(3)	Television in Society
SOCI 322	(3)	Sociology of Literature
SOCI 338	(3)	Introduction to Biomedical Knowledge
SOCI 377	(3)	Deviance
SOCI 388	(3)	Crime
SOCI 425	(3)	Sociology of the Body
SOCI 435	(3)	Popular Culture
SOCI 460	(3)	Responses to Social Problems
SOCI 488	(3)	Punishment and Prisons
SOCI 489	(3)	Gender, Deviance and Social Control
SOCI 495	(3)	Social Problems and Conflicts
SOCI 508	(3)	Medical Sociology and Social Psychiatry

SOCI 515	(3)	Medicine and Society
SOCI 525	(3)	Health Care Systems in Comparative Perspective
SOCI 535	(3)	Sociology of the Family
SOCI 538	(3)	Selected Topics in Sociology of Biomedical Knowledge
SOCI 571	(3)	Deviance and Social Control
SOCI 588	(3)	Sociology of Knowledge

**P**

SOCI 512	(3)	Ethnicity & Public Policy
SOCI 520	(3)	Migration and Immigrant Groups
SOCI 530	(3)	Sex and Gender
SOCI 555	(3)	Comparative Historical Sociology

### **Work, Organizations, and the Economy**

SOCI 235	(3)	Technology and Society
SOCI 304	(3)	Sociology of the Welfare State
SOCI 312	(3)	Sociology of Work and Industry
SOCI 420	(3)	Organizations
SOCI 422	(3)	Health Care Providers
SOCI 470	(3)	Topics in Economic Sociology

## **25.10.52 Women's Studies (WMST)**

### **25.10.52.1 Location**

McGill Institute for Gender, Sexuality, and Feminist Studies (IGSF)  
 3487 Peel Street, Second Floor  
 Montreal, Quebec H3A 1W7

Telephone: 514-398-3911  
 Website: [www.mcgill.ca/igsf](http://www.mcgill.ca/igsf)

### **25.10.52.2 About Women's Studies**

Women's Studies is an interdisciplinary program that brings to light contemporary and historical critical issues centred on women, gender and/or feminism. The program provides students with opportunities to explore the meanings and intersections of such categories as gender, 'race', class, sexual orientation, age, ability, citizenship, and national identity for example, and to examine how such categories might inform and reproduce power relationships.

Students must see an advisor in Women's Studies at a minimum upon registering in

### **Faculty of Arts Representatives**

Professor Shari Brotman (*School of Social Work*)

Professor Amanda Grenier (*School of Social Work*)

Assistant Professor Adrienne Hurley (*East Asian Studies*)

Professor Berkeley Kaite (*English*)

Professor Carrie Rentschler (*Communications*)

Professor Alanna Thain (*English*)

Professor Elaine Weiner (*Sociology*)

### **Representatives from other faculties**

Professor Annmarie Adams (*School of Architecture, Faculty of Engineering*)

Professor Vrinda Narain (*Faculty of Law and IGSF*)

Professor Ada Sinacore (*Dept. of Educational and Counselling Psychology, Faculty of Education*)

Professor Davesh Soneji (*Faculty of Religious Studies of Religious Studies*)

EAST 350	(3)	Gender and Sexuality in Chinese Literature
EAST 351	(3)	Women Writers of China
EAST 370	(3)	History of Sexuality in Japan
EAST 390	(3)	The Chinese Family in History
EAST 466	(3)	Feminism and Japan
EDPE 515	(3)	Gender Identity Development
ENGL 396	(3)	Women in Film and Media
ENGL 397	(3)	Feminist Approaches to Cultural Studies
ENGL 443	(3)	Contemporary Women's Fiction
ENGL 444	(3)	Studies: Women's Writing and Feminist Theory

SOCI 425

(3)

Sociology of the Body  
Gender, De

JWST 351	(3)	Studies in Modern Jewish Literature
PHIL 544	(3)	Political Theory
RELG 336	(3)	Contemporary Theological Issues

**25.10.52.5 Bachelor of Arts (B.A.) - Major Concentration Women's Studies (36 credits)**

**Required Courses (6 credits)**

WMST 200	(3)	Introduction to Women's Studies
WMST 303	(3)	Feminist Theory and Research

**Complementary Courses (30 credits)**

Overview of the specifications for the 30 complementary credits:

3 credits from a list of Women's Studies (WMST) courses and

27 remaining credits with a minimum of 6 credits at the 400- or 500-level with

12 credits selected from Group A courses and

15 credits selected from Group B courses

By arrangement with the Chair of the Women's Studies Advisory Committee and subject to University approval, transfer credits will be accepted from approved exchange programs for a total of no more than 12 credits.

**Women's Studies (WMST)**

3 credits from:

WMST 301	(3)	Women's Studies Current Topics 1
	(3)	Women's Studies Current Topics 2



SOCI 247	(3)	Family and Modern Society
SOCI 321	(3)	Gender and Work
SOCI 390	(3)	Gender and Health

**Group A-5, T**

History of Se

SOCI 519	(3)	Gender and Globalization
SOCI 530	(3)	Sex and Gender
SOCI 535	(3)	Sociology of the Family
SWRK 377	(3)	Women's Issues in Practice
WMST 301	(3)	Women's Studies Current Topics 1
WMST 302	(3)	Women's Studies Current Topics 2
WMST 401	(3)	Women's Studies Special Topics 1
WMST 402	(3)	Women's Studies Special Topics 2
WMST 461	(3)	Tutorial in Women's Studies 1
WMST 462	(3)	Tutorial in Women's Studies 2 Advanced Topics 1c)

Contemporary

PHIL 242 (3) Introduction to Feminist Theory

**Group A-3**

COMS 310 (3) Media and Feminist Studies

**Group A-4, Gender Relations in Major Societal Institutions**

SOCI 247 (3) Family and Modern Society

SOCI 321 (3) Gender and Work

SOCI 390 (3) Gender and Health

**Group A-5, Transnational or National Histories of Women/Gender and Sexuality**

EAST 370 (3) History of Sexuality in Japan

HIST 323 (3) History and Sexuality 1

HIST 347 (3) History and Sexuality 2

**Group A-6, Women/Gender and Literature**

EAST 350 (3) Gender and Sexuality in Chinese Literature

EAST 351 (3) Women Writers of China

ENGL 443 (3) Contemporary Women's Fiction

ENGL 444 (3) Studies: Women's Writing and Feminist Theory

**Group A-7, Women/Gender in a Religious Tradition**

RELG 256 (3) Women in Judaism and Islam

RELG 338 (3) Women and the Christian Tradition

RELG 356 (3) Gender & Sexuality in Hinduism

**Group A-8, Women and Health**

HSEL 308 (3) Issues in Women's Health

HSEL 309 (3) Women's Reproductive Health

**Complementary Course Group B**

27 credits from Group B

Students select 27 credits from the Group B lists in consultation with an advisor and identify an individual focus of study comprised of 15 credits.

Reminder: A minimum of 9 credits at the 400- or 500-level must be taken in the 45 credits of Complementary Courses. Students will find more possible choices to meet this requirement in Group B.

Group B includes courses offered by many different departments and other interdisciplinary studies programs all of which are centrally focused on women and/or gender and/or feminism.

Group B also has a list of "topics" courses for which the course subject matter may change each time the course is taught. These courses may be taken toward Women's Studies programs ONLY when the topic is appropriate for Women's Studies, that is, it is centrally focused on women and/or gender and/or feminism in a given year and with documentation on file for the given year. Additions may be made during a particular calendar year depending on the topic of special and current topics courses. For final updates, go to <http://www.mcgill.ca/igs/>. Please note that not all courses are offered every year.

ANTH 341 (3) Women in Cross-cultural Perspective

ANTH 342 (3) Gender, Inequality and the State

ANTH 413	(3)	Gender in Archaeology
ARTH 352	(3)	Feminism in Art and Art History
CLAS 370	(3)	Women in Greek Drama
CMPL 504	(3)	Feminist Legal Theory
COMS 310	(3)	Media and Feminist Studies
EAST 350	(3)	Gender and Sexuality in Chinese Literature
EAST 351	(3)	Women Writers of China
EAST 370	(3)	History of Sexuality in Japan
EAST 390	(3)	The Chinese Family in History
EAST 466	(3)	Feminism and Japan
EDPE 515	(3)	Gender Identity Development
ENGL 396	(3)	Women in Film and Media
ENGL 397	(3)	Feminist Approaches to Cultural Studies
ENGL 443	(3)	Contemporary Women's Fiction
ENGL 444	(3)	Studies: Women's Writing and Feminist Theory
GERM 364	(3)	German Culture: Gender and Society
GERM 455	(3)	Women of the Romantic Era
HISP 358	(3)	Women Writers Fiction Spanish-America
HIST 199	(3)	FYS: Medieval Women and Men
HIST 323	(3)	History and Sexuality 1
HIST 347	(3)	History and Sexuality 2
HIST 412	(3)	Women and Gender in Modern Britain
HIST 420	(3)	Gender and Sexuality in Modern China
HIST 424	(3)	Gender, Sexuality & Medicine
HIST 433	(3)	British Queer History
HIST 439	(3)	History of Women in China
HIST 448	(3)	Women, Gender and Sexuality in the Middle East
HIST 463D1	(3)	Topics: History of Women in Canada
HIST 463D2	(3)	Topics: History of Women in Canada
HIST 525	(3)	Women, Work and Family in Global History
HSEL 308	(3)	Issues in Women's Health
HSEL 309	(3)	Women's Reproductive Health
ITAL 363	(3)	Gender, Literature and Society
ITAL 383	(3)	Women's Writing since 1880
MUHL 220	(3)	Women in Music
PHIL 242	(3)	Introduction to Feminist Theory
PHIL 442	(3)	Topics in Feminist Theory
RELG 256	(3)	Women in Judaism and Islam
RELG 338	(3)	Women and the Christian Tradition
RELG 339	(3)	Gender & Sexuality in Buddhism
RELG 356	(3)	Gender & Sexuality in Hinduism
RELG 372	(3)	Hindu Goddesses
SDST 250	(3)	Introduction: Sexual Diversity Studies

SOCI 247	(3)	Family and Modern Society
SOCI 270	(3)	Sociology of Gender
SOCI 321	(3)	Gender and Work
SOCI 370	(3)	Sociology: Gender and Development
SOCI 390	(3)	Gender and Health
SOCI 425	(3)	Sociology of the Body
SOCI 489	(3)	Gender, Deviance and Social Control
SOCI 519	(3)	Gender and Globalization
SOCI 530	(3)	Sex and Gender
SOCI 535	(3)	Sociology of the Family
SWRK 377	(3)	Women's Issues in Practice
WMST 301	(3)	Women's Studies Current Topics 1
WMST 302	(3)	Women's Studies Current Topics 2
WMST 401	(3)	Women's Studies Special Topics 1
WMST 402	(3)	Women's Studies Special Topics 2
WMST 461	(3)	Tutorial in Women's Studies 1
WMST 462	(3)	Tutorial in Women's Studies 2
WMST 501	(3)	Advanced Topics 1
WMST 502	(3)	Advanced Topics 2
WMST 513	(3)	Gender, Race and Science

**Group B: Topics Courses**

The courses below are accept0(ble WMST 513)Tj/F01 0 0 1 122.r0(bC(ble WRm(i35MST 513)Tj/F09.341 Tm(w are accept3 8.1 T1.2 Tm(opics 1)Tj1 0 WMST 513)T





## **Complementary Course Group A**

9 credits from Group A

Group A courses are divided into eight sub-groups. Students may take only one course from any particular grouping. Any additional credits taken above the 9 credits from Complementary Course Group A may count as credits towards Complementary Course Group B.

### **Group A-1**

SOCI 270                      (3)                      Sociology of Gender

### **Group A-2**

PHIL 242                      (3)                      Introduction to Feminist Theory

### **Group A-3**

CN Bb931                      (3)                      Media and Feminist Studies

Reminder: A minimum of 6 credits at the 400- or 500-level must be taken in the 24 credits of Complementary Courses. Students will find more possible choices to meet this requirement in Group B.

Group B includes courses offered by many different departments and other interdisciplinary studies programs

PHIL 242	(3)	Introduction to Feminist Theory
PHIL 442	(3)	Topics in Feminist Theory
RELG 256	(3)	Women in Judaism and Islam
RELG 338	(3)	Women and the Christian Tradition
RELG 339	(3)	Gender & Sexuality in Buddhism
RELG 356	(3)	Gender & Sexuality in Hinduism
RELG 372	(3)	Hindu Goddesses
SDST 250	(3)	Introduction: Sexual Diversity Studies
SOCI 247	(3)	Family and Modern Society
SOCI 270	(3)	Sociology of Gender
SOCI 321	(3)	Gender and Work
SOCI 370	(3)	Sociology: Gender and Development
SOCI 390	(3)	Gender and Health
SOCI 425	(3)	Sociology of the Body
SOCI 489	(3)	Gender, Deviance and Social Control
SOCI 519	(3)	Gender and Globalization
SOCI 530	(3)	Sex and Gender
SOCI 535	(3)	Sociology of the Family
SWRK 377	(3)	Women's Issues in Practice
WMST 301	(3)	Women's Studies Current Topics 1
WMST 302	(3)	Women's Studies Current Topics 2
WMST 401	(3)	Women's Studies Special Topics 1
WMST 402	(3)	Women's Studies Special Topics 2
WMST 461	(3)	Tutorial in Women's Studies 1
WMST 462	(3)	Tutorial in Women's Studies 2
WMST 501	(3)	Advanced Topics 1
WMST 502	(3)	Advanced Topics 2
WMST 513	(3)	Gender, Race and Science

**Group B: Topics Courses**

The courses below are acceptable ONL



### **25.10.53.4 Bachelor of Arts (B.A.) - Minor Concentration World Cinemas (18 credits)**

The Minor Concentration World Cinemas instructs students in film aesthetics, history, and theory by acquainting them with cinematic practices from different national and international traditions. This interdisciplinary program draws on the already existing teaching and research activities in several departments within the Faculty of Arts and will serve as an institutional context for future teaching and research endeavors in film studies.

#### **Required Courses (6 credits)**

ENGL 277	(3)	Introduction to Film Studies
FILM 279	(3)	Introduction to Film History

#### **Complementary Courses (12 credits)**

12 credits selected from the course list below with the following specifications:

a minimum of 6 credits in non-U.S. cinemas;

a maximum of 6 credits from any one department.

No more than 6 credits may be taken from the same discipline as the student's other major or minor concentrations.

CANS 300	(3)	Topics in Canadian Studies 1
EAST 214	(3)	Japanese Animation & New Media
EAST 216	(3)	Chinese Action Film
EAST 353	(3)	Approaches to Chinese Cinema
EAST 362	(3)	Japanese Cinema
EAST 454	(3)	Topics: Chinese Cinema
EAST 467	(3)	Topics: Japanese Cinema
ENGL 279	(3)	Introduction to Film as Art
ENGL 280	(3)	Introduction to Film as Mass Medium
ENGL 350	(3)	Studies in the History of Film 1
ENGL 351	(3)	Studies in the History of Film 2
ENGL 363	(3)	Studies in the History of Film 3
ENGL 366	(3)	Film Genre
ENGL 374	(3)	Film Movement or Period
ENGL 379	(3)	Film Theory
ENGL 381	(3)	A Film-Maker 1
ENGL 382	(3)	International Cinema 1
ENGL 385	(3)	Topics in Literature and Film
ENGL 391	(3)	Special Topics: Cultural Studies 1
ENGL 393	(3)	Canadian Cinema
ENGL 450	(3)	Film Aesthetics
ENGL 451	(3)	A Period in Cinema
		Philosoph

(3)

Cinéma français 1

### **26.3.2 Administrative Officers**

For a listing of administrative officers in the Faculty of Arts, refer to *Faculty of Arts > Administrative Officers* and for those in the Faculty of Science, refer to *Faculty of Science > Administr*

*section 26.5.3: Time and Credit Limit for Completion of the Degree*

*section 26.5.6: Course Requirements*

### **26.5.1 Minimum Credit Requirement**

You must complete the minimum credit requirement for the degree as specified in your letter of admission.

Students are normally admitted to a four-year degree requiring the completion of 120 credits, but advanced standing of up to 30 credits may be granted if you obtain satisfactory results in the Diploma of Collegial Studies, International Baccalaureate, French Baccalaureate, Advanced Levels, and Advanced Placement tests.

If you are readmitted after interrupting your studies for a period of five consecutive years or more, you may be required to complete a minimum of 60 credits and satisfy the requirements of a program. In this case, a new GPA will be calculated. The Director of Advising Services, Science, in consultation with the appropriate department, may approve a lower minimum for students who had completed 60 credits or more before interrupting their studies.

If you are readmitted after a period of absence, you are normally subject to the program and (13A.374.6640 1 67.52 584.861 Tm(grhe requScieain satisf)Tj449.3630 1 67



One of a second Calculus:

MATH 141	(4)	Calculus 2
MATH 151	(4)	Calculus B

A Linear Algebra course:

MATH 133	(3)	Linear Algebra and Geometry
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## SCIENCE

At least three foundational science courses:

One or more of Biology or Chemistry:

\* Note: CHEM 120 is not open to students who have taken CHEM 115.

BIOL 111	(3)	Principles: Organismal Biology
BIOL 112	(3)	Cell and Molecular Biology
CHEM 120*	(4)	General Chemistry 2

One of General Chemistry:

CHEM 110	(4)	General Chemistry 1
CHEM 115	(4)	Accelerated General Chemistry: Giants in Science

One of Mechanics:

PHYS 101	(4)	Introductory Physics - Mechanics
PHYS 131	(4)	Mechanics and Waves

One of Electromagnetism:

Note: PHYS 101 is a prerequisite for PHYS 102; and PHYS 131 is a prerequisite for PHYS 142.

PHYS 102	(4)	Introductory Physics - Electromagnetism
PHYS 142	(4)	Electromagnetism and Optics

## ARTS

At least three Arts courses (or 9 credits) to be chosen in two of the following three categories: Humanities, Languages and Social Sciences.

A maximum of two courses (or 6 credits) may be chosen from one category, and no more than two courses (or 6 credits) can be taken in any one department.

Note: No course may fulfil the requirements for more than one program, including the B.A. & Sc. Freshman Program.

### Humanities (Literature and Civilization):

Courses selected from the following subjects:

- Art History and Communications Studies (ARTH and COMS)
- Classics (CLAS)
- East Asian Studies (EAST)
- English (ENGL)
- French Language and Literature (FREN)
- German Studies (GERM)

Hispanic Studies (HISP)

Islamic Studies (ISLA)

Italian studies (ITAL)

Jewish Studies (JWST)

Philosophy (PHIL)

Religious Studies (RELG)

Russian Studies (RUSS)

**Languages:**

### **26.5.5.1 Multi-Track System**

To recognize the diversity of student backgrounds and interests and the multiple routes to understanding provided by a modern university, the Faculties of Arts and of Science of

## **26.5.6 Course Requirements**

All required and complementary courses used to fulfil program requirements, including the Freshman Program, must be completed with a grade of C or better

#### 26.5.6.4 Courses in English as a Second Language

## **Interfaculty Programs**

In contrast to other Environment programs offered through the McGill School of Environment, the B.A. & Sc. Interfaculty Environment Program does not have predefined themes and is intended for students who have a specific goal and want to define their own theme by choosing courses that help them progress towards that goal. Further information about Environment programs and academic advising can be found at [www.mcgill.ca/mse](http://www.mcgill.ca/mse)

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## 26.9 Overview of Programs Offered

- *Major Concentrations*; see [section 26.9.1: Major Concentrations](#)
- *Interfaculty Programs*; see [section 26.9.2: Interfaculty Programs](#)
- *Honours Programs*; see [section 26.9.3: Honours Programs](#)
- *Joint Honours Programs*; see [section 26.9.4: Joint Honours Programs](#)
- *Minor Concentrations or Minors*; see [section 26.9.5: Minor Concentrations or Minors](#)
- *Integrative Courses*; see [section 26.9.6: Integrative Courses](#)

### 26.9.1 Major Concentrations

#### 26.9.1.1 Faculty of Arts

The Arts Major Concentrations available to B.A. & Sc. students are listed here and are described in detail under the *Faculty of Arts* section of this publication. Since the B.A. & Sc. degree requires a certain number of credits in the Arts and in the Sciences, there are special requirements for B.A. & Sc. students. To be counted as an Arts Major Concentration, the program must include at least 30 credits of Arts courses. Similarly, to be counted as a Science Major Concentration, the program must include at least 30 credits of Science courses.

For example, a student completing the 36-credit African Studies Major Concentration in Arts must complete at least 30 of those credits in Arts courses and at most 6 credits in Science courses.

**African Studies**; see *Faculty of Arts > Bachelor of Arts (B.A.) - Major Concentration African Studies (36 credits)*

**Anthropology**; see *Faculty of Arts > Bachelor of Arts (B.A.) - Major Concentration Anthropology (36 credits)*

**Art History**; see *Faculty of Arts > Bachelor of Arts (B.A.) - Major Concentration Art History (36 credits)*

**Canadian Studies**; see *Faculty of Arts > Bachelor of Arts (B.A.) - Major Concentration Canadian Studies (36 credits)*

**Classics**; see *Faculty of Arts > Bachelor of Arts (B.A.) - Major Concentration Classics (36 credits)*

**East Asian Studies**; see *Faculty of Arts > Bachelor of Arts (B.A.) - Major Concentration East Asian Studies (36 credits)*

**Economics**; see *Faculty of Arts > Bachelor of Arts (B.A.) - Major Concentration Economics (36 credits)*

**English – Cultural Studies**; see *Faculty of Arts > Bachelor of Arts (B.A.) - Major Concentration English – Cultural Studies (36 credits)*

**English – Drama and Theatre**; see *Faculty of Arts > Bachelor of Arts (B.A.) - Major Concentration English – Drama and Theatre (36 credits)*

**English – Literature**; see *Faculty of Arts > Bachelor of Arts (B.A.) - Major Concentration English – Literature (36 credits)*

**Geography**; see *Faculty of Arts*

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**Latin-American Studies;** see *Faculty of Arts > Bachelor of Arts (B.A.) - Major Concentration Latin-American Studies (36 credits)*

**Linguistics;** see *Faculty of Arts > Bachelor of Arts (B.A.) - Major Concentration Linguistics (36 credits)*

**Middle East Studies;** see *Faculty of Arts > Bachelor of Arts (B.A.) - Major Concentration Middle East Studies (36 credits)*

**North American Studies;** see *Faculty of Arts > Bachelor of Arts (B.A.) - Major Concentration North American Studies (36 credits)*

**Philosophy;** see *Faculty of Arts > Bachelor of Arts (B.A.) - Major Concentration Philosophy (36 credits)*

**Philosophy and Western Religions;** see *Faculty of Arts > Bachelor of Arts (B.A.) - Major Concentration Philosophy and Western Religions (36 credits)*

**Political Science;** see *Faculty of Arts > Bachelor of Arts (B.A.) - Major Concentration Political Science (36 credits)*

**Quebec Studies;** see *Fand*



- The Honours Program in Cognitive Science is described in detail in [section 26.10.6: Cognitive Science](#).  
Students interested in an Honours degree should also consider the Joint Honours Programs; see [section 26.9.4: Joint Honours Programs](#).

## 26.9 Joint Honours Programs

Joint Honours Programs in the B.A. & Sc. are created by combining a Joint Honours Program component from an Arts discipline with one from a Science discipline. Students must register for both Joint Honours Program components. Joint Honours students should consult an adviser in each department to discuss their course selection and their interdisciplinary research project (if applicable).

### 26.9.1 Faculty of Arts

The Arts Joint Honours components available to B.A. & Sc. students are listed here and are described in detail under the *Faculty of Arts* section of this publication.

**Anthropology**; see *Faculty of Arts > Bachelor of Arts (B.A.) - Joint Honours Component Anthropology (36 credits)*

**Art History**; see *Faculty of Arts > Bachelor of Arts (B.A.) - Joint Honours Component Art History (36 credits)*

**Canadian Studies**; see *Faculty of Arts > Bachelor of Arts (B.A.) - Joint Honours Component Canadian Studies (36 credits)*

**Classics**; see *Faculty of Arts > Bachelor of Arts (B.A.) - Joint Honours Component Classics (36 credits)*

**East Asian Studies**; see *Faculty of Arts > Bachelor of Arts (B.A.) - Joint Honours Component East Asian Studies (36 credits)*

**East Asian Studies**; see *Faculty of Arts > Bachelor of Arts (B.A.) - Joint Honours Component East Asian Studies (36 credits)*

Faculty of

#### **26.9.4.2 Faculty of Science**

There are currently only tw

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**International Relations;** see *Faculty of Arts > Political Science (POLI) > Bachelor of Arts (B.A.) - Minor Concentration International Relations (18 credits)*

**Islamic Studies;** see *Faculty of Arts > Bachelor of Arts (B.A.) - Minor Concentration Islamic Studies (18 credits)*

**Italian Studies;** see

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**Biology – Cell/Molecular (MC-AS); see *Bachelor of***

ECON 310	(3)	Introduction to Behavioural Economics
ECON 326	(3)	Ecological Economics
ECON 347	(3)	Economics of Climate Change
ECON 405	(3)	Natural Resource Economics
ECON 440	(3)	Health Economics
ECON 546	(3)	Game Theory
		The Global En



Students may complete this program with a minimum of 18 credits or a maximum of 19 credits depending if they are exempt from taking CHEM 212 and their choice of complementary course.

**Required Courses\* (16 credits)**

\* Required courses taken at CEGEP or elsewhere that are not credited toward the B.A. & Sc. must be replaced by approved complementary courses. Regardless of the substitution, students must take at least 18 credits in this program.

\*\* Students who have already taken CHEM 212 or its equivalent will choose another appropriate complementary course, to be approved by the adviser.

BIOL 200	(3)	Molecular Biology
BIOL 201	(3)	Cell Biology and Metabolism
BIOL 205	(3)	Biology of Organisms
BIOL 215	(3)	Introduction to Ecology and Evolution
CHEM 212**	(4)	Introductory Organic Chemistry 1

**Complementary Course (3 credits)**

Any biology course at the 300-level or higher approved by an adviser.

**26.10.3.3 Bachelor of Arts and Science (B.A. & Sc.) - Major Concentration Biology - Cell/Molecular (36 credits)**

The Major Concentration Biology - Cell/Molecular is a planned sequence of courses designed to permit a deB3Required

courses

**26.10.3.4 Bachelor of Arts and Science (B.A. & Sc.) - Major Concentration Biology - Organismal (37 credits)**

The Major Concentration Biology - Organismal is a planned sequence of courses designed to permit a degree of specialization in organismal biology.

Advising Note: Freshman students should be aware that PHYS 101 and/or PHYS 102 are required for some of the courses in the major and minor concentrations in Biology.

**Required Courses\* (28 credits)**

\* Required courses taken at CEGEP or elsewhere that are not credited toward the B.A. & Sc. or B.Sc./B.Ed. must be replaced by 3-credit courses from the Complementary Course List. Regardless of the substitution, students must take at least 36 credits in this program.

\*\* Students who have already taken CHEM 212 or its equivalent will choose another appropriate complementary course, to be approved by the adviser.

BIOL 200	(3)	Molecular Biology
BIOL 201	(3)	Cell Biology and Metabolism
BIOL 202	(3)	Basic Genetics
BIOL 205	(3)	Biology of Organisms
BIOL 206	(3)	Methods in Biology of Organisms
BIOL 215	(3)	Introduction to Ecology and Evolution
BIOL 304	(3)	Evolution
BIOL 308	(3)	Ecological Dynamics
CHEM 212**	(4)	Introductory Organic Chemistry 1

**Complementary Courses (9 credits)**

9 credits selected from:

BIOL 303	(3)	Developmental Biology
BIOL 305	(3)	Animal Diversity
BIOL 306	(3)	Neural Basis of Behaviour
BIOL 307	(3)	Behavioural Ecology/Sociobiology
BIOL 310	(3)	Biodiversity and Ecosystems
BIOL 331	(3)	Ecology/Behaviour Field Course
BIOL 342	(3)	Marine Biology
BIOL 350	(3)	Insect Biology and Control
BIOL 352	(3)	Vertebrate Evolution
BIOL 373	(3)	Biometry
BIOL 427	(3)	Herpetology
BIOL 435	(3)	Natural Selection
BIOL 441	(3)	Biological Oceanography
BIOL 465	(3)	Conservation Biology

or other appropriate course at the 300-level or higher with permission of an adviser.

**26.10.4 Biomedical Sciences**

**Program Advisers:**

Professor Teresa Trippenbach, Department of Physiology  
 McIntyre Medical Sciences Building, Room 1116  
 Email: [teresa.trippenbach@mcgill.ca](mailto:teresa.trippenbach@mcgill.ca)  
 Telephone: 514-398-4331



Professor Ann Wechsler, Department of Physiology  
McIntyre Medical Sciences Building, Room 1135  
Email:

CHEM 582	(3)	Supramolecular Chemistry
CHEM 591	(3)	Bioinorganic Chemistry

## 26.10.6 Cognitive Science

### 26.10.6.1 Location

Ian Gold  
Director, Program in Cognitive Science  
3465 Peel Street, Room 401

Interdisciplinary Programs Adviser  
Wendy Brett  
Email: <mailto:wendy.brett@mcgill.ca>  
Telephone: 514-398-7330

Website: <http://www.mcgill.ca/cogsci>

### 26.10.6.2 About Cognitive Science

Cognitive Science is the multidisciplinary study of cognition in humans and machines. The goal is to understand the principles of intelligence and thought with the hope that this will lead to better understanding of the mind and of learning, and to the development of intelligent devices that constructively extend human abilities.

An Interfaculty Program in Cognitive Science (54 credits) is offered by the following departments:

Computer Science (COMP) (Science)  
Linguistics (LING) (Arts)  
Philosophy (PHIL) (Arts)  
Psychology (PSYC) (Science)

#### Cognitive Science Committee Members:

Brendan Gillon (*Linguistics*)  
Stephen McAdams (*Music*)  
Doina Precup (*Computer Science*)  
David Ragsdale (*Neuroscience*)  
Debra T

COMP 230	(3)	Logic and Computability
MATH 318	(3)	Mathematical Logic
PHIL 210	(3)	Introduction to Deductive Logic 1

18 credits from List A in one of Computer Science, Linguistics, Neuroscience, Philosophy, or Psychology.

12 credits from List A in one of the four remaining units.

18 credits chosen from Lists A and/or B in Computer Science, Linguistics, Neuroscience, Philosophy, Psychology and/or Research Courses of which at least 12 credits must be at the 400-level or higher.

Note 1: Students are responsible for ensuring that they meet all pre- and corequisites for all their courses.

Note 2: With the permission of the Director of the Cognitive Science program, students may be able to substitute courses in cognate departments, such as Anatomy and Cell Biology, Biology, Neurology, or Physiology. F

LING 360	(3)	Introduction to Semantics
LING 371	(3)	Syntax 1
LING 390	(3)	Neuroscience of Language
LING 419	(3)	Linguistic Theory and its Foundations
LING 451	(3)	Acquisition of Phonology
LING 455	(3)	Second Language Syntax

**List B:**

LING 440	(3)	Morphology
LING 461	(3)	Formal Methods in Linguistics
LING 531	(3)	Phonology 2
LING 555	(3)	Language Acquisition 2
LING 565	(3)	Pragmatics
LING 571	(3)	Syntax 2
LING 590	(3)	Language Acquisition and Breakdown

**Philosophy**

**List A:**

PHIL 304	(3)	Chomsky
PHIL 306	(3)	Philosophy of Mind
PHIL 310	(3)	Intermediate Logic
PHIL 341	(3)	Philosophy of Science 1
PHIL 360	(3)	17th Century Philosophy
PHIL 370	(3)	Problems in Analytic Philosophy
PHIL 415	(3)	Philosophy of Language
PHIL 419	(3)	Epistemology
PHIL 441	(3)	Philosophy of Science 2
PHIL 506	(3)	Seminar: Philosophy of Mind
PHIL 507	(3)	Seminar: Cognitive Science

**List B:**

PHIL 410	(3)	Advanced Topics in Logic 1
PHIL 411	(3)	Topics in Philosophy of Logic and Mathematics
PHIL 421	(3)	Metaphysics
PHIL 470	(3)	Topics in Contemporary Analytic Philosophy
PHIL 474	(3)	Phenomenology
PHIL 510	(3)	Seminar: Advanced Logic 2
PHIL 511	(3)	Seminar: Philosophy of Logic and Mathematics
PHIL 519	(3)	Seminar: Epistemology
PHIL 521	(3)	Seminar: Metaphysics
PHIL 560	(3)	Seminar: 17th Century Philosophy

**Psychology**

**List A/B:**

ANTH 440	(3)	Cognitive Anthropology
MUMT 250	(3)	Music Perception and Cognition
PSYC 212Cogniti	(3)	Perception

PHGY 520	(3)	Ion Channels
PHGY 556	(3)	Topics in Systems Neuroscience
PSYC 311	(3)	Human Cognition and the Brain
PSYC 317	(3)	Genes and Behaviour
PSYC 318	(3)	Behavioural Neuroscience 2
PSYC 410	(3)	Special Topics in Neuropsychology
PSYC 502	(3)	Psychoneuroendocrinology
PSYC 522	(3)	Neurochemistry and Behaviour

**Research Courses**

COGS 401	(6)	Research Cognitive Science 1
COGS 402	(6)	Research Cognitive Science 2

**26.10.6.4 Bachelor of Arts and Science (B.A. & Sc.) - Honours Cognitive Science (60 credits)**

The Honours Cognitive Science, which is restricted to students in the B.A. & Sc., is an extension of the Interfaculty Program and offers students an opportunity to undertake a research project in close association with professors in their main Arts and Science focus areas. Prior to selecting the Honours Program, students should meet with the Interdisciplinary Program Advisor and review the B.A. & Sc. academic requirements for Honours and First Class Honours, which can also be found under "University Regulations and Information", "Graduation" and "Graduation Honours."

To receive an honours degree, students are required to achieve a minimum overall program GPA of 3.3 at graduation, and attain a grade of B+ (3.3) or better in COGS 444. Students must complete both the 60 credit Honours Program, plus an approved Minor Concentration or a Minor in the Faculties of Arts or of Science.

Note: B.A. & Sc. students who take Interfaculty programs, including the Honours in Cognitive Science, must take at least 30 credits in Arts and 30 in Science across their interfaculty program and their minor or minor concentration.

**Required Courses (9 credits)**

COGS 444	(6)	Honours Research
PSYC 532	(3)	Cognitive Science

**Complementary Courses (51 credits)**

Credits are selected as follows:

3 credits, one of:

COMP 230	(3)	Logic and Computability
MATH 318	(3)	Mathematical Logic
PHIL 210	(3)	Introduction to Deductive Logic 1

18 credits from List A in one of Computer Science, Linguistics, Neuroscience, Philosophy, or Psychology.

12 credits from List A in one of the four remaining units.

18 credits chosen from Lists A and/or B in Computer Science, Linguistics, Neuroscience, Philosophy, Psychology and/or Research Courses of which at least 12 credits must be at the 400-level or higher.

Note 1: Students are responsible for ensuring that they meet all pre- and corequisites for all their courses.

Note 2: With the permission of the Director of the Cognitive Science program, students may be able to substitute courses in cognate departments, such as Anatomy and Cell Biology, Biology, Neurology, or Physiology. For further information, consult the Cognitive Science website: <http://www.mcgill.ca/cogsci>.

**Computer Science**

**List A:**

COMP 206	(3)	Introduction to Software Systems
COMP 250	(3)	Introduction to Computer Science
COMP 251	(3)	Data Structures and Algorithms
COMP 302	(3)	Programming Languages and Paradigms
COMP 424	(3)	Artificial Intelligence
COMP 527	(3)	Logic and Computation
MATH 240	(3)	Discrete Structures 1

**List B:**

COMP 280	(3)	History and Philosophy of Computing
COMP 330	(3)	Theoretical Aspects: Computer Science
COMP 360	(3)	Algorithm Design Techniques
COMP 400	(3)	Technical Project and Report
COMP 409	(3)	Concurrent Programming
COMP 417	(3)	Introduction Robotics and Intelligent Systems
COMP 421	(3)	Database Systems
COMP 490	(3)	Introduction to Probabilistic Analysis of Algorithms
COMP 526	(3)	Probabilistic Reasoning and AI
COMP 531	(3)	Theory of Computation
COMP 558	(3)	Fundamentals of Computer Vision
MATH 222	(3)	Calculus 3
MATH 223	(3)	Linear Algebra

**Linguistics****List A:**

LING 201	(3)	Introduction to Linguistics
LING 330	(3)	Phonetics
LING 331	(3)	Phonology 1
LING 355	(3)	Language Acquisition 1
LING 360	(3)	Introduction to Semantics
LING 371	(3)	Syntax 1
LING 390	(3)	Neuroscience of Language
LING 419	(3)	Linguistic Theory and its Foundations
LING 451	(3)	Acquisition of Phonology
LING 455	(3)	Second Language Syntax

**List B:**

LING 440	(3)	Morphology
LING 461	(3)	Formal Methods in Linguistics
LING 531	(3)	Phonology 2
LING 555	(3)	Language Acquisition 2
LING 565	(3)	Pragmatics

LING 571	(3)	Syntax 2
LING 590	(3)	Language Acquisition and Breakdown

**Philosophy**

**List A:**

PHIL 304	(3)	Chomsky
PHIL 306	(3)	Philosophy of Mind
PHIL 310	(3)	Intermediate Logic
PHIL 341	(3)	Philosophy of Science 1
PHIL 360	(3)	17th Century Philosophy
PHIL 370	(3)	Problems in Analytic Philosophy
PHIL 415	(3)	Philosophy of Language
PHIL 419	(3)	Epistemology
PHIL 441	(3)	Philosophy of Science 2
PHIL 506	(3)	Seminar: Philosophy of Mind
PHIL 507	(3)	Seminar: Cognitive Science

**List B:**

PHIL 410	(3)	Advanced Topics in Logic 1
PHIL 411	(3)	Topics in Philosophy of Logic and Mathematics
PHIL 421	(3)	Metaphysics
PHIL 470	(3)	Topics in Contemporary Analytic Philosophy
PHIL 474	(3)	Phenomenology
PHIL 510	(3)	Seminar: Advanced Logic 2
PHIL 511	(3)	Seminar: Philosophy of Logic and Mathematics
PHIL 519	(3)	Seminar: Epistemology
PHIL 521	(3)	Seminar: Metaphysics
PHIL 560	(3)	Seminar: 17th Century Philosophy

**Psychology**

**List A/B:**

ANTH 440	(3)	Cognitive Anthropology
MUMT 250	(3)	Music Perception and Cognition
PSYC 212	(3)	Perception
PSYC 213	(3)	Cognition
PSYC 301	(3)	Animal Learning & Theory
PSYC 304	(3)	Child Development
PSYC 305	(3)	Statistics for Experimental Design
PSYC 311	(3)	Human Cognition and the Brain
PSYC 315	(3)	Computational Psychology
PSYC 316	(3)	Psychology of Deafness



PSYC 317	(3)	Genes and Behaviour
PSYC 318	(3)	Behavioural Neuroscience 2
PSYC 340	(3)	Psychology of Language
PSYC 341	(3)	The Psychology of Bilingualism
PSYC 352	(3)	Cognitive Psychology Laboratory
PSYC 353	(3)	Laboratory in Human Perception
PSYC 410	(3)	Special Topics in Neuropsychology
PSYC 413	(3)	Cognitive Development
PSYC 470	(3)	Memory and Brain
PSYC 473	(3)	Social Cognition and the Self
PSYC 522	(3)	Neurochemistry and Behaviour
PSYC 529	(3)	Music Cognition
PSYC 537	(3)	Advanced Seminar in Psychology of Language
PSYC 545	(3)	Topics in Language Acquisition
PSYC 561	(3)	Methods: Developmental Psycholinguistics

## Neuroscience

### List A/B:

\* Students select either PHGY 311 or BIOL 306 but not both.

ANAT 321	(3)	Circuitry of the Human Brain
BIOL 306*	(3)	Neural Basis of Behaviour
BIOL 514	(3)	Neurobiology Learning and Memory
BIOL 530	(3)	Advances in Neuroethology
BIOL 588	(3)	Advances in Molecular/Cellular Neurobiology
NEUR 310	(3)	Cellular Neurobiology
NSCI 200	(3)	Introduction to Neuroscience 1
NSCI 201	(3)	Introduction to Neuroscience 2
PHGY 311*	(3)	Channels, Synapses & Hormones
PHGY 314	(3)	Integrative Neuroscience
PHGY 520	(3)	Ion Channels
PHGY 556	(3)	Topics in Systems Neuroscience
PSYC 311	(3)	Human Cognition and the Brain
PSYC 317	(3)	Genes and Behaviour
PSYC 318	(3)	Behavioural Neuroscience 2
PSYC 410	(3)	Special Topics in Neuropsychology
PSYC 502	(3)	Psychoneuroendocrinology
PSYC 522	(3)	Neurochemistry and Behaviour

## Research Courses

COGS 401	(6)	Research Cognitive Science 1
COGS 402	(6)	Research Cognitive Science 2

### 26.10.7 Computer Science

The School of Computer Science and the discipline are described under *Faculty of Science > Computer Science (COMP)*.

The following are considered Science programs in the B.A. & Sc.:

- Minor Concentration in Computer Science
- Major Concentration in Computer Science
- Major Concentration in Software Engineering

The requirements of the Software Engineering Program are described under the *Bachelor of Arts and Science* section while the requirements of the Computer Science programs are described under *Faculty of Arts > Computer Scienc (COMP)*.

#### 26.10.7.1 Bachelor of Arts and Science (B.A. & Sc.) - Major Concentration Software Engineering (37 credits)

This major concentration provides a program of study that covers the subject commonly known as "Software Engineering". This program may be used to satisfy part of the requirements for a B.A. & Sc. degree. This program does not lead to certification as a Professional Engineer.

Students may complete this program with a minimum of 36 credits or a maximum of 37 credits depending on their choice of complementary courses.

#### Required Courses (30 credits)

\* Students who have sufficient knowledge in a programming language do not need to take COMP 202 and can replace it with additional computer science complementary course credits.

COMP 202*	(3)	Introduction to Computing 1
COMP 206	(3)	Introduction to Software Systems
COMP 250	(3)	Introduction to Computer Science
COMP 251	(3)	Data Structures and Algorithms
COMP 273	(3)	Introduction to Computer Systems
COMP 302	(3)	Programming Languages and Paradigms
COMP 303	(3)	Software Development
COMP 421	(3)	Database Systems
MATH 223	(3)	Linear Algebra
MATH 240	(3)	Discrete Structures 1

#### Complementary Courses (7 credits)

6 - 7 credits from:

COMP 322	(1)	Introduction to C++
COMP 361D1	(3)	Software Engineering Project
COMP 361D2	(3)	Software Engineering Project
COMP 529	(4)	Software Architecture
COMP 533	(3)	Object-Oriented Software Development

or any computer science course at the 300-level or above, excluding COMP 364, COMP 396, and COMP 431.

### 26.10.8 Earth, Atmosphere and Ocean Sciences

The following departments jointly offer a B.A. & Sc. program:

- Atmospheric and Oceanic Sciences (ATOC)
- Earth and Planetary Sciences (EPSC)

The departments, the disciplines, and specific courses are described in their respective sections under *Faculty of Science*.

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0 - 6 credits in integrative and advanced topics selected from:

GEOG 302	(3)	Environmental Management 1
GEOG 501	(3)	Modelling Environmental Systems
GEOG 505	(3)	Global Biogeochemistry
GEOG 506	(3)	Advanced Geographic Information Science
GEOG 536	(3)	Geocryology
GEOG 537	(3)	Advanced Fluvial Geomorphology
GEOG 550	(3)	Historical Ecology Techniques
GEOG 555	(3)	Ecological Restoration

### 26.10.11 Mathematics

The requirements for the B.A. & Sc. Major Concentration in Mathematics are described in detail under *Faculty of Arts > Mathematics and Statistics (MATH)*.

### 26.10.12 Physics (PHYS)

The Department of Physics, the discipline, and specific courses are described under the *Faculty of Science* section of this publication.

#### 26.10.12.1 Bachelor of Arts and Science (B.A. & Sc.) - Major Concentration Physics (36 credits)

The Major Concentration Physics, which is restricted to students in the B.A. & Sc. or B.Sc./B.Ed. is a planned sequence of courses designed to permit a degree of specialization in this discipline. This program is insufficient to prepare a student for professional or graduate work in physics; students interested in pursuing a career in physics are advised to take the appropriate B.Sc. program in physics.

#### Required Courses\* (30 credits)

\* Required courses taken at CEGEP or elsewhere that are not credited toward the B.A. & Sc. or B.Sc./B.Ed. must be replaced by courses from the Complementary Course List.

MATH 222	(3)	Calculus 3
MATH 223	(3)	Linear Algebra
MATH 314	(3)	Advanced Calculus
MATH 315	(3)	Ordinary Differential Equations
PHYS 230	(3)	Dynamics of Simple Systems
PHYS 232	(3)	Heat and Waves
PHYS 257	(3)	Experimental Methods 1
PHYS 333	(3)	Thermal and Statistical Physics
PHYS 340	(3)	Majors Electricity and Magnetism
PHYS 446	(3)	Majors Quantum Physics

#### Complementary Courses (6 credits)

6 credits selected from:

PHYS 214	(3)	Introductory Astrophysics
PHYS 225	(3)	Musical Acoustics
PHYS 241	(3)	Signal Processing
PHYS 258	(3)	Experimental Methods 2
PHYS 334	(3)	Advanced Materials
PHYS 534	(3)	Nanoscience and Nanotechnology

or any 300- or 400-level course approved by an adviser.

### **26.10.13 Psychology**

The requirements for the B.A. & Sc. Major Concentration in Psychology

Visit the Education Library website to learn more about library loans, hours, reserve readings, and links to important education sites. We look forward to seeing you in the Library.

Head Librarian: Sara Holder

Telephone: 514-398-4689

Website: [www.mcgill.ca/education-library](http://www.mcgill.ca/education-library)

## **Education Under**

Email: [ann.keenan@mcgill.ca](mailto:ann.keenan@mcgill.ca)

Website: <http://mje.mcgill.ca>

### **27.3.6 A.S. Lamb Learning Centre**

The A.S. Lamb Learning Centre, consisting of the Computer Laboratory, the multimedia unit and the reading room, is located on the second floor of the Sir Arthur Currie Memorial Gymnasium. The computer lab houses 25 computers connected to the McGill network and is available for courses, workshops and individual use by students and staff. Laser printing is also available at a cost. Access to the McGill wireless netw



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## 27.4 About the Faculty of Education(Undergraduate)

### 27.4.1 Department of Integrated Studies in Education

The Department of Integrated Studies in Education offers undergraduate programs that are committed to the preparation of exceptional teachers for work in elementary and secondary schools. We have four-year Bachelor of Education programs for CEGEP graduates, and five-year programs for out-of-province students. In addition, we can accommodate students with completed or partly completed degrees in other disciplines.

- Bachelor of Education Kindergarten and Elementary Education
- Bachelor of Education Kindergarten and Elementary Education (Jewish Studies)
- Bachelor of Education Secondary Program
- Concurrent Bachelor of Science/Bachelor of Education (Secondary)
- Concurrent Bachelor of Music/Bachelor of Education in Music (Music Education)
- Bachelor of Education Teaching French as a Second Language
- Bachelor of Education Teaching English as a Second Language

### 27.4.2 Department of Educational and Counselling Psychology

The Department of Educational and Counselling Psychology (ECP) is committed to the advancement of scientific knowledge through research and practice in education and psychology. ECP addresses cognition and development in typical and atypical populations across the lifespan. Broadly speaking researchers examine issues pertaining to assessment and intervention; cognitive processes and developmental psychology; and the design and evaluation of learning environments and instructional practices.

The Department offers:

- Undergraduate Minor Concentrations
- Teacher Certification (online courses)

### 27.4.3 Department of Kinesiology and Physical Education

The mission of the Department of Kinesiology and Physical Education is to generate, advance, and disseminate knowledge about human health and physical activity, and to prepare professionals to engage in related employment.

- Bachelor of Education majoring in Physical and Health Education
- Bachelor of Science (Kinesiology) with Major General, Major Applied, and Honours
- Bachelor of Science students also hav

Victoria Talwar; M.A. Hons(St. Andr.), M.A., Ph.D.(Qu.)

Alenoush Saroyan; B.A.(Pahlavi), M.Ed.(Loyola-Ill.), Ph.D.(McG.)

**Assistant Dean, Graduate Programs** (*on sabbatical*)

**Chair, Department of Educational and Counselling Psychology**

*section 27.11.5: Bachelor of Science (Kinesiology) (B.Sc.(Kinesiology)) - Kinesiology (90 credits)*, a 90-credit program offered by the Department of Kinesiology and Physical Education.

The program entails a comprehensive understanding of human movement. Kinesiology is a multidisciplinary field viewing human movement from social, historical, psychological, or biological perspectives. The program provides students with a breadth of theoretical knowledge as well as an opportunity to explore related areas in greater depth, including minor programs available elsewhere within the University. An Honours program is available for particularly strong students.

#### **27.5.1.1 General Admission Requirements**

For information about admission requirements to the B.Ed., B.Sc.(Kinesiology) or the Concurrent B.Sc. and B.Ed. or B.Mus. and B.Ed. programs please refer to the Undergraduate Admissions Guide, found at [www.mcgill.ca/applying/undergrad](http://www.mcgill.ca/applying/undergrad). Applicants to the Concurrent B.Sc. and B.Ed. apply through the Faculty of Science, and applicants to the Concurrent B.Mus. and B.Ed. apply through the Faculty of Music.

For information about Inter-Faculty Transfer or Readmission, please see *Inter-Faculty Transfer or Readmission* under *University Regulations and General Information* in this publication, as well as information posted on the Student Affairs Office website, [www.mcgill.ca/edu-sao](http://www.mcgill.ca/edu-sao).

Although no additional prerequisite courses are required, the Faculty recommends that applicants to the B.Ed. Secondary, Science & Technology, and B.Ed. Physical & Health Education programs have appropriate background science and mathematics courses, i.e., biology, chemistry, physics and mathematics. Students having other backgrounds will be considered for admission but will be required to complete prerequisite courses in mathematics and science that may increase the number of credits required for the degree.

##### **27.5.1.1.1 Language Requirement for Applicants to B.Ed. TESL Program**

The application process for the B.Ed. TESL program involves several steps. Students first apply to the University indicating their program choice. Those whose academic record meets minimum program requirements will be informed by the University that they are being considered for admission to the B.Ed. TESL program. Students being considered will need to pass written and oral English language proficiency tests as a further admission requirement, and will be contacted by email with information about how to make arrangements to take the test.

#### **27.5.1.2 Credit Requirements**

Students are normally admitted to a five-year B.Ed. degree requiring the completion of 150 credits, or a four-year B.Sc.(Kinesiology) degree requiring the completion of 120 credits. Students who have completed Quebec CEGEP, French Baccalaureate, International Baccalaureate or at least one year of university studies are normally enrolled in a four-year B.Ed. program, or three-year B.Sc.(Kinesiology) program.

Students entering the five-year B.Ed., or four-year B.Sc.(Kinesiology) degree are in Year 0 and are required to complete the freshman requirements applicable to their program.

Students who have completed previous university studies may be awarded transfer credits for their course work. This can only be determined after the formal application and all necessary supporting documents have been received by Enrolment Services. A minimum of 60 credits must be completed while in residence at McGill University in order to be eligible for a degree. Transfer credits for courses taken more than five (5) years before the time of admission are not permitted in subjects where there has been a hiatus in orhan

Ministère de l'Éducation du Loisir et du Sport  
600 Fullum, 10e étage  
Montréal, Québec H2K 4L1  
Téléphone: 514-873-4630

Please refer to the following website for further information on obtaining a Quebec Teaching Licence: [www.mels.gouv.qc.ca](http://www.mels.gouv.qc.ca).

It is recommended that applicants intending to teach outside of Quebec obtain information beforehand concerning the requirements for certification.

#### 27.5.1.3.1 International Students

In addition to the CAQ and Study Permit, International students in Bachelor of Education programs must obtain a Work Permit (Internship) issued by Citizenship and Immigration Canada as a requirement for the mandatory Field Experiences. Consult the International Students website for more information [www.mcgill.ca/internationalstudents/predeparture/documents](http://www.mcgill.ca/internationalstudents/predeparture/documents).

### 27.5.2 Programs of Professional Development

The Faculty of Education offers programs of professional development in several fields. All such programs are 30 credits, unless otherwise indicated, and may be completed through part-time study. They are intended to provide an opportunity for teachers and other educators to enhance their existing knowledge and skills or to develop new ones, and thus are normally available only to those who are already certified as teachers.

Detailed information regarding general regulations, admission requirements and program profiles for the following certificates and diplomas may be found in the section for offering departments.

#### 27.5.2.1 Department of Educational and Counselling Psychology

Certificate in Inclusive Education  
Diploma in Human Relations and Family Life Education  
Graduate Certificate in Counselling Applied to Teaching

Further information is available from the program coordinator:

Dean Thomson  
Office: Education Building, Room 614  
Telephone: 514-398-4248  
Fax: 514-398-6968  
Email: [dean.thomson@mcgill.ca](mailto:dean.thomson@mcgill.ca)

#### 27.5.2.2 Department of Integrated Studies in Education

**First Nations and Inuit Education (FNIE):** The Faculty of Education collaborates with various Indigenous communities and institutions offering programs whose courses are given either at McGill or off campus. In collaboration with the Kativik School Board, the Cree School Board, the Kahnawake Education Centre, and various other Indigenous communities in Quebec, FNIE delivers field-based teacher education programs leading to initial teacher certification and to the B.Ed.Cert.Teach. degree. FNIE also works with departments to meet other educational needs of Indigenous peoples.

Director of Programs in First Nations and Inuit Education: Professor Donna-Lee Smith  
Office: Education Building, Room 244  
Telephone: 514-398-4533  
Fax: 514-398-2553  
Email: [donnalee.smith@mcgill.ca](mailto:donnalee.smith@mcgill.ca)  
Website: [www.mcgill.ca/edu-integrated](http://www.mcgill.ca/edu-integrated)

**Centre for Educational Leadership (CEL):** CEL, a unit of the Department of Integrated Studies in Education, is committed to the development of leadership for all educational stakeholders through teacher preparation, graduate studies, research and varied approaches to professional development. The Centre seeks to promote dialogue, partnerships and projects among teachers, policy makers and other educational leaders in the local community and beyond through credit and non-credit work, research and development activities.

Director: Dr. Lynn Butler-Kisber  
Office: Education Building, Room 442  
Telephone: 514-398-1591  
Fax: 514-398-7436  
Website: [www.mcgill.ca/edu-integrated](http://www.mcgill.ca/edu-integrated)

**Courses offered through Continuing Education and Summer Studies:** A wide range of courses, enabling students either to acquire prerequisite credits or to earn credit towards their degree, is offered through Continuing Education and Summer Studies. For courses offered, please check [Minerva](#).

### 27.5.3 Programs for First Nations and Inuit

The following programs are offered for First Nations and Inuit teachers by the Faculty of Education. Information can be obtained by contacting:

First Nations and Inuit Education (FNIE)  
3700 McTavish Street, Room 244  
Montreal, Quebec H3A 1Y2  
Telephone: 514-398-4533  
Fax: 514-398-2553  
Website: [www.mcgill.ca/edu-integrated/fnie](http://www.mcgill.ca/edu-integrated/fnie)

#### **Bachelor of Education - Kindergarten and Elementary First Nations and Inuit Studies Option:**

Detailed information about this program may be found in [section 27.9.21: Bachelor of Education \(B.Ed.\) - Kindergarten and Elementary Education - First Nations and Inuit Studies \(120 credits\)](#).

#### **Detailed information about the following programs may be found in [section 27.10: Programs for First Nations and Inuit](#):**

Bachelor of Education for Certifi

of professional conduct, including but not limited to respect for persons, property and confidentiality, appropriate dress and punctuality. Failure to meet these expectations, regardless of performance in courses or other formal program requirements will be taken into account in the assessment of the students' overall academic standing in the program and, in the most serious instance, may result in a requirement to withdraw from the program.

### 27.6.3 English Language Requirement

The Quebec *Ministère de l'Éducation, du Loisir et du Sport* (MELS) requires that all students in teacher education programs demonstrate their proficiency in the language of instruction. To fulfil this obligation, students are required to write the English Examination for Teacher Certification (EETC) before the end of their first semester in the program, except for Year 0 (Freshman) students who will write the examination in their second year (Year 1). Students must pass the examination prior to their third Field Experience.

The examination is coordinated by an independent body, the Centre for the English Exam for Teacher Certification. McGill assists with the administration and scheduling of the examination. To write this examination, students must first register on Minerva for a section of EDEC 215 in the Fall term, then register with the Centre <http://useper.lbpsb.qc.ca/index.asp> and pay a \$70 fee before writing the test.

Students who do not pass the examination the first time and who wish to remain in the program will be required to take EDEC 202 in the Winter term of their first year. They must receive a passing grade and, in their second year, they will be required to take the examination again. A fee is charged each time the examination is written. Students who do not pass the examination on their second attempt will be placed in unsatisfactory standing and must withdraw from the program. Permission may be granted to allow students to continue taking courses during the subsequent Winter semester only. Please see [section 27.6.12.3: Unsatisfactory/Interim Unsatisfactory Standing](#) for readmission procedures.



**Note:** This requirement does not apply to students in the B.Ed. TFSL or the Certificate in Education for First Nations and Inuit programs.

### 27.6.4 Additional Requirements for Students admitted to B.Ed. TFSL program

Students admitted to the B.Ed. TFSL program are required to write diagnostic tests in French language and mathematics. Based on test results students may be required to successfully complete remedial courses above and beyond degree requirements. In addition there will be a compulsory French language test coordinated by an independent body for TFSL students, prior to their third Field Experience, that they will be required to pass in order to continue in the program.

#### 27.6.4.1 Additional Requirements for Students admitted to B.Ed. Kindergarten/Elementary program

Students admitted to the B.Ed. Kindergarten/Elementary program are required to write a diagnostic test in mathematics. Students who do not pass this test will be required to successfully complete Math 111 prior to taking EDEE 230. For students who have taken CEGEP course 201-101 or an equivalent, Math 111 will be above and beyond degree requirements.

### 27.6.5 Judicial Record Verification for Students in the Bachelor of Education Programs

Quebec's Education Act, section 261.0.2, grants school boards the right to verify the judicial record of any person regularly in contact with minors, and this includes student teachers. Each school board or private school may have its own administrative procedures for verification. Students are responsible for complying with their request. Anyone unable to obtain the required security clearance will not be permitted to undertake their Field Experiences, which is a mandatory requirement of the program, and consequently would have to withdraw from the program.

### 27.6.6 Course and Program Regulations

#### 27.6.6.1 Course Load

Undergraduate Education programs can normally only be followed on a full-time basis. Students must take a minimum of twelve (12) credits per term unless the Executive Director, Student Affairs gives them special permission. Special permission must be requested prior to the end of Course Add/Drop period.

Any absence or reduction in course load that may impact the regular progression of a student's program must have written approval by the Executive Director, Student Affairs.

The normal course load per term is 15 credits. Students in Satisfactory Standing may take up to 17 credits per term. Students whose CGPA is above 3.00 may request permission to take an overload. Overloads are not allowed in major Field Experience terms for students in the B.Ed. programs. Students in Probationary Standing take a maximum of 12 credits.

#### 27.6.6.2 Time Limit and Credits for Completion of Degrees

Students are expected to complete their program in no more than five (5) years after their initial registration for the B.Ed. degree and after four (4) years for the B.Sc.(Kinesiology) degree. Students who enter into a freshman year become subject to these regulations one year after their initial registration. Students who exceed these limits must apply to the Faculty for permission to continue.

Students registered in the B.Ed. or B.Sc. are expected to complete the requirements of their programs and their degree within 150 or 120 credits respectively. Students will receive credits for all courses (subject to degree regulations) taken up to and including the semester in which they obtain the full degree credit requirements. Students who wish to remain at McGill beyond that semester must seek permission of the Executive Director, Student Affairs. Students who wish to exceed the specified minimum number of credits required for their degree must also seek permission of the Executive Director, Student Affairs. Credits over the credit limit will be flagged for no credit and the grades will not count in the CGPA.

Permission for exceeding the time and or credit limits will normally be granted only for valid academic reasons, such as change of program or approved part-time status. If permission is granted, students will receive credit only for required and complementary courses necessary to complete their program requirements.

### **27.6.6.3 Course Requirements**

All Required and Complementary courses used to fulfil program requirements must be completed with a grade of C or better. Students who fail to obtain a satisfactory grade in a Required course must either pass the supplemental examination if available, or repeat the course. If the failed course is a Complementary course required by the program, a student may choose to replace it with another complementary course. If a student repeats a Required course in which a D was received, credit will only be given once. A failure (F, J, KF, WF) in any lev

Students who decide not to return to McGill must withdraw from all of their courses on Minerva or inform the Student Affairs Office in writing. For further information, please refer to *University Regulations and General Information > Regulations Concerning Course Withdrawal* and *University Regulations and General Information > Regulations Concerning University Withdrawal* in this publication.

#### **27.6.7.1 Course Registration**

Students in Faculty of Education programs should register for the courses as outlined in the individual program overviews and advising material posted on the Student Affairs Office website, [www.mcgill.ca/edu-sao/new/advising](http://www.mcgill.ca/edu-sao/new/advising) and [www.mcgill.ca/edu-sao/current/advising](http://www.mcgill.ca/edu-sao/current/advising). For more information on registration, see *University Regulations and General Information > Registration* in this publication.

Students in the B.Ed. programs who are required to be registered for Field Experience should consult [section 27.7: Student Teaching/Field Experience](#) for more information.

Some courses may require special permission. Students should consult the Calendar and/or the Class Schedule on Minerva well in advance of the Course Change period to determine if permission is required of the instructor, the department or the Faculty for any course they wish to take.

A number of courses have prerequisites which must be completed prior to course registration. Permission to waive a prerequisite requirement must be given in writing by an academic adviser.

#### **27.6.7.2 Withdrawals**

There are three course withdrawal periods, published on the University website, [www.mcgill.ca/importantdates](http://www.mcgill.ca/importantdates), and in this publication under *University Regulations and General Information > Regulations Concerning Course Withdrawal*. Students may, under exceptional circumstances, be granted permission to withdraw after the published deadlines. Such students should contact the Student Affairs Office for further information.

Students withdrawing from a Field Experience should refer to [section 27.7: Student Teaching/Field Experience](#).

### **27.6.8 Attendance**

The class attendance necessary to satisfy course requirements varies from course to course. All students are expected to apprise themselves of and to meet course-specific requirements.

Attendance is particularly critical in B.Ed. programs, as these are designed to develop required professional competencies which prepare students for the demands of the teaching profession. Students must therefore inform themselves of, and adhere to, the attendance requirements for all Education courses. Special attention should be paid to the requirements of intensive courses and professional seminars scheduled around Field Experiences. Unexcused absences may result in exclusion from a course, course failure, and/or removal from any associated Field Experience.

For Field Experiences, punctual attendance is required throughout. Absences are only excused in exceptional circumstances. Please refer to [section 27.7: Student Teaching/Field Experience](#).

Students in B.Ed. programs should be aware that some Field Experiences may begin in August, some are held in the Spring, and some may overlap with the official exam period. In addition, some professional seminars follow unique schedules. It is the students' responsibility to consult the Class Schedule on Minerva. In the case of a conflict with a final exam, students will be excused from Field Experience or professional seminar on the exam date.

### **27.6.9 Grading**

During the first week of lectures, each instructor will provide students with a written course outline which should include a description of the means of evaluation to be used in the course.

For further information on Grading, see *University Regulations and General Information > Grading and Grade Point Averages (GPA)*.

### **27.6.10 Incomplete Grades**

An instructor who believes that there is justification for a student to delay submitting term work may extend the deadline until after the end of the course. In this case, the instructor will submit a grade of "K" (incomplete), indicating the date by which the work is to be completed. The maximum extensions for the submission of grades to the Student Affairs Office are as follows: April 30 for F



Students must be in satisfactory or probationary standing and have received a final grade of D, J, F



### **27.6.13 Graduation Requirements**

To be eligible for a B.Ed. or the B.Sc.(Kinesiology) degree, students must fulfil all Faculty and program requirements. This includes completing the minimum credit requirements for the degree as stipulated in the letter of acceptance; obtaining a grade of C or better in all required and complementary courses; and achieving a minimum cumulative grade point average (CGPA) of 2.00. Students must satisfactorily complete a minimum of 60 credits at McGill University towards the fulfilment of the degree requirements. In addition, students must complete specific components of their program at McGill.

Students enrolled in Kinesiology and Physical Education programs are required, before the end of their final year of study, to show proof of certification in Standard Level Safety Oriented First Aid, and Level C in Cardiopulmonary Resuscitation, or equivalencies.

Students must complete their degree requirements within five (5) years after their initial registration for the B.Ed. degree and within four (4) years after their initial registration for the B.Sc.(Kinesiology) degree. Students in the part-time B.Ed. for Certified Teachers and B.Ed.(Vocational) programs are allowed a maximum of two years to complete their requirements for the de

- Are completed in schools within anglophone school boards in the province of Quebec in the majority of cases, with the exception of the B.Ed. TESL program Field Experiences which take place in schools within francophone school boards in the province of Quebec.
- Can be specialized in some circumstances. Refer to the OST website for information regarding such opportunities (distance, special needs, resource room, adult education, etc.).
- Could require that students travel some distance to their host school and students should therefore budget time and money for this purpose.
- Require that students be placed at host schools for specific periods of time ranging from 10 to 40 days.
- May be

- Office of Student Teaching, telephone 514-398-7046
- Field supervisor

Student teachers are permitted to be absent for religious holy days, as outlined in McGill's Policy for the Accommodation of Religious Holy Days, see [www.mcgill.ca/student-records/holydays](http://www.mcgill.ca/student-records/holydays). Students must notify the OST, cooperating teacher and field supervisor before the Field Experience begins if possible, or at least 2 weeks before the planned absence. The missed days must be made up, usually at the end of the Field Experience.

Absences related to McGill Intercollegiate Sport events are evaluated by the director of the OST on a case-by-case basis. Student teachers must submit a signed copy of the Intercollegiate Sport Event Accommodation form (see [www.mcgill.ca/deanofstudents/intercollegiateaccommodation](http://www.mcgill.ca/deanofstudents/intercollegiateaccommodation)) to the OST at least 2 weeks in advance of each conflict.

Absences for any other reason, including but not limited to: marriage, family parties, vacation, university extracurricular activities, employment, or conflicting courses, are not permitted during Field Experience under any circumstances. Students should consult an academic adviser if they need to rearrange their course schedule.

### 27.7.3.3 Judicial Record Verification

See *Faculty Regulations for Undergraduate Programs* > [section 27.6.5: Judicial Record Verification for Students in the Bachelor of Education Programs](#) for information on the requirement to obtain this security clearance. Additional information can be found on the OST website.

### 27.7.3.4 Work Permit for International Students

International students (students who are not permanent residents or citizens of Canada) must apply for an internship/co-op work permit issued by Citizenship and Immigration Canada as a requirement for your mandatory Field Experiences. This is not the same as an off-campus work permit. The internship/co-op work permit is free of charge, but takes time to obtain and may require a medical exam. Detailed instructions are available on the OST website. For assistance with the application students should contact International Student Services, [www.mcgill.ca/internationalstudents](http://www.mcgill.ca/internationalstudents). Students must submit a copy of their valid permit to the OST before the Field Experience starts.

## 27.7.4 Grading and Credit

Field Experiences are graded 'Pass/Fail'. Students must submit all completed evaluation forms to the OST immediately following their Field Experience in order to receive a grade.

Where a student is experiencing serious difficulties in a Field Experience but has demonstrated some potential to successfully reach the required standard, the student will be granted a "D" grade. In this case, the director of the OST has the authority to grant special permission for a student to repeat a Field Experience during the next term in which the course is offered. This special permission will be granted once only in a student's program. Students receiving a 'D' grade are also required to repeat the corequisite seminar or other corequisite course as specified by the director. The original grade for the corequisite seminar or course will be excluded from the GPA and credits; only the second grade will be retained.

Students must receive a Pass grade in order to proceed in the B.Ed. program. Failure (F, J, KF, WF) in any Field Experience places a student in "Unsatisfactory Standing", requiring withdrawal from the Teacher Education Program. Students who fail in a Fall term Field Experience may be allowed to continue taking courses in the program to enable transfer to another faculty.

A student may appeal a failing grade or termination of a Field Experience by making a formal application to the Executive Director, Student Affairs.

### 27.7.4.1 Termination of Field Experience

At any time, students may be removed from their Field Experience placement at the request of the host school administrator and cooperating teacher, or at the request of the director of Student Teaching. Students who are removed from a Field Experience placement will be informed of the reason for the termination and will meet with the director.

Circumstances that could lead to termination include, but are not limited to:

- Prerequisite courses not successfully completed.
- Exceeding the number of permissible unexcused absences for corequisite courses (consult the syllabus for each course).
- Failure to pass a judicial record check, if required by the school or school board where the student is placed.
- Unprofessional behaviour; behaviour that contravenes the Code of Ethics for Student Teachers.
- Failure to make the improvements outlined on a Notification of Concern by the date indicated.

The final outcome for a Field Experience that is terminated will be decided by the director of Student Teaching.

Possible outcomes are:

- Reassignment during the same term, subject to availability of placements.
- "W" – Withdrawal (normally without refund).
- "D" – Student will be permitted to register for the Field Experience again during the next regularly scheduled term.
- "F, J, KF, WF" – Failure in any Field Experience places the student in Unsatisfactory Standing.

If a student cannot continue the Field Experience due to illness, see [section 27.7.4.2: Withdrawal from Field Experience](#).

If a student chooses to end his or her Field Experience, the director of Student Teaching will evaluate the circumstances and determine an outcome. Possible outcomes are the same as those listed above.

#### **27.7.4.2 Withdrawal from Field Experience**

- Withdrawal (with refund) for any reason must be done at least 2 weeks before the start date of the Field Experience. The student is responsible for notifying the OST in writing by this deadline.
- Students having to withdraw for any reason, including illness, from a Field Experience that begins in less than 2 weeks or that is underway must immediately inform the OST. Based on the circumstances of the withdrawal, the director of the OST will determine the final outcome of the Field Experience and the Student Affairs Office will determine eligibility for refund.

#### **27.7.4.3 Exemption and Transfer Credit**

Students who have acquired **formal** teaching experience prior to admission to the Bachelor of Education program may be granted exemption for the first Field Experience and corequisite seminar. Written requests must be made to the Director of the OST by August 31 of the year of admission. Requirements for supporting documentation can be found on the OST website, [www.mcgill.ca/ost](http://www.mcgill.ca/ost). Exemption does not reduce the number of credits students need to graduate. Students should consult an academic adviser to discuss their plan of study.

Students who previously completed a Field Experience at another university may be eligible for transfer credit (advanced standing). Contact an academic adviser to discuss this possibility. Students may need to submit a syllabus for the course so that the OST can determine equivalency.

For general information about exemptions and transfer credits at McGill see [www.mcgill.ca/students/transferecredit](http://www.mcgill.ca/students/transferecredit), as well as Faculty-specific information at [www.mcgill.ca/edu-sao/new/advancedstanding](http://www.mcgill.ca/edu-sao/new/advancedstanding).

### **27.7.5 Code of Professional Conduct: Code of Ethics for Student Teachers**

#### **27.7.5.1 Preamble - A Student-centred Perspective**

- **Mandate**

A joint subcommittee consisting of members from two standing committees of the Faculty of Education (Faculty of Education Ethical Review Board and Student Standing) was created to develop a Code of Ethics for Student Teachers and to examine the ways in which this Code will be communicated to students, faculty members and educational partners.

- **Goals and Rationale**

The interests of the two Standing Committees of the Faculty of Education in promoting appropriate ethical and professional conduct have led us to develop the following Code of Ethics for Student Teachers. This code seeks to respond to and address the following needs:

1. The Code addresses the interdependent duties, rights and responsibilities of student teachers, faculty members and educational partners.
2. By addressing common issues and needs, the Code seeks to articulate and make explicit ethical principles that transcend disciplinary boundaries. These principles reflect the fundamental values that are expressed in the duties, rights and responsibilities of all involved in Teacher Education.
3. The Code requires a reasonable flexibility in the implementation of common principles. It is designed to help those involved in Teacher Education,

### 27.7.5.3 Ethics and Law

"Teaching is governed by a legal and regulatory framework" (MEQ 2001, p. 120). The law affects and regulates the standards and norms of teaching behaviours in a variety of ways such as respecting privacy, confidentiality, intellectual property, competence. Human rights legislation prohibits discrimination and recognizes equal treatment as fundamental to human dignity and well being. Teachers should respect the spirit of the Canadian Charter of Rights and Freedoms, particularly the sections dealing with life, liberty and the security of the person, as well as those involving equality and discrimination and the Education Act that sets out the obligations and rights of teachers.

### 27.7.5.4 Guiding Ethical Principles

Ethical student teachers should respect the following guiding ethical principles:

#### 1. Respect for Human Dignity

- Speaks and acts towards all students with respect and dignity; and deals judiciously with them at all times, always mindful of their individual rights and personal sensibilities.
- Respects the dignity and responsibilities of cooperating teachers, peers, principals, parents and other professionals or para-professionals within the school, school board and community.

#### 2. Respect for Vulnerable Persons

- Respects and recognizes ethical obligations towards vulnerable persons. This principle recognizes that students are in a vulnerable position and that student teachers are in a privileged relationship with students and their families and will always refrain from exploiting that relationship in any form or manner.

#### 3. Respect for Confidentiality and Privacy

- Respects the confidential nature of information and maintains confidentiality of information.

## 27.8.2 About the Department of Educational and Counselling Psychology

Educational Psychology encompasses a) the theoretical and applied study of learning, cognition, and instruction in a variety of educational settings across ages and domains; b) instructional technology and computers as cognitive tools in learning; c) cognitive and social processes in learning; d) evaluation and enhancement of learning and teaching; e) methods for fostering inclusive education; f) relationships of phenomena related to teaching, learning and assessment in human development; and g) the impact of family and community on children's learning and development.

At the undergraduate level, the Department of Educational and Counselling Psychology is responsible for the B.A.; see *Faculty of Arts > section 25.10.16: Education Psychology Minor Concentration* for more information and for a variety of undergraduate courses in the areas of learning, cognition and development, inclusive education, gifted education, educational media and computers, and educational measurement and evaluation.

In professional development, the Department offers diploma or certificate programs in Human Relations and Family Life Education, Inclusive Education, and First Nations and Inuit Student Personnel Services. For more information please consult our website, [www.mcgill.ca/edu-ecp/undergraduate](http://www.mcgill.ca/edu-ecp/undergraduate), or contact the Undergraduate Program Coordinator in Educational and Counselling Psychology:

Dean Thomson  
Undergraduate Program Coordinator  
Telephone: 514-398-4248  
Email: [dean.thomson@mcgill.ca](mailto:dean.thomson@mcgill.ca)

At the graduate level, the Department of Educational and Counselling Psychology offers Master's de



### Associate Professors

Evelyn Lusthaus; B.S., M.S., Ph.D.(SUNY Buffalo) (*on leave*)

Robert Savage; B.A.(Oxf.), M.Sc.(Camb.), M.Sc., Ph.D.(Lond.) (*William Dawson Scholar*)

Ada L. Sinacore; B.A.(Montclair St.), M.A., M.Ed., Ph.D.(Col.)

Ingrid E. Sladeczek; B.A., M.S., Ph.D.(Ariz.), A.A.(Md.)

Ronald Stringer; B.Sc., M.A., Ph.D.(Tor.)

Victoria Talwar; M.A.(St. And.), M.A., Ph.D.(Qu.) (*sabbatical leave*)

### Assistant Professors

Tara Flanagan; B.A.(Winn.), M.A., Ph.D.(McG.)

Annett Körner; M.A., Ph.D.(Leipzig)

Krista Muis; B.A.(Wat.), M.A.(Vic. (BC)), Ph.D.(S. Fraser)

Steven R. Shaw; B.S., M.Ed., Ed.S., Ph.D.(FlorFlorB.Ar)

**Research Associates**

Jazvinder Magon

Diana Tabatabai

Laura Winer

Joan B. Wolforth

**Professional Associates**

Isabelle Martin

Alissa Sklar

**Part-time Instructors**

Shawna Atkins

Maureen Baron

Dianne Bateman

Antonio Bernardelli

Elana Bloom

Sam Bruzzese

Scott Conrod

Dominic D'Abate

Sandy Freedman

Lisa French

Karen Gazith-Cohen

David Hoida

Rita McDonough

Judith Norton

Carolyn Nelham

Monica Oala

Caroline Zanni-Dansereau

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**27.9 Department of Integrated Studies in Education**

**27.9.1 Location**

**Faculty of Education**

3700 McTavish Street, Room 244  
Montreal, Quebec H3A 1Y2

Telephone: 514-398-6960

Website: [www.mcgill.ca/edu-dise](http://www.mcgill.ca/edu-dise)

***Undergraduate Programs:***

Telephone: 514-398-4527

Fax: 514-398-4529

***Graduate and Certificate Programs :***

Telephone: 514-398-1591 or 514-398-6985

Fax: 514-398-4529

## **27.9.2 About the Department of Integrated Studies in Education**

The Department of Integrated Studies in Education, created in September 2001, incorporates the programs and staff previously associated with the Departments of Culture and Values in Education, Educational Studies, Second Language Education and First Nations and Inuit Education.

The Department offers four-year programs for CEGEP graduates and five-year programs for out-of-province students leading to a B.Ed. degree.

For B.Ed. program overviews, see

## Associate Professors

Kevin McDonough; B.A., B.Ed., M.Ed.(Alta.), Ph.D.(Ill.)

Christopher S. Milligan; B.A.(Sir G. Wms.), Dip.Ed., M.Ed.(McG.), Ed.D.(Tor.)

Ronald Morris; B.Ed., M.A., Ph.D.(McG.)

Joan Russell; B.Mus., L.Mus., M.Ed., Ph.D.(McG.)

Mela Sarkar; B.A.(McG.), M.A., Ph.D.(C' dia)

Gale Seiler; B.Sc.(Fairleigh Dickinson), M.Sc.(Montana), Ph.D.(Penn.)

Shaheen Shariff; B.A., M.A., Ph.D.(S. Fraser)



#### **27.9.4.3 Concurrent Bachelor of Science/Bachelor of Education (Secondary) (135 credits)**

This program provides students with the opportunity to attain a Bachelor of Science degree and a Bachelor of Education degree concurrently. The two degrees are awarded during the same convocation period. Students who have completed Quebec CEGEP, French Baccalaureate, International Baccalaureate or at least one year of university studies are normally enrolled in a program requiring the completion of 135 credits.

#### **27.9.4.4 Bachelor of Education (Kindergarten and Elementary) (120 credits)**

This program leads to certification to teach children between the ages of 5 and 11 years. It consists of four years of full-time study requiring the completion of 120 credits (150 credits or five years for out of province students) of academic and professional courses.

Options within the B.Ed. (Kindergarten and Elementary) program are:

- First Nations and Inuit Studies
- Jewish Studies (126 credits)
- Programme intensif de français (**under revision for 2010-11**)

#### **27.9.4.5 Baccalauréat en enseignement du français langue seconde (120 credits) (B.Ed. TFSL)**

This four-year program (normally 120 credits or four-years for students who have completed Quebec CEGEP, French Baccalaureate, International Baccalaureate or at least one year of university studies) prepares specialist teachers to teach French as a second language, in Core French programs, immersion programs, intensive programs and classes d'accueil, at both the elementary and the secondary levels. Offered by the Department of Integrated Studies in Education jointly with the *Université de Montréal* ([www.mcgill.ca/edu-dise/students/undergraduate/new/#TFSL](http://www.mcgill.ca/edu-dise/students/undergraduate/new/#TFSL)).

#### **27.9.4.6 Bachelor of Education in Teaching English as a Second Language (120 credits)**

This program prepares specialist teachers to teach English as a second language at both the elementary level (including regular and intensive ESL) and the secondary level (including regular ESL and ESLA – English Second Language Arts). This integrated 120-credit program (150 credits for out of province students) consists of academic and professional components. The academic components provide students with opportunities to develop a broad liberal education and to study language and language learning from linguistic, social, cultural and psychological perspectives. The professional components revolve around school-based Field Experiences which are supported by studies in pedagogy and educational foundations.

#### **27.9.4.7 Graduate Programs**

At the Graduate level, the Department offers M.A. programs with thesis and non-thesis options in the following areas: Education and Society, Educational Leadership, and Second Language Education.

The Department also offers graduate certificates in Leadership and Teaching English as a Second Language.

See [www.mcgill.ca/edu-dise/students/graduate](http://www.mcgill.ca/edu-dise/students/graduate).

#### **27.9.4.8 In-Service Programs**

The Department of Integrated Studies in Education offers a number of in-service programs.

First Nations and Inuit Education, a Certificate in Education for First Nations and Inuit, a Certificate in Aboriginal Literacy Education, a Certificate in Middle School Education in Aboriginal Communities, a Certificate in First Nations and Inuit Educational Leadership, a Certificate in Aboriginal Education for Certified Teachers, and a Bachelor of Education for Certified Teachers.

The Department is also involved in a variety of in-service activities with administrators, teachers, consultants and other educational leaders through the Centre for Educational Leadership (CEL).

### **27.9.5 Bachelor of Education (B.Ed.) - Secondary English (120 credits)**

The Bachelor of Education (B.Ed.) - Secondary English program requires 120 credits and leads to teacher certification. Students who have not completed Quebec CEGEP, French Baccalaureate, International Baccalaureate, or at least one year of university studies prior to commencing the B.Ed. must also complete a minimum of 30 credits of freshman courses (in addition to the 120 credits for the program) for a total of 150 credits.

The aim of the B.Ed. Secondary Education Program is to prepare strong beginning teachers for the secondary school level. This integrated program consists of academic studies, professional studies, and school-based practicum components. All of this is supported by studies in pedagogy, curriculum and educational foundations.

The Secondary English program provides students with the learning opportunities needed to become proficient English teachers.

Please note that graduates of teacher education programs are recommended by the University for Quebec certification to the Quebec Ministère de l'Éducation, du Loisir et du Sport (MELS). For more information about teacher certification in Quebec, please refer to the Faculty of Education section under "Overview of Faculty Programs," "Undergraduate Education Programs," and "Quebec Teacher Certification."

#### **Freshman Program**

Students normally complete 30 credits in their freshman (U0) year.

The freshman year is the time to take introductory level courses in English, as well as to 52 728.56 Tm(The frn osB88tak)Tj1 0 e4Otlnoeductoe ar3y le

EDEC 249 (3) Global Education and Social Justice

### **Philosophy of Education**

3 credits from:

EDEC 260 (3) Philosophical Foundations

EDEC 261 (3) Philosophy of Catholic Education

### **Media, Technology, Computers and Education**

3 credits from:

EDEC 262 (3) Media, Technology and Education

EDPT 200 (3) Integrating Educational Technology in Classrooms

EDPT 204 (3) Educational Media 1

For students with a background in computers or other media applications in education, the following courses may be substituted for the above:

EDPT 341 (3) Instructional Programming 1

EDPT 420 (3) Media Literacy for Education

### **Secondary Teaching Methods - English**

6 credits:

Note: Students selecting 18 credits of Secondary English courses as their other "teachable" subject will take 3 credits of English Secondary Teaching Methods courses to count as an elective in their program.

EDES 361 (3) Teaching Secondary English 1

EDES 461 (3) Teaching Secondary English 2

### **Secondary English Subject Area (54 credits)**

Secondary English students complete 54 credits selected in consultation with the program adviser in one of two options with the following speci



And must also take

3 credits of Secondary Teaching Methods for the teachable subject area

(Note: this additional Methods course counts as a 3-credit elective in the program.)

Students in other secondary subject areas (i.e., Mathematics, Social Sciences or Science and Technology) who select English as their other "teachable subject area" take

18 credits selected as follows:

3 credits of "Required Literature"

3 credits from the "Communication/Language Learning/Linguistics" course list

6 credits from the "Literature" course list

6 credits from the "Media/Cultural Studies" course list with a minimum of 3 credits at the 300-level

And

3 credits of "Secondary Teaching Methods - English"

(Note: this additional Methods course counts as a 3-credit elective in the program.)

**Required Literature**

3 credits:

Literature for Young

## Caribbean Fiction

- Literature
- Media/Cultural Studies

### Electives (6 credits)

6 credits of electives

Note: Students who have chosen to do 36 credits in one teachable subject and 18 credits in another will use 3 credits of electives to take the Secondary Teaching Methods course needed for their second teachable subject.

## 27.9.6 Bachelor of Education (B.Ed.) - Secondary Mathematics (120 credits)

The Bachelor of Education (B.Ed.) Secondary Mathematics program requires 120 credits and leads to teacher certification. Students who have not completed Quebec CEGEP, French Baccalaureate, International Baccalaureate, or at least one year of university studies prior to commencing the B.Ed. must also complete a minimum of 30 credits of freshman courses (in addition to the 120 credits for the program) for a total of 150 credits.

The aim of the B.Ed. Secondary Education Program is to prepare strong beginning teachers for the secondary school level. This integrated program consists of academic studies, professional studies, and school-based practicum components. All of this is supported by studies in pedagogy, curriculum and educational foundations.

The Secondary Mathematics program provides students with the learning opportunities needed to become proficient Mathematics teachers.

Please note that graduates of teacher education programs are recommended by the University for Quebec certification to the Quebec Ministère de l'Éducation, du Loisir et du Sport (MELS). For more information about teacher certification in Quebec, please refer to the Faculty of Education section under "Overview of Faculty Programs," "Undergraduate Education Programs," and "Quebec Teacher Certification."

### Freshman Program

Students normally complete 30 credits in their freshman (U0) year.

The freshman year is the time to take introductory level courses in Mathematics, as well as to explore areas that are not normally taken as teachable subject areas within B.Ed. programs (e.g. Sociology, Psychology, Political Science, etc.). Students should also investigate the possibility of taking one of the First Year Seminar courses offered by the Faculty of Arts or the Faculty of Science.

Students in the Secondary Mathematics program must complete three Math prerequisite courses in their freshman year, MATH 133, MATH 140 and MATH 141.

In addition, students select courses from the recommended list below or other courses in consultation with the program adviser. The French Second Language (FRSL) courses suggested require a placement test to determine the appropriate course level.

EAPR 250	(3)	Research Essay & Rhetoric
EDEM 220	(3)	Contemporary Issues in Education
FRSL 101D1	(3)	Beginners' French
FRSL 101D2	(3)	Beginners' French
FRSL 207D1	(3)	Elementary French 01
FRSL 207D2	(3)	Elementary French 01
FRSL 211D1	(3)	Oral and Written French 1
FRSL 211D2	(3)	Oral and Written French 1
MATH 133	(3)	Linear Algebra and Geometry
MATH 140	(3)	Calculus 1
MATH 141	(4)	Calculus 2
RELG 204	(3)	Judaism, Christianity and Islam
RELG 207	(3)	The Study of World Religions 1

### Required Courses (45 credits)

EDEC 201	(1)	First Year Professional Seminar
EDEC 215	(0)	English Language Requirement
EDEC 247	(3)	Policy Issues in Quebec Education
EDEC 254	(1)	Second Professional Seminar (Secondary)
EDEC 351	(2)	Third Professional Seminar (Secondary)

EDEC 404	(3)	Fourth Year Professional Seminar (Sec)
EDES 350	(3)	Classroom Practices (Secondary)
EDFE 200	(2)	First Field Experience (K/Elem & Secondary)
EDFE 254	(3)	Second Field Experience (Secondary)
EDFE 351	(8)	Third Field Experience (Secondary)
EDFE 451	(7)	Fourth Field Experience (Secondary)
EDPE 300	(3)	Educational Psychology
EDPE 304	(3)	Measurement and Evaluation
EDPI 309	(3)	Exceptional Students
EDPI 341	(3)	Instruction in Inclusive Schools

**Complementary Courses (15 credits)**

15 credits selected as described below.

**Multicultural Education**

3 credits from:

EDEC 233	(3)	First Nations and Inuit Education
EDEC 248	(3)	Multicultural Education
EDEC 249	(3)	Global Education and Social Justice

**Philosophy of Education**

3 credits from:

EDEC 260	(3)	Philosophical Foundations
EDEC 261	(3)	Philosophy of Catholic Education

**Media, Technology, Computers and Education**

3 credits from:

EDEC 262	(3)	Media, Technology and Education
EDPT 200	(3)	Integrating Educational Technology in Classrooms
EDPT 204	(3)	Educational Media 1

For students with a background in computers or other media applications in education, the following courses may be substituted for the above:

EDPT 341	(3)	Instructional Programming 1
EDPT 420	(3)	Media Literacy for Education

**Secondary Teaching Methods - Mathematics**

6 credits:

Note: Students selecting 18 credits of Secondary Mathematics courses as their other "teachable" subject will take 3 credits of Mathematics Secondary Teaching Methods courses to count as an elective in their program.

EDES 353	(3)	Teaching Secondary Mathematics 1
EDES 453	(3)	Teaching Secondary Mathematics 2

**Secondary Mathematics Subject Area (54 credits)**

Secondary Mathematics students complete 54 credits selected in consultation with the program adviser in one of two options. They are expected to have completed the prerequisite courses MATH 133, MATH 140 and MATH 141 or their equivalents. Freshman students will take them as part of their freshman program.

Students entering from CEGEP should only choose this program if they have a strong background in their CEGEP mathematics courses. The 100-level prerequisite courses (MATH 133, MATH 140 and MATH 141) are considered CEGEP level and only students entering a 5-year program (out-of-province and directly from high school) are eligible to take them. Students entering with advanced standing without having completed these prerequisites will be required to make up any deficiencies in these courses over and above the degree requirements.

Option 1



EAPR 250	(3)	Research Essay & Rhetoric
EDEM 220	(3)	Contemporary Issues in Education
FRSL 101D1	(3)	Beginners' French
FRSL 101D2	(3)	Beginners' French
FRSL 207D1	(3)	Elementary French 01
FRSL 207D2	(3)	Elementary French 01
FRSL 211D1	(3)	Oral and Written French 1
FRSL 211D2	(3)	Oral and Written French 1
GEOG 200	(3)	Geographical Perspectives: World Environmental Problems
GEOG 205	(3)	Global Change: Past, Present and Future
GEOG 210	(3)	Global Places and Peoples
	(3)	Survey: Canada to 1867

EDEC 248	(3)	Multicultural Education
EDEC 249	(3)	Global Education and Social Justice

### **Philosophy of Education**

3 credits from:

EDEC 260	(3)	Philosophical Foundations
EDEC 261	(3)	Philosophy of Catholic Education

### **Media, Technology, Computers and Education**

3 credits from:

EDEC 262	(3)	Media, Technology and Education
EDPT 200	(3)	Integrating Educational Technology in Classrooms
EDPT 204	(3)	Educational Media 1

For students with a background in computers or other media applications in education, the follo



HIST 303*	(3)	History of Quebec
HIST 353*	(3)	History of Montreal

**Ethics and Religious Culture**

18 credits as specified below.

6 credits from:

\*Note: Either EDER 309 or RELG 204 may be selected but not both.

EDER 309*	(3)	The Religious Quest
RELG 204*	(3)	Judaism, Christianity and Islam
RELG 207	(3)	The Study of World Religions 1
RELG 252	(3)	Hinduism and Buddhism

6 credits from:

EDER 209	(3)	Search for Authenticity
EDER 395	(3)	Moral Values and Human Action
EDER 461	(3)	Society and Change
EDER 473	(3)	Living with Insight
EDER 494	(3)	Ethics in Practice

Please note that graduates of teacher education programs are recommended by the University for Quebec certification to the Quebec Ministère de l'Éducation, du Loisir et du Sport (MELS). For more information about teacher certification in Quebec, please refer to the Faculty of Education section under "Overview of Faculty Programs," "Undergraduate Education Programs," and "Quebec Teacher Certification."

### **Freshman Program**

Students normally complete 30 credits in their freshman (U0) year.

The freshman year is the time to take introductory level courses in a teachable subject area, as well as to explore areas that are not normally taken within B.Ed. programs (e.g. Sociology, Psychology, Political Science, etc.). Students should also investigate the possibility of taking one of the First Year Seminar courses offered by the Faculty of Arts or the Faculty of Science.

In addition, in consultation with the program adviser, students may select courses from the recommended course list below or other courses. The list includes History, Geography and Religious Studies courses that may be used toward the academic component of the Secondary Social Sciences course requirements. Also included are several French Second Language (FRSL) courses for which placement tests are required to determine the appropriate level.

EDPI 341 (3) Instruction in Inclusive Schools

### **Complementary Courses (15 credits)**

15 credits selected as described below.

#### **Multicultural Education**

3 credits from:

EDEC 233 (3) First Nations and Inuit Education  
EDEC 248 (3) Multicultural Education  
EDEC 249 (3) Global Education and Social Justice

#### **Philosophy of Education**

3 credits from:

EDEC 260 (3) Philosophical Foundations  
EDEC 261 (3) Philosophy of Catholic Education

#### **Media, Technology, Computers and Education**

3 credits from:

EDEC 262 (3) Media, Technology and Education  
EDPT 200 (3) Integrating Educational Technology in Classrooms  
EDPT 2044 403 7,c Tm(s s 1 0)ther mducat31Educatioal MEdTj1ther m4T 204..

(Students may consult the course lists for History programs offered by the Faculty of Arts for guidance on course choices.)

And

18 credits of Geography chosen for the "Geograph

Winter term: BIOL 112, CHEM 120, MATH 141 or MATH 151, PHYS 102 or PHYS 142

Students should consult a program adviser for guidance on which fall and winter term Math and Physics courses should be taken. Course choices depend on a student's background in Science and plans for upper-level Physics courses.

BIOL 111	(3)	Principles: Organismal Biology
BIOL 112	(3)	(3)EDEM 220 On-line Introductory Biology 243.549 513.aluec Education
CHEM 110	(4)	General Chemistry 1
CHEM 120	(4)	General Chemistry 2
MATH 139	(4)	Calculus 1 with Precalculus
MATH 140	(3)	Calculus 1
MATH 141	(4)	Calculus 2
MATH 150	(4)	Calculus A
MATH 151	(4)	Calculus B
PHYS 101	(4)	Introductory Physics - Mechanics
PHYS 102	(4)	Introductory Physics - Electromagnetism
PHYS 131	(3)4DEC(3)Tj10 -7	Mechanics and Waves 50 0481 7.1 1 150 0481 7.6 1 142 0 1 7.6 1 lhf0 G0 g10/F1 8.1 Tf150 0 1 30 863 513.78(TH 151)Tj10 -7
PHYS 142	(4)	Electromagnetism and Optics

**Freshman Program - Complementary**

For freshman students with advanced standing in one or more of the basic sciences, the Faculty also recommends some of the courses listed below. French Second Language (FRSL) courses require a placement test to determine the course level.

EAPR 250	(3)	Research Essay & Rhetoric
EDEM 220	(3)	Contemporary Issues in Education
FRSL 101D1	(3)	Beginners' French
FRSL 101D2	(3)	Beginners' French
FRSL 207D1	(3)	Elementary French 01
FRSL 207D2	(3)	Elementary French 01
FRSL 211D1	(3)	Oral and Written French 1
FRSL 211D2	(3)	Oral and Written French 1

**Required Courses (45 credits)**

EDEC 201	(1)	First Year Professional Seminar
EDEC 215	(0)	English Language Requirement
EDEC 247e1.(3)	(3)	Policy Issues in Quebec Education

(3)2Tm((1))Tj1 0 0 119 0 67 592.62 Tm3m(TH 151)Tj1 0 0 1 2180.59 262.20(TH 151)Tj1 0 60 122180.59 262.2uient2 Tm(Y)Tj1 04.71 2180.59 262.2YTm(-le)Tj1 0 07652180.59 262.20

EDPI 309	(3)	Exceptional Students
EDPI 341	(3)	Instruction in Inclusive Schools

**Complementary Courses (15 credits)**

15 credits selected as described below.

**Multicultural Education**

3 credits from:

EDEC 233	(3)	First Nations and Inuit Education
EDEC 248	(3)	Multicultural Education
EDEC 249	(3)	Global Education and Social Justice

**Philosophy of Education**

3 credits from:

EDEC 260	(3)	Philosophical Foundations
EDEC 261	(3)	Philosophy of Catholic Education

**Media, Technology, Computers and Education**

3 credits from:

EDEC 262	(3)	Media, Technology and Education
EDPT 200	(3)	Integrating Educational Technology in Classrooms
EDPT 204	(3)	Educational Media 1

For students with a background in computers or other media applications in education, the following courses may be substituted for the above:

EDPT 341	(3)	Instructional Programming 1
EDPT 420	(3)	Media Literacy for Education

**Secondary Teaching Methods - Science and Technology**

6 credits

EDES 335	(3)	Teaching Secondary Science 1
EDES 435	(3)	Teaching Secondary Science 2

**Secondary Science and Technology (54 credits)**

Please note: Courses in the list below are pending the approval of the Faculties of Science, Engineering, Agriculture and Environmental Sciences, and Arts, and there may be additions or deletions to this list. Students are advised to consult with their Faculty of Education program adviser prior to registering in any course.

54 credits in designated science courses selected to provide subject matter expertise in the four areas of:

- the Material World
- Earth and Space
- the Living World
- the Technological World

Note: Students entering this program from CEGEP should have completed the basic science equivalents in CEGEP. The 100-level basic sciences are considered CEGEP level and only students entering a 5-year program (out-of-province and directly from high school) are eligible to take them. Students entering with

advanced standing without having completed these prerequisites (or their equivalents) will be required to make up any deficiencies in these courses over and above the degree requirements.

Overview of the 54 credits for the program:

A minimum of 12 credits at the 300-level or above;

39 credits of courses across the 4 subject areas:

- 3 credits of Statistics
- 3 credits of History of Science
- 9 credits minimum from courses on the Living World
- 9 credits minimum from courses on Earth and Space
- 9 credits minimum from courses on the Material World
- 6 credits minimum from courses on the Technological World

15 credits of complementary courses either spread across the 4 subjects areas or concentrated in 1 subject area. Students who plan to teach Grade 11 Chemistry or Physics should concentrate their 15 complementary credits in the Material World.

All students need to plan their course selections with attention to the prerequisites.

### Statistics

3 credits:

MATH 203	(3)	Principles of Statistics 1
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### History of Science

3 credits from:

BIOL 210	(3)	Perspectives of Science
HIST 238	(3)	Histories of Science
HIST 319	(3)	The Scientific Revolution
HIST 350	(3)	Science and the Enlightenment

### The Living World - Required

6 credits:

\*Note: Students select either BIOL 200 or LSCI 202 but not both.

BIOL 200*	(3)	Molecular Biology
BIOL 206	(3)	Methods in Biology of Organisms
LSCI 202*	(3)	Molecular Cell Biology

### The Living World - Complementary

Students select a minimum of 3 credits to a maximum of 15 credits from courses on the Living World in the areas of:

Cell and Molecular Biology

Human and Organismal Biology

Populations, Ecosystems, and Evolution

### The Living World - Cell and Molecular Biology

BIOL 201	(3)	Cell Biology and Metabolism
BIOL 202	(3)	Basic Genetics
BIOL 300	(3)	Molecular Biology of the Gene
BIOL 301	(4)	Cell and Molecular Laboratory
BIOL 313	(3)	Eukaryotic Cell Biology





EPSC 405	(3)	Planetary Geology
ESYS 200	(3)	Earth System Processes
ESYS 300	(3)	Investigating the Earth System
ESYS 301	(3)	Earth System Modelling
GEOG 272	(3)	Earth's Changing Surface
GEOG 321	(3)	Climatic Environments
PHYS 214	(3)	Introductory Astrophysics

**Earth and Space - Environment**

The Global En

CHEM 297*	(1)	Introductory Analytical Chemistry Laboratory
CHEM 301	(3)	Modern Inorganic Chemistry 2
CHEM 302	(3)	Introductory Organic Chemistry 3
CHEM 307	(3)	Analytical Chemistry of Pollutants
CHEM 319	(3)	Chemistry of Energy, Storage and Utilization
CHEM 381	(3)	Inorganic Chemistry 2
CHEM 392	(3)	Integrated Inorganic/Organic Laboratory
MATH 222	(3)	Calculus 3
PHYS 224	(3)	Physics and Psychophysics of Music
PHYS 230	(3)	Dynamics of Simple Systems
PHYS 232	(3)	Heat and Waves
PHYS 241	(3)	Signal Processing
PHYS 242	(2)	Electricity and Magnetism
PHYS 251	(3)	Honours Classical Mechanics 1
PHYS 257	(3)	Experimental Methods 1
PHYS 258	(3)	Experimental Methods 2
PHYS 328	(3)	Electronics
PHYS 331	(3)	Topics in Classical Mechanics
PHYS 332	(3)	Physics of Fluids
PHYS 333	(3)	Thermal and Statistical Physics
PHYS 339	(3)	Measurements Laboratory in General Physics
PHYS 340	(3)	Majors Electricity and Magnetism
PHYS 342	(3)	Majors Electromagnetic Waves
PHYS 434	(3)	Optics
PHYS 436	(3)	Modern Physics
PHYS 439	(3)	Majors Laboratory in Modern Physics
PHYS 446	(3)	Majors Quantum Physics

### The Technological World

Students select a minimum of 6 credits to a maximum of 15 credits from courses on the Technological World.

\*Note: Students may take either COMP 102 or COMP 280 but not both.

\*\*Note: Credit will not be given for COMP 102 if it is taken concurrently with or after COMP 202.

BREE 205	(3)	Engineering Design 1
BREE 210	(3)	Mechanical Analysis & Design
BREE 327	(3)	Bio-Environmental Engineering
COMP 102*	(3)	Computers and Computing
COMP 202**	(3)	Introduction to Computing 1
COMP 206	(3)	Introduction to Software Systems
COMP 280*	(3)	History and Philosophy of Computing
COMP 364	(3)	Computer Tools for Life Sciences
MATH 204	(3)	Principles of Statistics 2
MECH 289	(3)	Design Graphics
PHYS 334	(3)	Advanced Materials

### **27.9.10 Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Biology - Cell/Molecular with Minor Chemistry for Teachers (135 credits)**

The Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Biology - Cell/Molecular with Minor Chemistry for Teachers is jointly offered by the Faculty of Science and the Faculty of Education. Separately, the Bachelor of Science degree requires 90 credits (or 120 credits for students who have not completed the basic sciences) and the Bachelor of Education degree requires 120 credits. In the concurrent program, the requirements for the two degrees are combined in such a way that students complete 135 (or 165 credits) to fulfil all the requirements for graduation for both the B.Sc. and the B.Ed.

Graduates of the B.Ed. degree are recommended by the University to the Quebec Ministère de l'Éducation, du Loisir et du Sport (MELS) for Quebec Teacher Certification. For more information about teacher certification in Quebec, please refer to the Faculty of Education section under "Overview of Faculty Programs," "Undergraduate Education Programs," and "Quebec Teacher Certification."

The Major Concentration Biology - Cell/Molecular with Minor Chemistry is one of the nine variations of the program and allows students to focus their Science degree in Cell/Molecular Biology with a subspecialization in Chemistry.

To fulfil the requirements for graduation for the Concurrent Bachelor of Science and Bachelor of Education the 135 credits (or 165 credits for students admitted without basic sciences) include the following:

(30 credits of Science Freshman Program (for students admitted without basic sciences))

60 credits of Education Component

69 credits of Science Component consisting of:

- 36 credits of Major Concentration Biology - Cell/Molecular

- 18 credits of Minor Chemistry

- 15 credits of Additional Science Courses

6 credits of Electives, of which at least 3 credits must be Science Electives, depending on how many credits count toward both the B.Sc. and the B.Ed. degrees

For details on the counting of credits toward both degrees (double-counting) visit the program website <http://www.mcgill.ca/scienceforteachers/>.

#### **B.Sc. Freshman Program**

Students who enter Science in U0 will normally be registered in the Science Freshman Program until they complete their first year. They must consult an adviser in the Science Office for Undergraduate Student Advising (SOUSA) to obtain advice and approval of their course selection. Full details are available on the SOUSA website at <http://www.mcgill.ca/science/sousa>. Academic advising is also available by email. The address is [newstudentadvising.science@mcgill.ca](mailto:newstudentadvising.science@mcgill.ca).

Students normally complete 30 credits which must include at least 7 courses from the list of Approved Freshman Science courses, selected as follows:

#### **General Math and Science Breadth**

Six of the freshman courses must satisfy one of the following:

Option 1) 2 courses from MATH and 4 courses from BIOL, CHEM or PHYS;

or

Option 2) 3 courses from MATH and 3 courses from BIOL, CHEM or PHYS.

#### **Science Complementary**

The seventh course is chosen from the list of Approved Freshman Science Courses.

Notes:

1. Students who have not studied all of Biology, Chemistry and Physics at the grade 12 level or equivalent are strongly advised to include at least one course in the missing discipline in their freshman program.
2. Many students will complete more than 7 courses from the Approved Freshman Science Courses list, particularly those who wish to leave several options open for their choice of major.
3. Students entering the F be re

CHEM 115 (not open to students who are taking or have taken CHEM 110 or CHEM 120)

CHEM 120 (not open to students who have taken CHEM 115)

BIOL 111	(3)	Principles: Organismal Biology
BIOL 112	(3)	Cell and Molecular Biology
CHEM 110	(4)	General Chemistry 1
CHEM 115	(4)	Accelerated General Chemistry: Giants in Science
CHEM 120	(4)	General Chemistry 2
COMP 202	(3)	Introduction to Computing 1
ESYS 104	(3)	The Earth System
MATH 133	(3)	Linear Algebra and Geometry
PSYC 100	(3)	Introduction to Psychology

First calculus course, one of:

MATH 139	(4)	Calculus 1 with Precalculus
MATH 140	(3)	Calculus 1
MATH 150	(4)	Calculus A

Second calculus course, one of:

MATH 141	(4)	Calculus 2
MATH 151	(4)	Calculus B

First physics course, one of:

PHYS 101	(4)	Introductory Physics - Mechanics
PHYS 131	(4)	Mechanics and Waves

Second physics course, one of:

PHYS 102	(4)	Introductory Physics - Electromagnetism
PHYS 142	(4)	Electromagnetism and Optics

### Electives

Students wishing to take elective courses may choose them from introductory courses offered by departments in the Faculties of Science or of Arts. A list of recommended courses is found at <http://www.mcgill.ca/science/sousa/bsc/freshman/approved>. Certain courses offered by other faculties may also be taken, but some restrictions apply.

Consult the SOUSA website at <http://www.mcgill.ca/science/sousa/bsc/course/outside> for more information about taking courses from other faculties.

### Education Component (60 credits)

60 credits of Education Component consists of:

54 credits of required courses

6 credits of complementary courses

### Required Courses

54 credits

\*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

The English Language Requirement (EDEC 215) must be taken in the Fall semester following the Freshman Year.

EDEC 201	(1)	First Year Professional Seminar
EDEC 215	(0)	English Language Requirement
EDEC 247*	(3)	Policy Issues in Quebec Education
EDEC 254	(1)	Second Professional Seminar (Secondary)
EDEC 262*	(3)	Media, Technology and Education
EDEC 351	(2)	Third Professional Seminar (Secondary)
EDEC 404	(3)	Fourth Year Professional Seminar (Sec)
EDES 335	(3)	Teaching Secondary Science 1
EDES 350	(3)	Classroom Practices (Secondary)
EDES 435	(3)	Teaching Secondary Science 2
EDFE 200	(2)	First Field Experience (K/Elem & Secondary)
EDFE 254	(3)	Second Field Experience (Secondary)
EDFE 351	(8)	Third Field Experience (Secondary)
EDFE 451	(7)	Fourth Field Experience (Secondary)
EDPE 300*	(3)	Educational Psychology
EDPE 304	(3)	Measurement and Evaluation
EDPI 309*	(3)	Exceptional Students
EDPI 341	(3)	Instruction in Inclusive Schools

### Complementary Courses

6 credits selected as follows:

\*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

3 credits, one of the three following courses:

EDEC 233*	(3)	First Nations and Inuit Education
EDEC 248*	(3)	Multicultural Education
EDEC 249*	(3)	Global Education and Social Justice

3 credits, one of the two following courses:

EDEC 260*	(3)	Philosophical Foundations
EDEC 261*	(3)	Philosophy of Catholic Education

### Major Concentration Biology - Cell/Molecular (36 credits)

The Major Concentration Biology - Cell/Molecular is a planned sequence of courses designed to permit a degree of specialization in cell/molecular biology.

Advising Note: Freshman students should be aw

BIOL 200	(3)	Molecular Biology
BIOL 201	(3)	Cell Biology and Metabolism
BIOL 202	(3)	Basic Genetics
BIOL 205	(3)	Biology of Organisms
BIOL 215	(3)	Introduction to Ecology and Evolution
BIOL 300	(3)	Molecular Biology of the Gene
BIOL 301	(4)	Cell and Molecular Laboratory
BIOL 303	(3)	Developmental Biology

### Complementary Courses

At least 11 credits selected from:

BIOL 306	(3)	Neural Basis of Behaviour
BIOL 313	(3)	Eukaryotic Cell Biology
BIOL 314	(3)	Molecular Biology of Oncogenes
BIOL 370	(3)	Human Genetics Applied
BIOL 373	(3)	Biometry
BIOL 413	(1)	Directed Reading
BIOL 568	(3)	Topics on the Human Genome
BIOL 575	(3)	Human Biochemical Genetics

or other appropriate course at the 300-level or higher with the permission of an adviser.

### Minor Chemistry (18 credits)

#### Required Courses

18 credits selected as follows:

\*Note: denotes courses with CEGEP equivalents.

Substitutions for these by more advanced courses may be made at the discretion of the adviser.

CHEM 203	(3)	Survey of Physical Chemistry
CHEM 212*	(4)	Introductory Organic Chemistry 1
CHEM 222*	(4)	Introductory Organic Chemistry 2
CHEM 253	(1)	Introductory Physical Chemistry 1 Laboratory
CHEM 281	(3)	Inorganic Chemistry 1
CHEM 287	(2)	Introductory Analytical Chemistry
CHEM 297	(1)	Introductory Analytical Chemistry Laboratory

#### Additional Science Courses

15 credits selected as follows:

12 credits:

BIOL 210	(3)	Perspectives of Science
CHEM 381	(3)	Inorganic Chemistry 2
MATH 203	(3)	Principles of Statistics 1
MATH 222	(3)	Calculus 3

plus 3 credits, one of:

CHEM 180	(3)	World of Chemistry: Environment
CHEM 181	(3)	World of Chemistry: Food
CHEM 182	(3)	World of Chemistry: Technology
CHEM 183	(3)	World of Chemistry: Drugs

#### **Electives (6 credits)**

6 credits, of which at least 3 credits must be Science Electives.

The electives must be chosen in such a way that the credit counts needed for graduation are satisfied.

#### **27.9.11 Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Biology - Cell/Molecular with Minor Physics for Teachers (135 credits)**

The Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Biology - Cell/Molecular with Minor Physics for Teachers is jointly offered by the Faculty of Science and the Faculty of Education. Separately, the Bachelor of Science degree requires 90 credits (or 120 credits for students who have not completed the basic sciences) and the Bachelor of Education degree requires 120 credits. In the concurrent program, the requirements for the two degrees are combined in such a way that students complete 135 (or 165 credits) to fulfil all the requirements for graduation for both the B.Sc. and the B.Ed.

Graduates of the B.Ed. degree are recommended by the Univ

Notes:

1. Students who have not studied all of Biology, Chemistry and Physics at the grade 12 level or equivalent are strongly advised to include at least one course in the missing discipline in their freshman program.
2. Many students will complete more than 7 courses from the Approved Freshman Science Courses list, particularly those who wish to leave several options open for their choice of major.



Students wishing to take elective courses may choose them from introductory courses offered by departments in the Faculties of Science or of Arts. A list of recommended courses is found at <http://www.mcgill.ca/science/sousa/bsc/freshman/approved>. Certain courses offered by other faculties may also be taken, but some restrictions apply.

Consult the SOUSA website at <http://www.mcgill.ca/science/sousa/bsc/course/outside> for more information about taking courses from other faculties.

### Education Component (60 credits)

60 credits of Education Component consists of:

54 credits of required courses

6 credits of complementary courses

### Required Courses

54 credits

\*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

The English Language Requirement (EDEC 215) must be taken in the Fall semester following the Freshman Year.

EDEC 201	(1)	First Year Professional Seminar
EDEC 215	(0)	English Language Requirement
EDEC 247*	(3)	Policy Issues in Quebec Education
EDEC 254	(1)	Second Professional Seminar (Secondary)
EDEC 262*	(3)	Media, Technology and Education
EDEC 351	(2)	Third Professional Seminar (Secondary)
EDEC 404	(3)	Fourth Year Professional Seminar (Sec)
EDES 335	(3)	Teaching Secondary Science 1
EDES 350	(3)	Classroom Practices (Secondary)
EDES 435	(3)	Teaching Secondary Science 2
EDFE 200	(2)	First Field Experience (K/Elem & Secondary)
EDFE 254	(3)	Second Field Experience (Secondary)
EDFE 351	(8)	Third Field Experience (Secondary)
EDFE 451	(7)	Fourth Field Experience (Secondary)
EDPE 300*	(3)	Educational Psychology
EDPE 304	(3)	Measurement and Evaluation
EDPI 309*	(3)	Exceptional Students
EDPI 341	(3)	Instruction in Inclusive Schools

### Complementary Courses

6 credits selected as follows:

\*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

3 credits, one of the three following courses:

EDEC 233*	(3)	First Nations and Inuit Education
EDEC 248*	(3)	Multicultural Education
EDEC 249*	(3)	Global Education and Social Justice

3 credits, one of the two following courses:

EDEC 260*	(3)	Philosophical Foundations
EDEC 261*	(3)	Philosophy of Catholic Education

**Major Concentration Biology - Cell/Molecular (36 credits)**

The Major Concentration Biology - Cell/Molecular is a planned sequence of courses designed to permit a degree of specialization in cell/molecular biology.

Advising Note: Freshman students should be aware that PHYS 101 and/or PHYS 102 are required for some of the courses in the major and minor concentrations in Biology.

**Required Courses\***

29 credits selected as follows:

\* Students who have already taken CHEM 212 or its equivalent will choose another appropriate complementary course, to be approved by the adviser. Regardless of the substitution, students must take at least 36 credits in this program.

BIOL 200	(3)	Molecular Biology
BIOL 201	(3)	Cell Biology and Metabolism
BIOL 202	(3)	Basic Genetics
BIOL 205	(3)	Biology of Organisms
BIOL 215	(3)	Introduction to Ecology and Evolution
BIOL 300	(3)	Molecular Biology of the Gene
BIOL 301	(4)	Cell and Molecular Laboratory
BIOL 303	(3)	Developmental Biology
CHEM 212*	(4)	Introductory Organic Chemistry 1

**Complementary Courses**

At least 7 credits selected from:

BIOL 306	(3)	Neural Basis of Behaviour
BIOL 313	(3)	Eukaryotic Cell Biology
BIOL 314	(3)	Molecular Biology of Oncogenes
BIOL 370	(3)	Human Genetics Applied
BIOL 373	(3)	Biometry
BIOL 413	(1)	Directed Reading
BIOL 568	(3)	Topics on the Human Genome
BIOL 575	(3)	Human Biochemical Genetics

or other appropriate course at the 300-level or higher with the permission of an adviser.

**Minor Physics (18 credits)**

**Required Course**

3 credits

PHYS 257	(3)	Experimental Methods 1
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**Complementary Courses**

15 credits to be selected as follows:

one of:

PHYS 230 (3) Dynamics of Simple Systems  
PHYS 251 (3) Honours Classical Mechanics 1

one of:

PHYS 232 (3) Heat and Waves  
PHYS 253 (3) Thermal Physics

one of:

PHYS 241 (3) Signal Processing  
PHYS 258 (3) Experimental Methods 2

one of:

PHYS 214 (3) Introductory Astrophysics  
PHYS 225 (3) Musical Acoustics  
PHYS 260 (3) Modern Physics and Relativity  
PHYS 271 (3) Introduction to Quantum Physics

one of:

PHYS 340 (3) Majors Electricity and Magnetism  
PHYS 350 (3) Honours Electricity and Magnetism

**Additional Science Courses (15 credits)**

Perspectives of Scienceoury (15 credits)

To fulfil the requirements for graduation for the Concurrent Bachelor of Science and Bachelor of Education the 135 credits (or 165 credits for students admitted without basic sciences) include the following:

(30 credits of Science Freshman Program (for students admitted without basic sciences))

60 credits of Education Component

69 credits of Science Component consisting of:

- 36 credits of Major Concentration Biology - Organismal

- 18 credits of Minor Chemistry

- 15 credits of Additional Science Courses

6 credits of Electives, of which at least 3 credits must be Science Electives, depending on how many credits count toward both the B.Sc. and the B.Ed. degrees

For details on the counting of credits toward both degrees (double-counting) visit the program website <http://www.mcgill.ca/scienceforteachers/>.

### **B.Sc. Freshman Program**

Students who enter Science in U0 will normally be registered in the Science Freshman Program until they complete their first year. They must consult an adviser in the Science Office for Undergraduate Student Advising (SOUA) to obtain advice and approval of their course selection. Full details are available on the SOUSA website at <http://www.mcgill.ca/science/sousa>. Academic advising is also available by email. The address is [newstudentadvising.science@mcgill.ca](mailto:newstudentadvising.science@mcgill.ca).

Students normally complete 30 credits which must include at least 7 courses from the list of Approved Freshman Science courses, selected as follows:

#### **General Math and Science Breadth**

Six of the freshman courses must satisfy one of the following:

Option 1) 2 courses from MATH and 4 courses from BIOL, CHEM or PHYS;

or

Option 2) 3 courses from MATH and 3 courses from BIOL, CHEM or PHYS.

#### **Science Complementary**

The seventh course is chosen from the list of Approved Freshman Science Courses.

Notes:

1. Students who have not studied all of Biology, Chemistry and Physics at the grade 12 level or equivalent are strongly advised to include at least one course in the missing discipline in their freshman program.
2. Many students will complete more than 7 courses from the Approved Freshman Science Courses list, particularly those who wish to leave several options open for their choice of major.
3. Students entering the Freshman Program must be aware of the department specific requirements when selecting their courses. Detailed advising information is available at <http://www.mcgill.ca/science/sousa/bsc/freshman>.
4. The maximum number of courses per term, required, complementary and elective, is five.

#### **List of Approved Freshman Science Courses**

Select the approv



EDES 335	(3)	Teaching Secondary Science 1
EDES 350	(3)	Classroom Practices (Secondary)
EDES 435	(3)	Teaching Secondary Science 2
EDFE 200	(2)	First Field Experience (K/Elem & Secondary)
EDFE 254	(3)	Second Field Experience (Secondary)
EDFE 351	(8)	Third Field Experience (Secondary)
EDFE 451	(7)	Fourth Field Experience (Secondary)
EDPE 300*	(3)	Educational Psychology
EDPE 304	(3)	Measurement and Evaluation
EDPI 309*	(3)	Exceptional Students
EDPI 341	(3)	Instruction in Inclusive Schools

### Complementary Courses

6 credits selected as follows:

\*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

3 credits, one of the three following courses:

EDEC 233*	(3)	First Nations and Inuit Education
EDEC 248*	(3)	Multicultural Education
EDEC 249*	(3)	Global Education and Social Justice

3 credits, one of the two following courses:

EDEC 260*	(3)	Philosophical Foundations
EDEC 261*	(3)	Philosophy of Catholic Education

### Major Concentration Biology - Organismal (36 credits)

The Major Concentration Biology - Organismal is a planned sequence of courses designed to permit a degree of specialization in organismal biology.

Advising Note: Freshman students should be aware that PHYS 101 and/or PHYS 102 are required for some of the courses in the major and minor concentrations in Biology.

### Required Courses

24 credits

BIOL 200	(3)	Molecular Biology
BIOL 201	(3)	Cell Biology and Metabolism
BIOL 202	(3)	Basic Genetics
BIOL 205	(3)	Biology of Organisms
BIOL 206	(3)	Methods in Biology of Organisms
BIOL 215	(3)	Introduction to Ecology and Evolution
BIOL 304	(3)	Evolution
BIOL 308	(3)	Ecological Dynamics

### Complementary Courses

12 credits selected from:

BIOL 303	(3)	Developmental Biology
BIOL 305	(3)	Animal Diversity
BIOL 306	(3)	Neural Basis of Behaviour
BIOL 307	(3)	Behavioural Ecology/Sociobiology
BIOL 310	(3)	Biodiversity and Ecosystems
BIOL 331	(3)	Ecology/Behaviour Field Course
BIOL 342	(3)	Marine Biology
BIOL 350	(3)	Insect Biology and Control
BIOL 373	(3)	Biometry

**Electives (6 credits)**

6 credits, of which at least 3 credits must be Science Electives.

The electives must be chosen in such a way that the credit counts needed for graduation are satisfied.

**27.9.13 Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Biology - Organismal with Minor Physics for Teachers (135 credits)**

The Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Biology - Organismal with Minor Physics for Teachers is jointly offered by the Faculty of Science and the Faculty of Education. Separately, the Bachelor of Science degree requires 90 credits (or 120 credits for students who have not completed the basic sciences) and the Bachelor of Education degree requires 120 credits. In the concurrent program, the requirements for the two degrees are combined in such a way that students complete 135 (or 165 credits) to fulfil all the requirements for graduation for both the B.Sc. and the B.Ed.

Graduates of the B.Ed. degree are recommended by the University to the Quebec Ministère de l'Éducation, du Loisir et du Sport (MELS) for Quebec Teacher Certification. For more information about teacher certification in Quebec, please refer to the Faculty of Education section under "Overview of Faculty Programs," "Undergraduate Education Programs," and "Quebec Teacher Certification."

The Major Concentration Biology - Organismal with Minor Physics is one of the nine variations of the program and allows students to focus their Science degree in Organismal Biology with a subspecialization in Physics.

To fulfil the requirements for graduation for the Concurrent Bachelor of Science and Bachelor of Education the 135 credits (or 165 credits for students admitted without basic sciences) include the following:

(30 credits of Science Freshman Program (for students admitted without basic sciences))

60 credits of Education Component

70 credits of Science Component consisting of:



3. Students entering the Freshman Program must be aware of the department specific requirements when selecting their courses. Detailed advising information is available at <http://www.mcgill.ca/science/sousa/bsc/freshman>.

4. The maximum number of courses per term, required, complementary and elective, is five.

### List of Approved Freshman Science Courses

Select the approved courses according to the instructions above.

Note:

CHEM 115 (not open to students who are taking or have taken CHEM 110 or CHEM 120)

CHEM 120 (not open to students who have taken CHEM 115)

BIOL 111	(3)	Principles: Organismal Biology
BIOL 112	(3)	Cell and Molecular Biology
CHEM 110	(4)	General Chemistry 1
CHEM 115	(4)	Accelerated General Chemistry: Giants in Science
CHEM 120	(4)	General Chemistry 2
COMP 202	(3)	Introduction to Computing 1
ESYS 104	(3)	The Earth System
MATH 133	(3)	Linear Algebra and Geometry
PSYC 100	(3)	Introduction to Psychology

First calculus course, one of:

MATH 139	(4)	Calculus 1 with Precalculus
MATH 140	(3)	Calculus 1
MATH 150	(4)	Calculus A

Second calculus course, one of:

MATH 141	(4)	Calculus 2
MATH 151	(4)	Calculus B

First physics course, one of:

PHYS 101	(4)	Introductory Physics - Mechanics
PHYS 131	(4)	Mechanics and Waves

Second physics course, one of:

PHYS 102	(4)	Introductory Physics - Electromagnetism
PHYS 142	(4)	Electromagnetism and Optics

### Electives

Students wishing to take elective courses may choose them from introductory courses offered by departments in the Faculties of Science or of Arts. A list of recommended courses is found at <http://www.mcgill.ca/science/sousa/bsc/freshman/approved>. Certain courses offered by other faculties may also be taken, but some restrictions apply.

Consult the SOUSA website at <http://www.mcgill.ca/science/sousa/bsc/course/outside> for more information about taking courses from other faculties.

### Education Component (60 credits)

60 credits of Education Component consists of:

54 credits of required courses

6 credits of complementary courses

### Required Courses

54 credits

\*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

The English Language Requirement (EDEC 215) must be taken in the Fall semester following the Freshman Year.

EDEC 201	(1)	First Year Professional Seminar
EDEC 215	(0)	English Language Requirement
EDEC 247*	(3)	Policy Issues in Quebec Education
EDEC 254	(1)	Second Professional Seminar (Secondary)
EDEC 262*	(3)	Media, Technology and Education
EDEC 351	(2)	Third Professional Seminar (Secondary)
EDEC 404	(3)	Fourth Year Professional Seminar (Sec)
EDES 335	(3)	Teaching Secondary Science 1
EDES 350	(3)	Classroom Practices (Secondary)
EDES 435	(3)	Teaching Secondary Science 2
		First Field Experience (K/Elem & Secondary)

Advising Note: Freshman students should be aware that PHYS 101 and/or PHYS 102 are required for some of the courses in the major and minor concentrations in Biology.

PHYS 230 (3) Dynamics of Simple Systems  
PHYS 251 (3) Honours Classical Mechanics 1

one of:

PHYS 232 (3) Heat and Waves  
PHYS 253 (3) Thermal Physics

one of:

PHYS 241 (3) Signal Processing  
PHYS 258 (3) Experimental Methods 2

one of:

PHYS 214 (3) Introductory Astrophysics  
PHYS 225 (3) Musical Acoustics  
PHYS 260 (3) Modern Physics and Relativity  
PHYS 271 (3) Introduction to Quantum Physics

one of:

PHYS 340 (3) Majors Electricity and Magnetism  
PHYS 350 (3) Honours Electricity and Magnetism

**Additional Science Courses (15 credits)**

BIOL 210 (3) Perspectives of Science  
MATH 203 (3) Principles of Statistics 1  
Calculus583.0tics 1

To fulfil the requirements for graduation for the Concurrent Bachelor of Science and Bachelor of Education the 135 credits (or 165 credits for students admitted without basic sciences) include the following:

(30 credits of Science Freshman Program (for students admitted without basic sciences))

60 credits of Education Component

69 credits of Science Component consisting of:

- 36 credits of the Major Concentration Chemistry

- 24 credits of the Minor Biology

- 9 credits of Additional Science Courses

6 credits of Electives, of which at least 3 credits must be Science Electives, depending on how many credits count toward both the B.Sc. and the B.Ed. degrees

For details on the counting of credits toward both degrees (double-counting) visit the program website <http://www.mcgill.ca/scienceforteachers/>.

### **B.Sc. Freshman Program**

Students who enter Science in UO will normally be registered in the Science Freshman Program until they complete their first year. They must consult an adviser in the Science Office for Undergraduate Student Advising (SOUSA) to obtain advice and approval of their course selection. Full details are available on the SOUSA website at <http://www.mcgill.ca/scienceforteachers/>. Full details are available on the SOUSA website at <http://www.mcgill.ca/scienceforteachers/>.

MATH 133	(3)	Linear Algebra and Geometry
PSYC 100	(3)	Introduction to Psychology

First calculus course, one of:

MATH 139	(4)	Calculus 1 with Precalculus
MATH 140	(3)	Calculus 1
MATH 150	(4)	Calculus A

Second calculus course, one of:

MATH 141	(4)	Calculus 2
MATH 151	(4)	Calculus B

First physics course, one of:

PHYS 101	(4)	Introductory Physics - Mechanics
PHYS 131	(4)	Mechanics and Waves

Second physics course, one of:

PHYS 102	(4)	Introductory Physics - Electromagnetism
PHYS 142	(4)	Electromagnetism and Optics

### Electives

Students wishing to take elective courses may choose them from introductory courses offered by departments in the Faculties of Science or of Arts. A list of recommended courses is found at <http://www.mcgill.ca/science/sousa/bsc/freshman/approved>. Certain courses offered by other faculties may also be taken, but some restrictions apply.

Consult the SOUSA website at <http://www.mcgill.ca/science/sousa/bsc/course/outside> for more information about taking courses from other faculties.

### Education Component (60 credits)

60 credits of Education courses:

54 credits of required courses

6 credits of complementary courses

### Required Courses

54 credits

\*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electiv

EDES 335	(3)	Teaching Secondary Science 1
EDES 350	(3)	Classroom Practices (Secondary)
EDES 435	(3)	Teaching Secondary Science 2
EDFE 200	(2)	First Field Experience (K/Elem & Secondary)
EDFE 254	(3)	Second Field Experience (Secondary)
EDFE 351	(8)	Third Field Experience (Secondary)
EDFE 451	(7)	Fourth Field Experience (Secondary)
EDPE 300*	(3)	Educational Psychology
EDPE 304	(3)	Measurement and Evaluation
EDPI 309*	(3)	Exceptional Students

18 credits selected from:

CHEM 219	(3)	Introduction to Atmospheric Chemistry
CHEM 263	(1)	Introductory Physical Chemistry 2 Laboratory
	(3)	Introductory Organic Chemistry 3



The Major Concentration Chemistry with Minor Physics is one of the nine variations of the program and allows students to focus their Science degree in Chemistry with a subspecialization in Physics.

To fulfil the requirements for graduation for the Concurrent Bachelor of Science and Bachelor of Education the 135 credits (or 165 credits for students admitted without basic sciences) include the following:

(30 credits of Science Freshman Program (for students admitted without basic sciences))

60 credits of Education Component

69 credits of Science Component consisting of:

- 36 credits of the Major Concentration Chemistry

- 18 credits of the Minor Physics

- 15 credits of Additional Science Courses

6 credits of Electives, of which at least 3 credits must be Science Electives, depending on how many credits count toward both the B.Sc. and the B.Ed. degrees

For details on the counting of credits toward both degrees (double-counting) visit the program website <http://www.mcgill.ca/scienceforteachers/>.

### B.Sc. Freshman Program

Students who enter Science in U0 will normally be registered in the Science Freshman Program until they complete their first year. They must consult an adviser in the Science Office for Undergraduate Student Advising (SOUSA) to obtain advice and approval of their course selection. Full details are available on the SOUSA website at <http://www.mcgill.ca/science/sousa>. Academic advising is also available by email. The address is [newstudentadvising.science@mcgill.ca](mailto:newstudentadvising.science@mcgill.ca).

Students normally complete 30 credits which must include at least 7 courses from the list of Approved Freshman Science courses, selected as follows:

### General Math and Science Breadth

Six of the freshman courses must satisfy one of the following:

Option 1) 2 courses from MATH and 4 courses from BIOL, CHEM or PHYS;

or

Option 2) 3 courses from MATH and 3 courses from BIOL, CHEM or PHYS.

### Science Complementary

The seventh course is chosen from the list of Approved Freshman Science Courses.

Notes:

1. Students who have not studied all of Biology, Chemistry and Physics at the grade 12 level or equivalent are strongly advised to include at least one course in the missing discipline in their freshman program.
2. Many students will complete more than 7 courses from the Approved Freshman Science Courses list, particularly those who wish to leave several options open for their choice of major.
3. Students entering the Freshman Program must be aware of the department specific requirements when selecting their courses. Detailed advising information is available at <http://www.mcgill.ca/science/sousa/bsc/freshman>.
4. The maximum number of courses per term, required, complementary and elective, is five.

### List of Approved Freshman Science Courses

Select the approved courses according to the instructions above.

Note:

CHEM 115 (not open to students who are taking or have taken CHEM 110 or CHEM 120)

CHEM 120 (not open to students who have taken CHEM 115)

BIOL 111	(3)	Principles: Organismal Biology
BIOL 112	(3)	Cell and Molecular Biology
CHEM 110	(4)	General Chemistry 1
CHEM 115	(4)	Accelerated General Chemistry: Giants in Science
CHEM 120	(4)	General Chemistry 2
COMP 202	(3)	Introduction to Computing 1

ESYS 104	(3)	The Earth System
MATH 133	(3)	Linear Algebra and Geometry
PSYC 100	(3)	Introduction to Psychology

First calculus course, one of:

MATH 139	(4)	Calculus 1 with Precalculus
MATH 140	(3)	Calculus 1
MATH 150	(4)	Calculus A

Second calculus course, one of:

MATH 141	(4)	Calculus 2
MATH 151	(4)	Calculus B

First physics course, one of:

PHYS 101	(4)	Introductory Physics - Mechanics
PHYS 131	(4)	Mechanics and Waves

Second physics course, one of:

PHYS 102	(4)	Introductory Physics - Electromagnetism
PHYS 142	(4)	Electromagnetism and Optics

### **Electives**

Students wishing to take elective courses may choose them from introductory courses offered by departments in the Faculties of Science or of Arts. A list of recommended courses is found at <http://www.mcgill.ca/science/sousa/bsc/freshman/approved>. Certain courses offered by other faculties may also be taken, but some restrictions apply.

Consult the SOUSA website at <http://www.mcgill.ca/science/sousa/bsc/course/outside> for more information about taking courses from other faculties.

### **Education Component (60 credits)**

60 credits of Education courses:

54 credits of required courses

6 credits of complementary courses

### **Required Courses**

54 credits

\*Note: The courses marked with an asterisk are counted to

EDEC 404	(3)	Fourth Year Professional Seminar (Sec)
EDES 335	(3)	Teaching Secondary Science 1
EDES 350	(3)	Classroom Practices (Secondary)
EDES 435	(3)	Teaching Secondary Science 2
EDFE 200	(2)	First Field Experience (K/Elem & Secondary)
EDFE 254	(3)	Second Field Experience (Secondary)
EDFE 351	(8)	Third Field Experience (Secondary)
EDFE 451	(7)	Fourth Field Experience (Secondary)
EDPE 300*	(3)	Educational Psychology
EDPE 304	(3)	Measurement and Evaluation
EDPI 309*	(3)	Exceptional Students
EDPI 341	(3)	Instruction in Inclusive Schools

### **Complementary Courses**

### Complementary Courses

18 credits selected from:

CHEM 219	(3)	Introduction to Atmospheric Chemistry
CHEM 263	(1)	Introductory Physical Chemistry 2 Laboratory
CHEM 302	(3)	Introductory Organic Chemistry 3
CHEM 307	(3)	Analytical Chemistry of Pollutants
CHEM 334	(3)	Advanced Materials
CHEM 367	(3)	Instrumental Analysis 1
CHEM 381	(3)	Inorganic Chemistry 2
CHEM 382	(3)	Organic Chemistry: Natural Products
CHEM 531	(3)	Chemistry of Inorganic Materials
CHEM 571	(3)	Polymer Synthesis
CHEM 582	(3)	Supramolecular Chemistry
CHEM 591	(3)	Bioinorganic Chemistry

### Minor Physics (18 credits)

#### Required Course

3 credits

PHYS 257	(3)	Experimental Methods 1
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#### Complementary Courses

15 credits to be selected as follows:

one of:

one of:

PHYS 340	(3)	Majors Electricity and Magnetism
PHYS 350	(3)	Honours Electricity and Magnetism

**Additional Science Courses (15 credits)**

BIOL 210	(3)	Perspectives of Science
MATH 203	(3)	Principles of Statistics 1
MATH 222	(3)	Calculus 3
MATH 223	(3)	Linear Algebra
MATH 314	(3)	Advanced Calculus

**Electives (6 credits)**

6 credits, of which at least 3 credits must be Science Electives.

The electives must be chosen in such a way that the credit counts needed for graduation are satisfied.

**27.9.16 Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Physics with Minor Biology for Teachers (135 credits)**

The Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Physics with Minor Biology for Teachers is jointly offered by the Faculty of Science and the Faculty of Education. Separately, the Bachelor of Science degree requires 90 credits (or 120 credits for students who have not completed the basic sciences) and the Bachelor of Education degree requires 120 credits. In the concurrent program, the requirements for the two degrees are combined in such a way that students complete 135 (or 165 credits) to fulfil all the requirements for graduation for both the B.Sc. and the B.Ed.

Graduates of the B.Ed. degree are recommended by the Uni

Option 1) 2 courses from MATH and 4 courses from BIOL, CHEM or PHYS;

or

Option 2) 3 courses from MATH and 3 courses from BIOL, CHEM or PHYS.

### Science Complementary

The seventh course is chosen from the list of Approved Freshman Science Courses.

Notes:

1. Students who have not studied all of Biology, Chemistry and Physics at the grade 12 level or equivalent are strongly advised to include at least one course in the missing discipline in their freshman program.
2. Many students will complete more than 7 courses from the Approved Freshman Science Courses list, particularly those who wish to leave several options open for their choice of major.
3. Students entering the Freshman Program must be aware of the department specific requirements when selecting their courses. Detailed advising information is available at <http://www.mcgill.ca/science/sousa/bsc/freshman>.
4. The maximum number of courses per term, required, complementary and elective, is five.

### List of Approved Freshman Science Courses

Select the approved courses according to the instructions above.

Note:

CHEM 115 (not open to students who are taking or have taken CHEM 110 or CHEM 120)

CHEM 120 (not open to students who have taken CHEM 115)

BIOL 111	(3)	Principles: Organismal Biology
BIOL 112	(3)	Cell and Molecular Biology
CHEM 110	(4)	General Chemistry 1
CHEM 115	(4)	Accelerated General Chemistry: Giants in Science General Chemistry 2Princiogy

PHYS 102	(4)	Introductory Physics - Electromagnetism
PHYS 142	(4)	Electromagnetism and Optics

### Electives

Students wishing to take elective courses may choose them from introductory courses offered by departments in the Faculties of Science or of Arts. A list of recommended courses is found at <http://www.mcgill.ca/science/sousa/bsc/freshman/approved>. Certain courses offered by other faculties may also be taken, but some restrictions apply.

Consult the SOUSA website at <http://www.mcgill.ca/science/sousa/bsc/course/outside> for more information about taking courses from other faculties.

### Education Component (60 credits)

60 credits of Education Component consists of:

54 credits of required courses

6 credits of complementary courses

### Required Courses

54 credits

\*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

The English Language Requirement (EDEC 215) must be taken in the Fall semester following the Freshman Year.

EDEC 201	(1)	First Year Professional Seminar
EDEC 215	(0)	English Language Requirement
EDEC 247*	(3)	Policy Issues in Quebec Education
EDEC 254	(1)	Second Professional Seminar (Secondary)
EDEC 262*	(3)	Media, Technology and Education
EDEC 351	(2)	Third Professional Seminar (Secondary)
EDEC 404	(3)	Fourth Year Professional Seminar (Sec)
EDES 335	(3)	Teaching Secondary Science 1
EDES 350	(3)	Classroom Practices (Secondary)
EDES 435	(3)	Teaching Secondary Science 2
EDFE 200	(2)	First Field Experience (K/Elem & Secondary)
EDFE 254	(3)	Second Field Experience (Secondary)
EDFE 351	(8)	Third Field Experience (Secondary)
EDFE 451	(7)	Fourth Field Experience (Secondary)
EDPE 300*	(3)	Educational Psychology
EDPE 304	(3)	Measurement and Evaluation
EDPI 309*	(3)	Exceptional Students
EDPI 341	(3)	Instruction in Inclusive Schools

### Complementary Courses

6 credits selected as follows:

\*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

3 credits, one of the three following courses:

EDEC 233*	(3)	First Nations and Inuit Education
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EDEC 248*	(3)	Multicultural Education
EDEC 249*	(3)	Global Education and Social Justice

3 credits, one of the two following courses:

EDEC 260*	(3)	Philosophical Foundations
EDEC 261*	(3)	Philosophy of Catholic Education

### **Major Concentration Physics (36 credits)**

The Major Concentration Physics is a planned sequence of courses designed to permit a degree of specialization in this discipline.

#### **Required Courses\***

30 credits selected as follows:

\*Note: Required courses taken at CEGEP or elsewhere that are not credited toward the Concurrent B.Sc. and B.Ed. must be replaced by courses from the Complementary Course List equal to or exceeding their credit value. Regardless of the substitution, students must take at least 36 credits in this program.

MATH 222	(3)	Calculus 3
MATH 223	(3)	Linear Algebra
MATH 314	(3)	Advanced Calculus
MATH 315	(3)	Ordinary Differential Equations
PHYS 230	(3)	Dynamics of Simple Systems
PHYS 232	(3)	Heat and Waves
PHYS 257	(3)	Experimental Methods 1
	(3)	Thermal and Statistical Physics



BIOL 200	(3)	Molecular Biology
BIOL 201	(3)	Cell Biology and Metabolism
BIOL 202	(3)	Basic Genetics
BIOL 205	(3)	Biology of Organisms
BIOL 215	(3)	Introduction to Ecology and Evolution

### Complementary Courses

9 - 10 credits of complementary courses, CHEM 212 and 6 selected from the Biology Department's course offerings, at the 300-level or above.

\*Note: Students who have already taken CHEM 212 or its equivalent will choose another appropriate course, to be approved by the adviser.

CHEM 212*	(4)	Introductory Organic Chemistry 1
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### Additional Science Courses (9 credits)

9 credits selected as follows:

6 credits:

BIOL 210	(3)	Perspectives of Science
MATH 203	(3)	Principles of Statistics 1

plus 3 credits, one additional Physics (PHYS) course approved by the Physics Department.

### Electives (6 credits)

6 credits, of which at least 3 credits must be Science Electives.

The electives must be chosen in such a way that the credit counts needed for graduation are satisfied.

## 27.9.17 Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Physics with Minor Chemistry for Teachers (135 credits)

The Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Physics with Minor Chemistry for Teachers is jointly offered by the Faculty of Science and the Faculty of Education. Separately, the Bachelor of Science degree requires 90 credits (or 120 credits for students who have not completed the basic sciences) and the Bachelor of Education degree requires 120 credits. In the concurrent program, the requirements for the two degrees are combined in such a way that students complete 135 (or 165 credits) to fulfil all the requirements for graduation for both the B.Sc. and the B.Ed.

Graduates of the B.Ed. degree are recommended by the University to the Quebec Ministère de l'Éducation, du Loisir et du Sport (MELS) for Quebec Teacher Certification. For more information about teacher certification in Quebec, please refer to the Faculty of Education section under "Overview of Faculty Programs," "Undergraduate Education Programs," and "Quebec Teacher Certification."

The Major Concentration Physics with Minor Chemistry is one of the nine variations of the program and allows students to focus their Science degree in Physics with a subspecialization in Chemistry.

To fulfil the requirements for graduation for the Concurrent Bachelor of Science and Bachelor of Education the 135 credits (or 165 credits for students admitted without basic sciences) include the following:

(30 credits of Science Freshman Program (for students admitted without basic sciences))

60 credits of Education Component

69 credits of Science Component consisting of:

- 36 credits of the Major Concentration Physics
- 18 credits of the Minor Chemistry
- 15 credits of Additional Science Courses

6 credits of Electives, of which at least 3 credits must be Science Electives, depending on how many credits count toward both the B.Sc. and the B.Ed. degrees

For details on the counting of credits toward both degrees (double-counting) visit the program website <http://www.mcgill.ca/scienceforteachers/>.

### B.Sc. Freshman Program

Students who enter Science in UO will normally be registered in the Science Freshman Program until they complete their first year. They must consult an adviser in the Science Office for Undergraduate Student Advising (SOUSA) to obtain advice and approval of their course selection. Full details are available on the SOUSA website at <http://www.mcgill.ca/science/sousa>. Academic advising is also available by email. The address is [newstudentadvising.science@mcgill.ca](mailto:newstudentadvising.science@mcgill.ca).

Students normally complete 30 credits which must include at least 7 courses from the list of Approved Freshman Science courses, selected as follows:

### General Math and Science Breadth

Six of the freshman courses must satisfy one of the following:

Option 1) 2 courses from MATH and 4 courses from BIOL, CHEM or PHYS;

or

Option 2) 3 courses from MATH and 3 courses from BIOL, CHEM or PHYS.

### Science Complementary

The seventh course is chosen from the list of Approved Freshman Science Courses.

Notes:

1. Students who have not studied all of Biology, Chemistry and Physics at the grade 12 level or equivalent are strongly advised to include at least one course in the missing discipline in their freshman program.
2. Many students will complete more than 7 courses from the Approved Freshman Science Courses list, particularly those who wish to leave several options open for their choice of major.
3. Students entering the Freshman Program must be aware of the department specific requirements when selecting their courses. Detailed advising information is available at <http://www.mcgill.ca/science/sousa/bsc/freshman>.
4. The maximum number of courses per term, required, complementary and elective, is five.

### List of Approved Freshman Science Courses

Select the approved courses according to the instructions above.

Note:

CHEM 115 (not open to students who are taking or have taken CHEM 110 or CHEM 120)

CHEM 120 (not open to students who ha

BIOL 111	(3)	Principles: Organismal Biology
BIOL 112	(3)	Cell and Molecular Biology
CHEM 110	(4)	General Chemistry 1
CHEM 115	(4)	Accelerated General Chemistry: Giants in Science
CHEM 120	(4)	General Chemistry 2
COMP 202	(3)	Introduction to Computing 1
ESYS 104	(3)	The Earth System
MATH 133	(3)	Linear Algebra and Geometry
PSYC 100	(3)	Introduction to Psychology

First calculus course, one of:

MATH 139	(4)	Calculus 1 with Precalculus
MATH 140	(3)	Calculus 1
MATH 150	(4)	Calculus A

Second calculus course, one of:

MATH 141	(4)	Calculus 2
MATH 151	(4)	Calculus B

First physics course, one of:

PHYS 101	(4)	Introductory Physics - Mechanics
PHYS 131	(4)	Mechanics and Waves

Second physics course, one of:

PHYS 102	(4)	Introductory Physics - Electromagnetism
PHYS 142	(4)	Electromagnetism and Optics

### **Electives**

Students wishing to take elective courses may choose them from introductory courses offered by departments in the Faculties of Science or of Arts. A list of recommended courses is found at <http://www.mcgill.ca/science/sousa/bsc/freshman/approved>. Certain courses offered by other faculties may also be taken, but some restrictions apply.

Consult the SOUSA website at <http://www.mcgill.ca/science/sousa/bsc/course/outside> for more information about taking courses from other faculties.

### **Education Component (60 credits)**

60 credits of Education Component consists of:

54 credits of required courses

6 credits of complementary courses

### **Required Courses**

54 credits

\*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

The English Language Requirement (EDEC 215) must be taken in the F

## **Complementary Courses**

6 credits selected as follows:

\*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

3 credits, one of the three following courses:

EDEC 233*	(3)	First Nations and Inuit Education
EDEC 248*	(3)	Multicultural Education
EDEC 249*	(3)	Global Education and Social Justice

3 credits, one of the two following courses:

**Minor Chemistry (18 credits)**

**Required Courses**

18 credits selected as follows:

\* denotes courses with CEGEP equivalents.

Substitutions for these by more advanced courses may be made at the discretion of the adviser.

CHEM 203 (3) Survey of Physical Chemistry

CHEM 212\* (4) Introductory Organic Chemistry I

segBT/F0 83CHEM 212 499.50 295.4Ad((4))Tj1 8.5011499.50 295.480 Introductory Organic Chemistry I CourTj1 0 021 3499.50 295.4ed c Tm5(y (18 credits)es)Tj/F1 8.1 Tf1 0 0 148 0 1367



MATH 139	(4)	Calculus 1 with Precalculus
MATH 140	(3)	Calculus 1
MATH 150	(4)	Calculus A

Second calculus course, one of:

MATH 141	(4)	Calculus 2
MATH 151	(4)	Calculus B

First physics course, one of:

PHYS 101	(4)	Introductory Physics - Mechanics
PHYS 131	(4)	Mechanics and Waves

Second physics course, one of:

PHYS 102	(4)	Introductory Physics - Electromagnetism
PHYS 142	(4)	Electromagnetism and Optics

### Electives

Students wishing to take elective courses may choose them from introductory courses offered by departments in the Faculties of Science or of Arts. A list of recommended courses is found at <http://www.mcgill.ca/science/sousa/bsc/freshman/approved>. Certain courses offered by other faculties may also be taken, but some restrictions apply.

Consult the SOUSA website at <http://www.mcgill.ca/science/sousa/bsc/course/outside> for more information about taking courses from other faculties.

### Education Component (60 credits)

60 credits of Education Component consists of:

54 credits of required courses

6 credits of complementary courses

### Required Courses

54 credits

\*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

The English Language Requirement (EDEC 215) must be taken in the Fall semester following the Freshman Year.

EDEC 201	(1)	First Year Professional Seminar
EDEC 215	(0)	English Language Requirement
EDEC 247*	(3)	Policy Issues in Quebec Education
EDEC 254	(1)	Second Professional Seminar (Secondary)
EDEC 262*	(3)	Media, Technology and Education
EDEC 351	(2)	Third Professional Seminar (Secondary)
EDEC 404	(3)	Fourth Year Professional Seminar (Sec)
EDES 350	(3)	Classroom Practices (Secondary)
EDES 353	(3)	Teaching Secondary Mathematics 1
EDES 453	(3)	Teaching Secondary Mathematics 2
EDFE 200	(2)	First Field Experience (K/Elem & Secondary)

EDFE 254	(3)	Second Field Experience (Secondary)
EDFE 351	(8)	Third Field Experience (Secondary)
EDFE 451	(7)	Fourth Field Experience (Secondary)
EDPE 300*	(3)	Educational Psychology
EDPE 304	(3)	Measurement and Evaluation
EDPI 309*	(3)	Exceptional Students
EDPI 341	(3)	Instruction in Inclusive Schools

### Complementary Courses

6 credits selected as follows:

\*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

3 credits, one of the three following courses:

EDEC 233*	(3)	First Nations and Inuit Education
EDEC 248*	(3)	Multicultural Education
EDEC 249*	(3)	Global Education and Social Justice

3 credits, one of the two following courses:

EDEC 260*	(3)	Philosophical Foundations
EDEC 261*	(3)	Philosophy of Catholic Education

### Major Mathematics (54 credits)

#### Program Prerequisites

Students entering the Major program are normally expected to have completed the courses below or their equivalents. Otherwise they will be required to make up any deED23 Tm(mak)Tj0 0 1 282.851 129.113 Tm(e up an)rcial ab0 0 1 257.175 Tm7423 Tm(e up an)0 1 282.851 5837163 Tm(e up an)Trsesits)Tj1e B.Sc.



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**27.9.19 Concurrent Bachelor of Music (B.Mus.) - Major Music Education and Bachelor of Education (B.Ed.) - Music Elementary and Secondary (137 credits)**

The Bachelor of Music (B.Mus.) - Major Music Education, when offered concurrently with the The Bachelor of Education - Major Music Elementary and Secondary, provides students with the opportunity to obtain a Bachelor of Music degree and a Bachelor of Education degree after the completion of 137 credits, normally five years (172 credits or six years for out-of-province students\*). The concurrent program combines academic studies in music, professional studies and field experience. The two degrees are awarded during the same convocation period.

\*Out-of-province students or those who have not completed Quebec CEGEP, French Baccalaureate, International Baccalaureate, or at least one year of university studies prior to commencing the Concurrent Program.

To be admitted to the Concurrent Program, students must satisfy the regular admission requirements of the Schulich School of Music and Faculty of Education. Normally, students will be admitted to both components of the Concurrent Program simultaneously. Applicants who already hold a Bachelor of Music degree should apply to the Faculty of Education. Students who hav

MUSP 170	(1)	Musicianship (Keyboard) 1
MUSP 171	(1)	Musicianship (Keyboard) 2
MUTH 150	(3)	Theory and Analysis 1
MUTH 151	(3)	Theory and Analysis 2

**Required Music Components (49 credits)**

49 credits of required Music courses distributed as follows:

25 credits of Music Education

11 credits of Theory

4 credits of Musicianship

3 credits of Music History

6 credits of Performance

**Music Education**

25 credits:

MUCT 235	(3)	Vocal Techniques
MUGT 215	(1)	Basic Conducting Techniques
MUGT 354	(3)	Music for Children
MUGT 358	(3)	General Music for Adults and Teenagers
MUGT 401	(3)	Issues in Music Education
MUIT 202	(3)	Woodwind Techniques
MUIT 203	(3)	Brass Techniques
MUIT 204	(3)	Percussion Techniques
MUIT 356	(3)	Jazz Instruction: Philosophy and Techniques

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MUIN 280	(3)	BMus Practical Lessons 3
MUIN 281	(3)	BMus Practical Lessons 4
MUIN 283	(0)	BMus Concentration Final Examination

### **Complementary Music Components (21 credits)**

21 credits of complementary Music courses distributed as follows:

9 credits of Music Education

2 credits of Musicianship

6 credits of Music History

4 credits of Performance

#### **Music Education**

3 credits, one of:

MUIT 201	(3)	String Techniques
MUIT 250	(3)	Guitar Techniques

3 credits, one of:

MUCT 315	(3)	Choral Conducting 1
MUIT 315	(3)	Instrumental Conducting

3 credits, select EDEA 362 or any course with a prefix of MUIT or MUGT.

EDEA 362	(3)	Movement, Music and Communication
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#### **Musicianship**

2 credits from:

MUSP 324	(2)	Musicianship for Strings
MUSP 330	(2)	Musicianship for Woodwind
MUSP 335	(2)	Musicianship for Brass
MUSP 346	(2)	Post-Tonal Musicianship
MUSP 350	(2)	Musicianship for Pianists
MUSP 353	(2)	Musicianship for Voice
MUSP 354	(2)	Introduction to Improvisation and Ornamentation
MUSP 355	(2)	Musicianship for Percussion
MUSP 381	(2)	Singing Renaissance Notation

#### **Music History**

6 credits of courses with a MUHL or a MUPP prefix.

#### **Performance**

4 credits from:

MUEN 563	(2)	Jazz Vocal Workshop
MUEN 572	(2)	Cappella Antica
MUEN 573	(2)	Baroque Orchestra

MUEN 587	(2)	Cappella McGill
MUEN 590	(2)	McGill Winds
MUEN 592	(2)	Chamber Jazz Ensemble
MUEN 593	(2)	Choral Ensembles
MUEN 594	(2)	Contemporary Music Ensemble
MUEN 597	(2)	Orchestral Ensembles

**Electives (12 credits)**

9 credits of free electives

3 credits of non-music electives

**Required Education Courses (45 credits)**

\*Note: Students take either EDEE 355 or EDPE 304 but not both.

EDEA 206	(1)	1st Year Professional Seminar
EDEA 407	(3)	Final Year Professional Seminar Music
EDEA 442	(3)	Elementary Music Curriculum and Instruction
EDEA 472	(3)	Secondary Music Curriculum and Instruction
EDEC 215	(0)	English Language Requirement
EDEC 247	(3)	Policy Issues in Quebec Education
EDEE 355*	(3)	Classroom-based Evaluation
EDES 350	(3)	Classroom Practices (Secondary)
EDFE 205	(2)	First Field Experience (Music)
EDFE 208	(3)	Second Field Experience (Music)
EDFE 308	(8)	Third Field Experience (Music)
EDFE 407	(7)	Fourth Field Experience (Music)
EDPE 300	(3)	Educational Psychology
EDPE 304*	(3)	Measurement and Evaluation
EDPI 309	(3)	Exceptional Students

**Complementary Education Courses (10 credits)**

10 credits distributed as follows:

3 credits from:

EDEC 233	(3)	First Nations and Inuit Education
EDEC 248	(3)	Multicultural Education
EDEC 249	(3)	Global Education and Social Justice

1 credit from:

EDEC 253	(1)	Second Professional Seminar (Kindergarten/Elementary)
EDEC 254	(1)	Second Professional Seminar (Secondary)

3 credits from:

EDEC 260	(3)	Philosophical Foundations
EDEC 261	(3)	Philosophy of Catholic Education

3 credits from:

EDEC 262	(3)	Media, Technology and Education
EDPT 200	(3)	Integrating Educational Technology in Classrooms
EDPT 204	(3)	Educational Media 1
EDPT 341	(3)	Instructional Programming 1
MUGT 301	(3)	Technology and Media for Music Education

### **27.9.19.1 Admissions to the Concurrent Bachelor of Music (Major Music Education) and Bachelor of Education in Music Program**

Applicants who wish to pursue a music specialist teacher education degree should apply to the Concurrent Bachelor of Music (Music Education)/Bachelor of Education in Music program. Students who have partially completed a Bachelor of Music program are eligible to apply for advanced standing in the Concurrent program.

Application to the Concurrent B.Mus./B.Ed. program may be made online at [www.mcgill.ca/applying](http://www.mcgill.ca/applying). Information is available on that site or may be obtained from:

Admissions Office  
 McGill University  
 Schulich School of Music  
 555 Sherbrooke Street West  
 Montreal, QC H3A 1E3  
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Please note that graduates of teacher education programs are recommended by the University for Quebec certification to the Quebec Ministère de l'Éducation, du Loisir et du Sport (MELS). For more information about teacher certification in Quebec, please refer to the Faculty of Education section under "Overview of Faculty Programs," "Undergraduate Education Programs," and "Quebec Teacher Certification."

### **Freshman Program**

Students normally complete 30 credits in their freshman (U0) year.

The freshman year is the time to take introductory level courses in the subjects taught in Elementary school, as well as to explore areas that are not normally taken as teachable subject area courses within B.Ed. programs (e.g. Sociology, Psychology, Political Science, etc.). Students should also investigate the possibility of taking one of the First Year Seminar courses offered by the Faculty of Arts or the Faculty of Science.

In addition, in consultation with the program adviser, students may select courses from the recommended course list below or other courses. Included in the list are sev

EDER 360	(2)	Ethics and Religious Culture (K/Elementary)
EDFE 200	(2)	First Field Experience (K/Elem & Secondary)
EDFE 256	(3)	Second Field Experience (Kindergarten/Elementary)
EDPE 308	(3)	Third Field Experience (Kindergarten/Elementary)
EDFE 406	(7)	Fourth Field Experience (K/Elem)
EDPE 300	(3)	Educational Psychology
EDPI 309	(3)	Exceptional Students
EDPI 341	(3)	Instruction in Inclusive Schools

### Complementary Courses (18 credits)

18 credits of courses selected as described below.

#### Multicultural Education

3 credits from:

EDEC 233	(3)	First Nations and Inuit Education
EDEC 248	(3)	Multicultural Education
EDEC 249	(3)	Global Education and Social Justice

#### Philosophy of Education

3 credits from:

EDEC 260	(3)	Philosophical Foundations
EDEC 261	(3)	Philosophy of Catholic Education

#### Media, Technology, Computers and Education

3 credits from:

\*Note: Courses identified with an asterisk ("\*") are recommended for students with a background in computers or other media applications in education.

EDEC 262	(3)	Media, Technology and Education
EDPT 341*	(3)	Instructional Programming 1
EDPT 420*	(3)	Media Literacy for Education

#### Ethics, Ethics,



EDEA 345 (3) Music Curriculum and Instruction for Generalists

### **Kindergarten & Elementary Teaching Methods - Physical Education or English Second Language**

0 - 3 credits from:

Students may select both their methods courses from the list above for Art, Drama, or Music.

\*Note: Courses marked with an asterisk ("\*") have EDSL 350 "Essentials of English Grammar" as a prerequisite.

EDKP 332	(3)	Physical Education Curriculum and Instruction
EDSL 330*	(3)	L2 Literacy Development
EDSL 447*	(3)	Methods in TESL 1

### **Kindergarten & Elementary Education - Subject Areas (21 credits)**

21 credits selected in consultation with the program adviser as follows:

12 credits in "teachable" subject area courses of the elementary school curriculum from the lists below for Art, English, Ethics and Religious Culture, French, Mathematics, Music, Natural Sciences, Physical Education, and Social Studies.

And

9 credits, 3 credits from each of any three subject areas not chosen above.

No more than 12 credits may be selected from any single course list.

#### **Art**

Students may select up to 12 credits from this list and from Art History (ARTH) courses.

EDEA 204	(3)	Drawing
EDEA 205	(3)	Painting 2
EDEA 241	(3)	Basic Art Media for Classroom
EDEA 296	(3)	Basic Design
EDEA 304	(3)	Painting 3
EDEA 305	(3)	Painting 4
EDEA 307	(3)	Drawing 2
EDEA 410	(3)	Aesthetics and Art for the Classroom
EDEA 496	(3)	Sculpture 1
EDEA 497	(3)	Sculpture 2

#### **English**

Students may select up to 12 credits from this list.

EDEE 325*	(3)	Children's Literature
EDES 366	(3)	Literature for Young Adults
EDSL 350	(3)	Essentials of English Grammar
ENGL 200	(3)	Survey of English Literature 1
ENGL 201	(3)	Survey of English Literature 2
ENGL 204	(3)	English Literature and the Bible
ENGL 215	(3)	Introduction to Shakespeare
ENGL 225	(3)	American Literature 1
ENGL 226	(3)	American Literature 2
ENGL 227	(3)	American Literature 3
ENGL 228	(3)	Canadian Literature 1
ENGL 229	(3)	Canadian Literature 2
ENGL 230	(3)	Introduction to Theatre Studies
ENGL 237	(3)	Introduction to Study of a Literary Form
ENGL 275	(3)	Introduction to Cultural Studies
ENGL 276	(3)	Methods of Cultural Analysis
ENGL 279	(3)	Introduction to Film as Art
ENGL 280	(3)	Introduction to Film as Mass Medium
ENGL 314	(3)	20th Century Drama
ENGL 345	(3)	Literature and Society
ENGL 347	(3)	Great Writings of Europe 1
ENGL 349	(3)	English Literature and Folklore 1
ENGL 378	(3)	Media and Culture
ENGL 386	(3)	Fans, Celebrities, Audiences
ENGL 388	(3)	Studies in Popular Culture
LING 200	(3)	Introduction to the Study of Language
LING 201	(3)	Introduction to Linguistics

### **Ethics and Religious Culture**

Students may select up to 12 credits from this list. Students may also choose other Religious Studies (RELG) courses with the permission of the program adviser.

\*Note: Courses marked with an asterisk ("\*") may be used as Ethics and Religious Culture courses or as Social Studies.

EDER 207	(3)	'Who is Christ?'
EDER 209	(3)	Search for Authenticity
EDER 252	(3)	Understanding and Teaching Jewish Life
EDER 290	(3)	Guide to Reading the Bible
EDER 309	(3)	The Religious Quest
EDER 394	(3)	Philosophy of God
EDER 395	(3)	Moral Values and Human Action
EDER 461	(3)	Society and Change
EDER 473	(3)	Living with Insight
EDER 494	(3)	Ethics in Practice
JWST 211	(3)	Jewish Studies 1: Biblical Period

JWST 240*	(3)	The Holocaust
PHIL 200	(3)	Introduction to Philosophy 1
PHIL 230	(3)	Introduction to Moral Philosophy 1
PHIL 237	(3)	Contemporary Moral Issues
RELG 203	(3)	Bible and Western Culture
RELG 204	(3)	Judaism, Christianity and Islam
RELG 207	(3)	The Study of World Religions 1
RELG 252	(3)	Hinduism and Buddhism
RELG 253	(3)	Religions of East Asia
RELG 256	(3)	Women in Judaism and Islam
RELG 270	(3)	Religious Ethics and the Environment
RELG 271	(3)	Sexual Ethics
WMST 200*	(3)	Introduction to Women's Studies

### **French**

Students may choose up to 12 credits of French as a Second Language (FRSL) courses and/or French (FREN) courses.

### **Mathematics**

Students may choose up to 12 credits of Mathematics (MATH) courses at the 200-level or higher.

Note: Students admitted with CEGEP mathematics (or equivalent) Tj1/1 0 0 1 380.578 451.842 Tm(.)R eThx51.m139 437.26283s admittedI40.395x51.m139 437.TH 1

CHEM 180	(3)	World of Chemistry: Environment
CHEM 181	(3)	World of Chemistry: Food
CHEM 182	(3)	World of Chemistry: Technology
CHEM 183	(3)	World of Chemistry: Drugs
EDEE 473	(3)	Ecological Studies
EDEE 474	(3)	Problems of the Environment
EPSC 180	(3)	The Terrestrial Planets
EPSC 181	(3)	Environmental Geology
EPSC 185	(3)	Natural Disasters
EPSC 201	(3)	Understanding Planet Earth
PHYS 180	(3)	Space, Time and Matter
PHYS 181	(3)	Everyday Physics
		Our Ev

## Global Places and Peoples

EDEE 282	(2)	Teaching Social Sciences
EDEE 291	(3)	Cultural Values and Socialization
EDEE 325	(3)	Children's Literature
EDEE 332	(3)	Teaching Mathematics 1
EDEE 342	(3)	Intermediate Inuktitut/Amerindian Language
EDEE 344	(3)	Advanced Inuktitut/Amerindian Language
EDEE 353	(3)	Teaching and Learning in the Elementary Classroom
EDEE 355	(3)	Classroom-based Evaluation
EDER 360	(2)	Ethics and Religious Culture (K/Elementary)
EDFE 200	(2)	First Field Experience (K/Elem & Secondary)
EDFE 256	(3)	Second Field Experience (Kindergarten/Elementary)
EDFE 306	(8)	Third Field Experience (Kindergarten/Elementary)
EDFE 406	(7)	Fourth Field Experience (K/Elem)
EDKP 241	(3)	Aboriginal Physical Activities Nutrition and Wellness



any 100- or 200-level courses with the subject codes of ANTH (Anthropology), ENGL (English), GEOG (Geography), HIST (History), MUAR (Music -Arts Faculty), POLI (Political Science), PSYC (Psychology); RELG (Religious Studies), and SOCI (Sociology). For 200-level courses, information about any required prerequisites is found in the Minerva Class Schedule by "clicking on" the course CRN for registration. Check prerequisites before registering.

EAPR 250	(3)	Research Essay & Rhetoric
EDEE 325	(3)	Children's Literature
EDEM 220	(3)	Contemporary Issues in Education
EDES 366	(3)	Literature for Young Adults
FRSL 101D1	(3)	Beginners' French
FRSL 101D2	(3)	Beginners' French
FRSL 207D1	(3)	Elementary French 01
FRSL 207D2	(3)	Elementary French 01
FRSL 211D1	(3)	Oral and Written French 1
FRSL 211D2	(3)	Oral and Written French 1
MATH 111	(3)	Mathematics for Education Students
RELG 207	(3)	The Study of World Religions 1

**Required Courses (90 credits)**

EDEC 201	(1)	First Year Professional Seminar
EDEC 203	(3)	Communication in Education
EDEC 215	(0)	English Language Requirement
EDEC 247	(3)	Policy Issues in Quebec Education
EDEC 253	(1)	Second Professional Seminar (Kindergarten/Elementary)
EDEC 405	(3)	Fourth Year Professional Seminar (K/Elem)
EDEE 223	(3)	Language Arts
EDEE 230	(3)	Elementary School Mathematics
EDEE 250	(2)	The Kindergarten Classroom
EDEE 270	(3)	Elementary School Science
EDEE 275	(2)	Science Teaching
EDEE 280	(3)	Geography, History and Citizenship Education
EDEE 282	(2)	Teaching Social Sciences
EDEE 325	(3)	Children's Literature
EDEE 332	(3)	Teaching Mathematics 1
EDEE 353	(3)	Teaching and Learning in the Elementary Classroom
EDEE 355	(3)	Classroom-based Evaluation
EDER 252	(3)	Understanding and Teaching Jewish Life
EDER 318	(3)	Teaching the Jewish Liturgy
EDER 319	(3)	Teaching the Holocaust
EDER 320	(3)	Visions and Realities of Jewish Education
EDER 360	(2)	Ethics and Religious Culture (K/Elementary)
EDER 401	(3)	Teaching Biblical Literature - Jewish School 1
EDFE 200	(2)	First Field Experience (K/Elem & Secondary)
EDFE 256	(3)	Second Field Experience (Kindergarten/Elementary)
EDFE 306	(8)	Third Field Experience (Kindergarten/Elementary)



EDFE 406	(7)	Fourth Field Experience (K/Elem)
EDPE 300	(3)	Educational Psychology
EDPI 309	(3)	Exceptional Students
EDPI 341	(3)	Instruction in Inclusive Schools
JWST 211	(3)	Jewish Studies 1: Biblical Period

### Kindergarten and Elementary Teaching Methods - Art, Drama, or Music (3 credits)

3 credits from:

EDEA 332	(3)	Art Curriculum and Instruction - Elementary
EDEA 342	(3)	Curriculum and Instruction in Drama Education
EDEA 345	(3)	Music Curriculum and Instruction for Generalists

### Media, Technology, Computers and Education (3 credits)

3 credits from:

\*Note: Courses identified with an asterisk ("\*") are recommended for students with a background in computers or other media applications in education.

EDEC 262	(3)	Media, Technology and Education
EDPT 341*	(3)	Instructional Programming 1
EDPT 420*	(3)	Media Literacy for Education

### Multicultural Education (3 credits)

3 credits from:

EDEC 233	(3)	First Nations and Inuit Education
EDEC 248	(3)	Multicultural Education
EDEC 249	(3)	Global Education and Social Justice

### Kindergarten and Elementary Jewish Studies - Subject Area - Group 1 (12 credits)

In consultation with the Jewish Studies option program adviser, students select 12 credits from the course sets below with no more than one 3-credit course from each set.

One of:

JWST 345	(3)	Introduction to Rabbinic Literature
RELG 306	(3)	Rabbinic Judaism

One of:

JWST 314	(3)	Denominations in North American Judaism
SOCI 327	(3)	Jews in North America

One of:

JWST 365	(3)	Modern Jewish Ideologies
JWST 366	(3)	History of Zionism

One of:

POLI 347	(3)	Arab-Israel Conflict, Crisis, Peace
POLI 437	(3)	Politics in Israel

One of:

HIST 207	(3)	Jewish History: 400 B.C.E. to 1000
JWST 216	(3)	Jewish Studies 2: 400 B.C.E. - 1000

One of:

HIST 219	(3)	Jewish History: 1000 - 2000
JWST 217	(3)	Jewish Studies 3: 1000 - 2000

One of:

JWST 367	(3)	Studies in Hebrew Language and Literature
JWST 368	(3)	Studies in Hebrew Language and Literature
JWST 369	(3)	Studies in Hebrew Language and Literature
JWST 370	(3)	Studies in Hebrew Language and Literature

**Kindergarten and Elementary Jewish Studies - Subject Area - Group 2 (6 credits)**

Students select 6 credits from the courses below.

\*Note: Only one of the three courses identified with an asterisk ("\*") may be selected.

JWST 327	(3)	A Book of the Bible
JWST 328	(3)	A Book of the Bible
JWST 329	(3)	A Book of the Bible
JWST 330	(3)	A Book of the Bible
JWST 331*	(3)	Bible Interpretation/Medieval Ashkenaz
JWST 332*	(3)	Bible Interpretation/Sefardic Tradition
JWST 510*	(3)	Jewish Bible Interpretation 1

**Kindergarten & Elementary Education - Subject Areas (6 credits)**

6 credits of teachable subject area courses:

3 credits from two of the following elementary school curriculum course lists: Art, English, Ethics and Religious Culture, French, Mathematics, Music, Natural Sciences, Physical Education, and Social Studies.

**Art**

EDEA 204	(3)	Drawing
EDEA 205	(3)	Painting 2
EDEA 241	(3)	Basic Art Media for Classroom
EDEA 296	(3)	Basic Design
EDEA 304	(3)	Painting 3
EDEA 305	(3)	Painting 4
EDEA 307	(3)	Drawing 2
EDEA 410	(3)	Aesthetics and Art for the Classroom

EDEA 496	(3)	Sculpture 1
EDEA 497	(3)	Sculpture 2

### English

\*Note: Starting with the 2009-10 academic year, EDEE 325 Children's Literature is a required course for the Kindergarten and Elementary Education program and is included in the "Required Courses" list. Students admitted to the program in prior years may select this course as a teachable subject course for English.

CLAS 203	(3)	Greek Mythology
COMS 200	(3)	History of Communication
COMS 210	(3)	Introduction to Communication Studies
COMS 300	(3)	Media and Modernity in the 20th Century
COMS 310	(3)	Media and Feminist Studies
COMS 320	(3)	Media and Empire
COMS 330	(3)	Media in Cultural Life
EDEC 308	(3)	Learning to Write Fiction
EDEC 309	(3)	Learning to Write Poetry
EDEE 325*	(3)	Children's Literature
EDES 366	(3)	Literature for Young Adults
EDSL 350	(3)	Essentials of English Grammar
ENGL 200	(3)	Survey of English Literature 1
ENGL 201	(3)	Survey of English Literature 2
ENGL 204	(3)	English Literature and the Bible
ENGL 215	(3)	Introduction to Shakespeare
ENGL 225	(3)	American Literature 1
ENGL 226	(3)	American Literature 2
ENGL 227	(3)	American Literature 3
ENGL 228	(3)	Canadian Literature 1
ENGL 229	(3)	Canadian Literature 2
ENGL 230	(3)	Introduction to Theatre Studies

**Ethics and Religious Culture**

\*Note: Courses marked with an asterisk ("\*") may be used as Ethics and Religious Culture courses or as Social Studies.

EDER 207	(3)	'Who is Christ?'
EDER 209	(3)	Search for Authenticity
EDER 252	(3)	Understanding and Teaching Jewish Life
EDER 290	(3)	Guide to Reading the Bible
EDER 309	(3)	The Religious Quest
EDER 394	(3)	Philosophy of God
EDER 395	(3)	Moral Values and Human Action
EDER 461	(3)	Society and Change
EDER 473	(3)	Living with Insight
EDER 494	(3)	Ethics in Practice
JWST 211	(3)	Jewish Studies 1: Biblical Period
JWST 240*	(3)	The Holocaust
PHIL 200	(3)	Introduction to Philosophy 1
PHIL 230	(3)	Introduction to Moral Philosophy 1
PHIL 237	(3)	Contemporary Moral Issues
RELG 203	(3)	Bible and Western Culture
RELG 204	(3)	Judaism, Christianity and Islam
RELG 207	(3)	The Study of World Religions 1
RELG 252	(3)	Hinduism and Buddhism
RELG 253	(3)	Religions of East Asia
RELG 256	(3)	Women in Judaism and Islam
RELG 270	(3)	Religious Ethics and the Environment
RELG 271	(3)	Sexual Ethics
WMST 200*	(3)	Introduction to Women's Studies

**French**

Students may choose 3 credits of French as a Second Language (FRSL) courses and/or French (FREN) courses.

**Mathematics**

Students may choose 3 credits of Mathematics (MATH) courses at the 200-level or higher.

Note: Students admitted with CEGEP mathematics (or equivalent) may not take MATH 111 for credit. MATH 111 is a recommended course for freshman students.

MATH 111	(3)	Mathematics for Education Students
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**Music**

Students may choose 3 credits from this list. Students may also select any Music course with the MUGT, MUHL, MUIT, or MUCT subject codes.

With the permission of the program adviser, students without a formal music background may choose courses with the MUAR subject code.

\*Note: Courses marked with a single asterisk ("\*") require permission from the Schulich School of Music to register.

\*\*Note: Courses marked with two asterisks ("\*\*") require a placement test.

EDEA 314	(3)	Instruments in the Classroom
EDEA 341	(3)	Listening for Learning

EDEA 352	(3)	Music Listening in Education
EDEA 362	(3)	Movement, Music and Communication
MUJZ 160*	(3)	Jazz Materials 1
MUJZ 161*	(3)	Jazz Materials 2
MUTH 110**	(3)	Melody and Counterpoint
MUTH 111**	(3)	Elementary Harmony and Analysis

### Natural Sciences

ATOC 181	(3)	Introduction to Atmospheric Science
ATOC 182	(3)	Introduction to Oceanic Sciences
ATOC 184	(3)	Science of Storms
ATOC 185	(3)	Natural Disasters
BIOL 115	(3)	Essential Biology
CHEM 180	(3)	World of Chemistry: Environment
CHEM 181	(3)	World of Chemistry: Food
CHEM 182	(3)	World of Chemistry: Technology
CHEM 183	(3)	World of Chemistry: Drugs
EDEE 473	(3)	Ecological Studies
EDEE 474	(3)	Problems of the Environment
EPSC 180	(3)	The Terrestrial Planets
EPSC 181	(3)	Environmental Geology
EPSC 185	(3)	Natural Disasters
EPSC 201	(3)	Understanding Planet Earth
PHYS 180	(3)	Space, Time and Matter
PHYS 181	(3)	Everyday Physics
PHYS 182	(3)	Our Evolving Universe
PHYS 183	(3)	The Milky Way Inside and Out

### Physical Education

Students may take 3 credits of Physical Education (EDKP) courses from the list with the permission of the Department of Kinesiology and Physical Education.

\*Note: EDKP 292 is available as an academic Physical Education course. All other EDKP courses are restricted.

EDKP 204	(3)	Health Education
EDKP 205	(3)	Structural Anatomy
EDKP 206	(3)	Biomechanics of Human Movement
EDKP 224	(3)	Foundations of Movement Education
EDKP 261	(3)	Motor Development
EDKP 292*	(3)	Nutrition and Wellness
EDKP 391	(3)	Physiology in Sport and Exercise
EDKP 495	(3)	Scientific Principles of Training
EDKP 498	(3)	Sport Psychology

### Social Studies

Students may take 3 credits from this list below which represents a balance of History (HIST), Geography (GEOG) and Citizenship courses offered by several departments. Anthropology (ANTH) and Sociology (SOCl) courses not on the list below may not be counted as Social Studies courses in the program requirements. Students may take them as electives only.

Students may select other History courses as follows:

Any 3 credits in European History

Any 3 credits in Asian, African or Latin American History

Any 3 credits in any topic or field of history

\*Note: Courses marked with an asterisk ("\*") may be used as Ethics and Religious Culture or Social Studies courses.

Comparative Cultures

Please note that graduates of teacher education programs are recommended by the University for Quebec certification to the Quebec Ministère de l'Éducation, du Loisir et du Sport (MELS). For more information about teacher certification in Quebec, please refer to the Faculty of Education section under "Overview of Faculty Programs," "Undergraduate Education Programs," and "Quebec Teacher Certification."

### Freshman Program

The freshman year is the time to take introductory level courses in the subject field, as well as to explore areas that are not normally taken as academic subjects within B.Ed. programs (e.g. Sociology, Psychology, Political Science, etc.). Students should also investigate the possibility of taking one of the First Year Seminar courses offered by the Faculty of Arts or the Faculty of Science.

In consultation with the program adviser, students select 30 credits of courses for their freshman (U0) year of studies.

To ensure that students are able to function effectively in French, students may need to take French as a Second Language (FRSL) courses (placement tests are required to determine the appropriate level) in their freshman year.

Recommended courses include language courses (selected from CLAS Greek/Latin; EAST Korean/Chinese/Japanese; GERM German; HISP Spanish; ISLA Arabic; ITAL Italian; RUSS Russian/Polish) and courses in the list below.

EDEM 220	(3)	Contemporary Issues in Education
HIST 202	(3)	Survey: Canada to 1867
HIST 203	(3)	Survey: Canada since 1867
LING 200	(3)	Introduction to the Study of Language
LING 201	(3)	Introduction to Linguistics
RELG 207	(3)	The Study of World Religions 1

### Required Courses (80 credits)

EDFE 261	(3)	Stage d'assistantat - 2e année
EDFM 260	(1)	Stage de familiarisation
EDPI 309	(3)	Exceptional Students
EDSL 260	(1)	Séminaire professionnel-2e
EDSL 301	(3)	Étude de la langue
EDSL 444	(3)	Laboratoire d'enseignement en français langue seconde
EDUM 245	(3)	Français écrit pour futurs enseignants
EDUM 262	(3)	Système éducatif - profession enseignante
EDUM 263	(3)	Apprentissage et développement
EDUM 264	(3)	Phonétique et phonologie
EDUM 265	(3)	Acquisition-apprentissage-langues secondes
EDUM 266	(3)	Mathématiques au primaire
		Didactique des aj/F5

FREN 252 (3) Littérature québécoise

9 credits to increase the student's proficiency level in the teaching of French, the following courses (or equivalent courses if not available):

FREN 239 (3) Stylistique comparée  
FREN 245 (3) Grammaire avancée  
FREN 334 (3) Analyse des textes littéraires

### **Complementary Courses (40 credits)**

40 credits selected as described below.

3 credits from:

EDEC 260 (3) Philosophical Foundations  
EDEC 261 (3) Philosophy of Catholic Education

8 credits, one of two sets of courses:

Either set:

EDFE 362 (7) Stage d'enseignement en Français langue seconde  
EDSL 320 (1) Séminaire 3 professionnel

Or set:

EDFM 361 (7) Stage d'enseignement 1  
EDUM 394 (1) Séminaire de stage-3e

11 credits, one of two sets of courses:

Either set:

EDFE 461 (9) Stage d'enseignement - immersion  
set: 5.7471 0 0 1 70.52 Saeed (9) seigneme set: Séminaire 4 professionnel



3 credits from:

EDUM 493	(3)	Sciences humaines au primaire
EDUM 494	(3)	Didactique de l'univers social et TIC
EDUM 495	(3)	Recherche-résolution de problèmes
EDUM 496	(3)	Laboratoire de formation professionnelle
EDUM 497	(3)	Problématique en éducation préscolaire

3 credits from:

EDEC 248	(3)	Multicultural Education
LING 350	(3)	Linguistic Aspects of Bilingualism

6 credits of study of a second or third language, to be chosen from University offerings, so that students experience the learning processes that take place in the learning of a language.

### 27.9.24 Programme intensif de français Elementary Option

This option is currently under revision. Admission is suspended for 2010-2011.

### 27.9.25 Bachelor of Education (B.Ed.) - Teaching English as a Second Language - TESL Elementary and Secondary (121 credits)

The Bachelor of Education (B.Ed.) - Teaching English as a Second Language - TESL Elementary and Secondary program requires 121 credits and leads to teacher certification. Students who have not completed Quebec CEGEP, French Baccalaureate, International Baccalaureate, or at least one year of university studies prior to commencing the B.Ed. must also complete a minimum of 30 credits of freshman courses (in addition to the 121-credit program) for a total of 151 credits.

The program includes studies in language and language learning from linguistic, literary, social, cultural, and psychological perspectives, accompanied by field experiences. It prepares students to teach English as a Second Language (ESL) at both the elementary school level (including regular and intensive ESL) and the secondary school level (including regular ESL and ESLA - English Second Language Arts), and provides a base for adult and other ESL teaching.

Please note that graduates of teacher education programs are recommended by the University for Quebec certification to the Quebec Ministère de l'Éducation, du Loisir et du Sport (MELS). For more information about teacher certification in Quebec, please refer to the Faculty of Education section under "Overview of Faculty Programs," "Undergraduate Education Programs," and "Quebec Teacher Certification."

The department is committed to supporting students in the development and creation of their individual professional portfolios throughout their program.

#### Freshman Program

Students normally complete 30 credits in their freshman (U0) year.

The freshman year is the time to take introductory level courses in the subject field, as well as to explore areas that are not normally taken as academic subjects within B.Ed. programs (e.g. Sociology, Psychology, Political Science, etc.). Students should also investigate the possibility of taking one of the First Year Seminar courses offered by the Faculty of Arts or the Faculty of Science.

In consultation with the program adviser, students may select courses from the recommended course list below or other courses. Included in the list are several French Second Language (FRSL) courses for which placement tests are required to determine the appropriate level. In Quebec ESL is taught within the French school system. Thus, proficiency in French is an asset for student teaching placements, and is a requirement for employment in Quebec.

To ensure that students are able to function effectively in French in the French school setting, EDLS 215 Effective Communication in French (placement test required) is a required course in the TESL program. This course is offered in alternate years and must be taken in students' first or second year of their program. Students may need to take prerequisite FRSL courses prior to taking EDLS 215. If so, the freshman year is an ideal time in which to do so.

Other language courses (selected from CLAS Greek/Latin; EAST Korean/Chinese/Japanese; GERM German; HISP Spanish, ISLA Arabic; ITAL Italian; RUSS Russian/Polish) are also freshman year good choices.

EDEC 203	(3)	Communication in Education
EDEE 325	(3)	Children's Literature
EDEM 220	(3)	Contemporary Issues in Education
ENGL 201	(3)	Survey of English Literature 2



EDEC 248	(3)	Multicultural Education
EDEC 249	(3)	Global Education and Social Justice

3 credits from:

EDEC 260	(3)	Philosophical Foundations
EDEC 261	(3)	Philosophy of Catholic Education

3 credits from:

EDEC 262	(3)	Media, Technology and Education
EDPT 200	(3)	Integrating Educational Technology in Classrooms
EDPT 204	(3)	Educational Media 1

## 27.10 Programs for First Nations and Inuit

The following programs are offered in First Nations and Inuit communities for First Nations and Inuit students through:

Faculty of Education  
 First Nations and Inuit Education (FNIE)  
 3700 McTavish Street, Room 244  
 Montreal, Quebec H3A 1Y2  
 Telephone: 514-398-4533  
 Fax: 514-398-2553  
 Website: [www.mcgill.ca/edu-integrated](http://www.mcgill.ca/edu-integrated)

For details about the First Nations and Inuit Studies option within the Bachelor of Education Kindergarten and Elementary program, see [section 27.9.21: Bachelor of Education \(B.Ed.\) - Kindergarten and Elementary Education - First Nations and Inuit Studies \(120 credits\)](#).

### 27.10.1 Certificate in Education - First Nations and Inuit (60 credits)

This 60-credit program provides an opportunity for Algonquin, Cree, Inuit, Mi'kmaq and Mohawk people to become qualified as teachers. It is offered on a part-time basis in Indigenous communities throughout Quebec in collaboration with, for example, the Cree School Board, the Kativik School Board, and various Mi'kmaq, Mohawk and Algonquin education authorities.

Quebec graduates of this program receive Ministère de l'Éducation, du Loisir et du Sport (MELS) certification to teach at the elementary school level in First Nations and Inuit schools.

On completion of the Certificate requirements, trainees may apply for admission to the Bachelor of Education for Certified Teachers program with up to 30 credits advanced standing. Certain non-credit academic upgrading courses may be required of B.Ed. applicants.

#### Time Limit

The time limit for completion of the 60-credit Certificate in Education for First Nations and Inuit is 12 years. The University reserves the right to request that a student retake a course or courses after a 5-year period if it is felt that too long a break has occurred in the ongoing nature of the training.

The following program requirements are for all students except those specializing in teaching physical education.

#### Required Courses (30 credits)

EDEC 203	(3)	Communication in Education
EDEC 260	(3)	Philosophical Foundations
EDEE 325	(3)	Children's Literature
EDEM 202	(3)	Native Family Dynamics & Supporting Institutions
EDPE 300	(3)	Educational Psychology
EDPI 341	(3)	Instruction in Inclusive Schools

12 credits of practicum courses:

EDEC 201	(1)	First Year Professional Seminar
EDEC 253	(1)	Second Professional Seminar (Kindergarten/Elementary)
EDFE 200	(2)	First Field Experience (K/Elem & Secondary)
EDFE 256	(3)	Second Field Experience (Kindergarten/Elementary)
EDFE 300	(5)	Aboriginal Education Field Experience

#### Complementary Courses

30 credits selected as described below:

6 credits from the following language courses according to language group and fluency:

#### Algonquin

EDEC 234	(3)	Algonquin Second Language 2
EDEE 293	(3)	Algonquin Second Language 1
EDEE 294	(3)	Algonquin Language 1
EDEE 295	(3)	Algonquin Language 2

**Cree**

EDEC 241	(3)	Cree Language 1
EDEC 242	(3)	Cree Language 2

**Inuktitut**

EDEE 249	(3)	Inuktitut Orthography and Grammar
EDEE 342	(3)	Intermediate Inuktitut/Amerindian Language

**Mi'kmaq**

EDEC 237	(3)	Mi'kmaq Second Language 1
EDEC 238	(3)	Mi'kmaq Second Language 2
EDEC 239	(3)	Mi'kmaq Language 1
EDEC 240	(3)	Mi'kmaq Language 2

**Mohawk**

EDEC 236	(3)	Mohawk Second Language 2
EDEE 296	(3)	Mohawk Second Language 1
EDEE 297	(3)	Mohawk Language 1
	(3)	Mohawk Language 2

EDEE 332	(3)	Teaching Mathematics 1
EDEE 355	(3)	Classroom-based Evaluation

**List B**

EDEA 241	(3)	Basic Art Media for Classroom
EDEC 200	(3)	Introduction to Inuit Studies
EDEC 220	(3)	Curriculum Development

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EDEE 325	(3)	Children's Literature
EDEM 202	(3)	Native Family Dynamics & Supporting Institutions
EDPE 300	(3)	Educational Psychology
EDPI 341	(3)	Instruction in Inclusive Schools

12 credits of practicum courses; students specializing in Physical Education will do a minimum of 6 credits in Physical Education settings.

EDEC 201	(1)	First Year Professional Seminar
EDEC 253	(1)	Second Professional Seminar (Kindergarten/Elementary)
EDFE 200	(2)	First Field Experience (K/Elem & Secondary)
EDFE 256	(3)	Second Field Experience (Kindergarten/Elementary)
EDFE 300	(5)	Aboriginal Education Field Experience

### Complementary Courses (30 credits)

30 credits selected as described below:

6 credits from the following language courses according to language group and fluency:

#### Algonquin

EDEC 234	(3)	Algonquin Second Language 2
EDEE 293	(3)	Algonquin Second Language 1
EDEE 294	(3)	Algonquin Language 1
EDEE 295	(3)	Algonquin Language 2

#### Cree

EDEC 241	(3)	Cree Language 1
EDEC 242	(3)	Cree Language 2

#### Inuktitut

EDEE 249	(3)	Inuktitut Orthography and Grammar
EDEE 342	(3)	Intermediate Inuktitut/Amerindian Language

#### Mi'kmaq

EDEC 237	(3)	Mi'kmaq Second Language 1
EDEC 238	(3)	Mi'kmaq Second Language 2
EDEC 239	(3)	Mi'kmaq Language 1
EDEC 240	(3)	Mi'kmaq Language 2

#### Mohawk

EDEC 236	(3)	Mohawk Second Language 2
EDEE 296	(3)	Mohawk Second Language 1
EDEE 297	(3)	Mohawk Language 1
EDEE 298	(3)	Mohawk Language 2

9 credits:

EDKP 241	(3)	Aboriginal Physical Activities
EDKP 342	(3)	Physical Education Methods
EDKP 494	(3)	Physical Education Curriculum Development

6 credits from the following physical education courses:

EDKP 214	(1)	Basketball 1
EDKP 217	(2)	Track & Field / Cross Country
EDKP 218	(1)	Volleyball 1
EDKP 223	(2)	Games: Principles and Practice
EDKP 229	(1)	Ice Hockey 1
EDKP 240	(1)	Winter Activities

**List A**

9 credits from different subject areas from course List A and course List B with priority given to courses from List A.

EDEC 262	(3)	Media, Technology and Education
EDEE 230	(3)	Elementary School Mathematics
EDEE 241	(3)	Teaching Language Arts
EDEE 250	(2)	The Kindergarten Classroom
EDEE 270	(3)	Elementary School Science
EDEE 275	(2)	Science Teaching
EDEE 280	(3)	Geography, History and Citizenship Education
EDEE 282	(2)	Teaching Social Sciences
EDEE 291	(3)	Cultural Values and Socialization
EDEE 332	(3)	Teaching Mathematics 1
EDEE 355	(3)	Classroom-based Evaluation

**List B**

EDEA 241	(3)	Basic Art Media for Classroom
EDEC 200	(3)	Introduction to Inuit Studies
EDEC 220	(3)	Curriculum Development
EDEC 243	(3)	Teaching: Multigrade Classrooms
EDEC 244	(3)	Issues in Aboriginal Education
EDEC 403	(3)	The Dialects of Inuktitut
EDEE 240	(3)	Use and Adaptation of Curricula
EDEE 243	(3)	Reading Methods in Inuktitut/Cree
EDEE 247	(6)	Individualized Instruction
EDEE 248	(3)	Reading and Writing Inuktitut/Cree
EDEE 261	(3)	Reading Clinic - Early Childhood
EDEE 292	(3)	Using Instructional Resources
EDEE 340	(3)	Special Topics: Cultural Issues



EDEE 342	(3)	Intermediate Inuktitut/Amerindian Language
EDEE 344	(3)	Advanced Inuktitut/Amerindian Language
EDEE 345	(3)	Literature and Creative Writing 1
EDEE 346	(3)	Literature and Creative Writing 2
EDEE 444	(3)	First Nations and Inuit Curriculum
EDKP 204	(3)	Health Education
EDKP 224	(3)	Foundations of Movement Education
EDKP 342	(3)	Physical Education Methods
EDKP 494	(3)	Physical Education Curriculum Development
EDPE 377	(3)	Adolescence and Education
EDSL 247	(3)	Second Language Education in Aboriginal Communities

### **27.10.3 Admission to the Certificate in Education for First Nations and Inuit and to the Certificate in Education for First Nations and Inuit Physical Education**

An applicant will normally be employed as a teacher or as a classroom assistant, have a valid teaching authorization from the appropriate teaching authority or a community education committee, be recommended by the school principal and an officer of the education authority, be recommended by a local community education committee, and be at least 21 years of age. Younger applicants will be considered for admission if they hold a Grade 12 Secondary School Diploma or a Diploma of Collegial Studies. The right of final decision for acceptance of candidates rests with McGill.

Those intending to complete the programs offered in cooperation with the Kativik School Board must be fluent and literate in Inuktitut/Inuinnaqtun. Fluency in Algonquin, Cree, Mi'kmaq or Mohawk is not a condition for acceptance for applicants from these communities, but is considered an asset. Courses are available in all four of these languages for those teaching in immersion classes and other teaching situations where a knowledge of the first language is essential.

### **27.10.4 Certificate in Aboriginal Literacy Education (30 credits)**

This 30-credit program is designed for Algonquin, Cree, Inuit, Mi'kmaq and Kanienkehaka (Mohawk) students who wish to gain a deeper understanding of their Indigenous language, especially in its written form. It is aimed mainly at those who will be teaching their Indigenous language.

This certificate may be taken concurrently and completed within the Bachelor of Education for Certified Teachers program if the requirements for B.Ed. are fulfilled.

EDEE 298 (3) Mohawk Language 2

### Education Courses

12 credits from the list below:

EDEA 242	(3)	Cultural Skills 1
EDEC 220	(3)	Curriculum Development
EDEC 403	(3)	The Dialects of Inuktitut
EDEE 223	(3)	Language Arts
EDEE 224	(3)	Language Arts Part 2
EDEE 240	(3)	Use and Adaptation of Curricula
EDEE 243	(3)	Reading Methods in Inuktitut/Cree
EDEE 247	(6)	Individualized Instruction
EDEE 248	(3)	Reading and Writing Inuktitut/Cree
EDEE 345	(3)	Literature and Creative Writing 1
EDEE 346	(3)	Literature and Creative Writing 2
EDES 365	(3)	Experiences in Communications
EDPE 304	(3)	Measurement and Evaluation

### Electives (6 credits)

6 credits of suitable courses approved by the Director of Programs in First Nations and Inuit Education.

#### 27.10.4.1 Admission to the Certificate in Aboriginal Literacy Education

Students admitted to this program will be recommended by their communities. If the program is used for professional development, students will be Indigenous teachers employed in local schools. They must be mature students, or hold a Secondary V diploma or equivalent. The right of final decision for acceptance of candidates rests with McGill.

#### 27.10.5 Certificate in Middle School Education in Aboriginal Communities (30 credits)

This 30-credit program focuses on developing the particular skills and abilities required of the Indigenous teacher in the middle school of his/her community. It does not lead to provincial certification. Rather, it prepares Indigenous teachers, who are bilingual or have some knowledge of their Indigenous language and who have already established themselves as teachers, to teach students at this level in ways that are dev



EDEE 340

(3)

Special Topics: Cultural Issues  
Native F

EDEC 233	(3)	First Nations and Inuit Education
EDEE 240	(3)	Use and Adaptation of Curricula
EDEE 291	(3)	Cultural Values and Socialization
EDEE 444	(3)	First Nations and Inuit Curriculum
EDSL 247	(3)	Second Language Education in Aboriginal Communities

**Complementary Courses (12 credits)**

12 credits selected as described below.

**Language**

3 credits of an introductory language course in the language of the community.

**Education**

9 credits of Education courses selected from the list below or any other suitable course approved by the Director of Programs in First Nations and Inuit

### Complementary Courses (9 credits)

9 credits selected from the list below or any other suitable course approved by the Program Coordinator.

Registration in EDEM 202, EDKP 204 or any other courses offered by departments other than Educational and Counselling Psychology, or in other programs of this Department is dependent on availability (e.g., through a concurrently offered program) or through an arrangement made with that department or program. The Program Coordinator will attempt to make these contacts whenever required.

EDEM 202	(3)	Native Family Dynamics & Supporting Institutions
EDKP 204	(3)	Health Education
EDPC 206	(3)	Group Leadership Skills
EDPC 207	(3)	Aboriginal Adolescent Development
EDPC 211	(3)	Special Topics in Student Personnel Services
EDPI 211	(3)	Social and Emotional Development

#### 27.10.9.1 Admission to Certificate in First Nations and Inuit Student Personnel Services

- Speak, read, and write fluently the language of instruction as agreed upon between First Nations and Inuit Education and the contracting school board.
- Hold a student adviser position in an Aboriginal community. This may be a new appointment concurrent with registration in the program. The position must be sufficient to meet the practicum requirements of the program.
- Be recommended by the local education authority.
- Be at least 21 years of age (except for special permission). By this means students will qualify for admission as Mature Students under McGill regulations, and thereby not be required to have a Diploma of Collegial Studies (DEC).
- Be recommended and selected by the school administration in collaboration with McGill personnel.

The right of final decision for acceptance of candidates rests with McGill.

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## 27.11 Department of Kinesiology and Physical Education

### 27.11.1 Location

Currie Gym  
475 Pine Avenue West  
Montreal, Quebec H2W 1S4

Telephone: 514-398-4184  
Fax: 514-398-4186  
Website: [www.mcgill.ca/edu-kpe](http://www.mcgill.ca/edu-kpe)  
Email: [kin.physed@mcgill.ca](mailto:kin.physed@mcgill.ca)

### 27.11.2 About the Department of Kinesiology and Physical Education

The Department of Kinesiology and Physical Education offers one program leading to a B.Ed. degree, one program leading to a B.Sc. degree and a Minor in Kinesiology for Science students.

The Department also offers programs at the graduate level leading to an M.A. and M.Sc., and possibilities for doctoral studies. For further information, see the most current *Graduate and Postdoctoral Studies Calendar* found at [www.mcgill.ca/students/courses/calendars](http://www.mcgill.ca/students/courses/calendars).

### 27.11.3 Department of Kinesiology and Physical Education Faculty

#### Chair

Theodore E. Milner

#### Director of Undergraduate Programs

Julie Côté

### Director of Graduate Programs

René A. Turcotte

### Professors

Ross E. Andersen; B.Ed., M.A.(McG.), Ph.D.(Temple) (*Canada Research Chair*)

Theodore E. Milner; B.Sc., M.Sc., Ph.D.(Alta.)

Hélène Perrault; B.Sc.(C'dia), M.Sc., Ph.D.(Montr.)

Greg Reid; B.Ed.(P.E.)(McG.), M.S.(Calif.), Ph.D.(Penn. St.)

### Associate Professors

Gordon Bloom; M.A.(W. Ont.), M.A.(York (Can.)), Ph.D.(Ott.)

Julie Côté; B.Sc., M.Sc.(Wis., Madison), Ph.D.(Montr.)

David J. Pearsall; B.A., B.P.H.E., M.Sc., Ph.D.(Qu.)

René A. Turcotte; H.B.P.H.E.(Lauren.), M.Sc., Ph.D.(Alta.)

### Assistant Professors

Enrique Garcia; B.P.E., INEF(Madrid), M.Sc.(Laval), Ph.D.(Alta.)

William Harvey; B.Ed., M.A., Ph.D.(McG.)

Dilson Rassier; B.P.E., M.Sc.(Brazil), Ph.D.(Calg.)

Catherine M. Sabiston; B.Sc.K.(Dal.), M.H.K.(Windsor), Ph.D.(Br. Col.)

Paul James Stapley; B.A.(Leeds Poly.), M.Sc.(Northumbria), Ph.D.(Université de Bourgogne)

Tanja Taivassalo; B.Sc., Ph.D.(McG.)

### Adjunct Professors

Bernard Aguilaniu; M.D., Ph.D.(Grenoble)

Robert Boushel; B.A.(P.E.)(Acadia), M.A.(S. Florida), D.Sc.(Boston)

Christian Duval; B.Sc.(UQTR), M.Sc.(UQAM), Ph.D.(McG.)

François Peronnet; M.Sc., Ph.D.(Montr.) *Emeritus Professor*

### Associate Member

Robert Thomas Jagoe; B.A.(Camb.), M.B., B.Chir., MRCP(UK), CCST(Resp. and General (Internal) Med.), Ph.D.(Newcastle (UK)), FRCP

## 27.11.4 Bachelor of Education (B.Ed.) - Physical and Health Education (120 credits)

The Bachelor of Education (B.Ed.) - Ph

EAPR 250	(3)	Research Essay & Rhetoric
EDEC 202	(3)	Effective Communication
EDEM 220	(3)	Contemporary Issues in Education

**Required Courses (95 credits)**

EDEC 215	(0)	English Language Requirement
EDEC 247	(3)	Policy Issues in Quebec Education
EDEC 260	(3)	Philosophical Foundations
EDFE 246	(3)	First Field Experience (Physical Education)
EDFE 373	(3)	Second Field Experience (Physical Education)
EDFE 380	(7)	Third Field Experience (Physical Education)
EDFE 480	(7)	Fourth Field Experience (Physical Education)
EDKP 204	(3)	Health Education



EDPE 300 (3) Educational Psychology

### Complementary Courses (10 credits)

10 credits selected as specified below:

#### Physical Activity

4 credits of physical activity courses (EDKP) offered by the Department of Kinesiology and Physical Education.

#### Multicultural Education

3 credits from:

EDEC 233	(3)	First Nations and Inuit Education
EDEC 248	(3)	Multicultural Education
EDEC 249	(3)	Global Education and Social Justice

#### Media, Technology, Computers and Education

3 credits from:

\*Note: Students with a background in computers or other media applications in education may select the courses with an asterisk ("\*").

EDEC 262	(3)	Media, Technology and Education
EDPT 200	(3)	Integrating Educational Technology in Classrooms
EDPT 204	(3)	Educational Media 1
EDPT 341*	(3)	Instructional Programming 1
EDPT 420*	(3)	Media Literacy for Education

#### Electives (15 credits)

15 credits chosen from any of the University's course offerings to contribute to the student's academic proficiency and professional preparation.

### 27.11.5 Bachelor of Science (Kinesiology) (B.Sc.(Kinesiology)) - Kinesiology (90 credits)

The McGill Bachelor of Science (Kinesiology) program received accreditation from the Canadian Council of University Physical Education and Kinesiology Administrators (CCUPEKA) in April 2007.

The B.Sc.(Kinesiology) is 90-credit program. Students who have not completed Quebec CEGEP, French Baccalaureate, International Baccalaureate or at least one year of university studies are normally enrolled in a four-year B.Sc.(Kinesiology) program which includes a 30-credit freshman year for a total of 120 credits.

The focus of the Kinesiology program is a comprehensive understanding of human movement. Kinesiology is a multidisciplinary field viewing human movement from social, historical, psychological, or biological perspectives. The program provides students with a breadth of theoretical knowledge as well as an opportunity to explore related areas in greater depth, including minor programs available elsewhere within the University.

Students are encouraged to select a minor program in a given discipline or interdisciplinary area. A maximum of 6 credits of overlap is allowed between the minor and the primary program. A minimum of 18 new credits must be completed in the minor or minor concentration. Science minors require from 18 to 24 credits. Arts minor concentrations and Management minors generally require 18 credits. For approved minors and minor concentrations, refer to the programs offered by the Faculty of Arts, the Desautels Faculty of Management, and the Faculty of Science.

An Honours program is available for particularly strong students. To qualify for the Honours program, students must obtain a CGPA of 3.3 after two years in Kinesiology and must retain this CGPA until graduation.

Graduation Requirement:

Prior to graduation, students are required to show proof of certification in Standard Level Safety Oriented First Aid/Level C in Cardiopulmonary Resuscitation, or equivalencies.

#### Freshman Program

29 - 30 credits of basic science courses depending on the Fall term MATH course selected.

Students admitted from CEGEP or with other advanced standing should have equivalencies for these courses to be exempt from Freshman Program requirements.

Fall term BIOL and CHEM courses:

BIOL 111	(3)	Principles: Organismal Biology
CHEM 110	(4)	General Chemistry 1

In consultation with a program adviser, one of the following F

EDKP 447

(3)

Motor Control  
Exercise P

**Bac**

In addition to the 58 credits of required courses for the major, Honours students complete EDKP 453 "Research Practicum in Kinesiology" and EDKP 499 "Undergraduate Honours Research Project."

ANAT 315	(4)	Anatomy/Limbs and Back
ANAT 316	(2)	Human Visceral Anatomy
BIOL 200	(3)	Molecular Biology
CHEM 212	(4)	Introductory Organic Chemistry 1
EDKP 206	(3)	Biomechanics of Human Movement
EDKP 215	(0)	Standard First Aid/Cardio-Pulmonary Resuscitation Level C
EDKP 261	(3)	Motor Development
EDKP 292	(3)	Nutrition and Wellness
EDKP 330	(3)	Physical Activity and Health
EDKP 394	(3)	Historical Perspectives
EDKP 395	(3)	Exercise Physiology
EDKP 396	(3)	Adapted Physical Activity
EDKP 405	(3)	Sport in Society
EDKP 443	(3)	Research Methods
EDKP 447	(3)	Motor Control
EDKP 453	(3)	Research Practicum in Kinesiology
EDKP 485	(3)	Exercise Pathophysiology 1
EDKP 495	(3)	Scientific Principles of Training
EDKP 498	(3)	Sport Psychology
EDKP 499	(6)	Undergraduate Honours Research Project
PHGY 209	(3)	Mammalian Physiology 1
PHGY 210	(3)	Mammalian Physiology 2

### Complementary Courses (15 credits)

15 credits selected as described below.

3 credits of statistics from:

BIOL 373	(3)	Biometry
MATH 203	(3)	Principles of Statistics 1
PSYC 204	(3)	Introduction to Psychological Statistics
SOCI 350	(3)	Statistics in Social Research

12 credits from:

EDKP 444	(3)	Ergonomics
EDKP 445	(3)	Exercise Metabolism
EDKP 446	(3)	Physical Activity and Ageing
EDKP 448	(3)	Exercise and Health Psychology
EDKP 449	(3)	Exercise Pathophysiology 2
EDKP 542	(3)	Environmental Exercise Physiology
EDKP 566	(3)	Advanced Biomechanics Theory
NUTR 503	(3)	Bioenergetics and the Lifespan

**Elective Courses (8 credits)**

To be chosen from 200-, 300-, 400- or 500-level courses in consultation with the Undergraduate Program Director or Student Adviser.

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**27.12 School of Information Studies**

**27.12.1 Location**

3661 Peel Street  
 Montreal, Quebec H3A 1X1

Telephone: 514-398-4204

Fax: 514-398-7193

Email: [sis@mcgill.ca](mailto:sis@mcgill.ca)

Website: [www.mcgill.ca/sis](http://www.mcgill.ca/sis)

**27.12.2 About the School of Information Studies**

The School of Information Studies focuses upon the knowledge and skills necessary to identify, acquire, organize, retrieve and disseminate information so as to meet people's varied information needs.

The School of Information Studies offers four programs at the graduate level. Its 48-credit Master of Library and Information Studies (MLIS) has three areas of specialization: Archival Studies, Knowledge Management, and Librarianship. Accredited by the American Library Association, the MLIS program prepares professionals to manage information resources and services in libraries and the wider information industries. Its 30-credit Graduate Diploma in Library and Information Studies and 15-credit Graduate Certificate in Library and Information Studies are designed to provide a formal environment in which information professionals can update, specialize, and redirect their careers for advanced responsibilities. Its Ph.D. program provides an opportunity to undertake research at the doctoral level in library and information studies within an interdisciplinary context.

For further information concerning programs, requirements, and courses, consult the School of Information Studies section of the most current *Graduate and Postdoctoral Studies Calendar* or the School website.

**27.12.3 School of Information Studies Faculty**

**Director**

France Bouthillier

**Professors**

J. Andrew Large; B.Sc.(Lond.), Ph.D.(Glas.), Dip.Lib.(Lond.) (*CN-Pratt-Grinstad Professor of Information Studies*)

Peter F. McNally; B.A.(W. Ont.), B.L.S., M.L.S., M.A.(McG.)

**Associate Professors**

Jamshid Beheshti; B.A.(S. Fraser), M.L.S., Ph.D.(W. Ont.)

France Bouthillier; B.Ed.(UQAM), M.B.S.I.(Montr.), Ph.D.(Tor.)

Kim Dalkir; B.Sc., M.B.A.(McG.), Ph.D.(C'dia)

Eun Park; B.A.(Pusan), M.L.I.S.(Ill.), M.B.A.(Pitt.), Ph.D.(Calif.-LA)

**Assistant Professors**

Joan Bartlett; B.Sc., M.L.S., Ph.D.(Tor.)

Catherine Guastavino; B.Sc.(McG.), M.Sc.(Aix-Marseille), Ph.D.(Paris)

Elaine Ménard; B.A., M.A., M.S.I.(Montr.)

**Adjunct Professor**

Joy Bennett; B.A., M.A.(C'dia), M.L.I.S.(McG.), Ph.D.(C'dia)

**Associate Members**

Gordon Burr; B.A., M.L.I.S.(McG.)

Pierre Pluye; M.D.(Toulouse), M.Sc., Ph.D.(Montr.)

Richard Virr; B.A.(Tulane), M.A.(Qu.), Ph.D.(McG.)

**Affiliate Member**

Frances Groen; B.A., B.L.S.(Tor.), M.A.(Pitt.)

**Professional Associate**

Edward Bilodeau; B.Sc., M.L.I.S.(McG.)

**Part-time Instructors**

Tanya Abramovitch; B.A., M.L.I.S., M.A.(McG.)

Nathalie Belanger; LL.B., D.D.N.(Montr.), M.L.I.S.(McG.)

Leanne Bowler; B.A., M.L.I.S., M.Ed., Ph.D.(McG.)

Louise Carpentier; B.L.S.(Tor.), M.Bibl.(Montr.), M.P.P.P.A.(C' dia)

April Colosimo; B.Sc.(McG.), M.Sc.(Sher.), M.L.I.S.(McG.)

Shannon Hodge; B.A.(Bishop's), M.L.I.S.(McG.)

Catherine Jenner; B.A., LL.B., M.L.S.(Tor.), LL.B.(Montr.)

Rajiv Johal; B.Com., B.A., M.L.I.S.(McG.)

Johanne Lessard; B.Ed.(UQAM), M.L.I.S.(McG.)

Amandine Pras; Dip.Sc.(Paris VII), M.Sc.(Conservatoire de Paris)

Marni Tam; B.Sc.(Tor.), M.L.I.S.(McG.)

Jillian Tomm; B.Mus., M.L.I.S.(McG.)

Natasha Zwarich; B.A., M.A.(UQAM)

**28 Faculty of Engineering****28.1 About the Faculty of Engineering**

The Faculty currently includes five engineering departments and two schools:

**The Departments**

Chemical Engineering

Civil Engineering and Applied Mechanics

Electrical and Computer Engineering

Mechanical Engineering

Mining and Materials Engineering

**The Schools**

Architecture

Urban Planning

The Faculty serves approximately 2,740 undergraduate students and 1,060 graduate students in a wide variety of academic programs.

Undergraduate programs leading to professional bachelor's degrees are offered in all engineering departments. These programs are designed to qualify graduates for immediate employment in a wide range of industries and for membership in the appropriate professional bodies. Additionally, a non-professional undergraduate degree is offered in the School of Architecture for those who plan to work in related fields not requiring professional qualification.

The curricula are structured to provide suitable preparation for those who plan to continue their education in postgraduate studies either at McGill or elsewhere. The professional degrees in Architecture and Urban Planning are offered at the master's level and are described in the *Graduate and Postdoctoral Studies Calendar* found at [www.mcgill.ca/students/courses/calendars](http://www.mcgill.ca/students/courses/calendars).

The academic programs are divided into required and complementary sections. The required courses emphasize those basic principles which permit graduates to keep abreast of progress in technology throughout their careers. Exposure to current technology is provided by the wide variety of complementary courses which allow students to pursue in depth a particular interest. For program details, refer to [section 28.11: Academic Programs](#).

The Engineering Internship Program provides engineering students with the opportunity to participate in four-, eight-, twelve- or sixteen-month paid work experiences. Details can be found at [www.mcgill.ca/careers4engineers/students/internship](http://www.mcgill.ca/careers4engineers/students/internship). In addition, co-op programs are offered in Mining Engineering and in Materials Engineering.

Postgraduate programs leading to master's and doctoral degrees are offered in all sectors of the Faculty. Numerous areas of specialization are available in each of the departments and schools. All postgraduate programs, including the professional degree programs in Architecture and in Urban Planning, are described in the *Graduate and Postdoctoral Studies Calendar* found at [www.mcgill.ca/students/courses/calendars](http://www.mcgill.ca/students/courses/calendars).

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## 28.2 History of the Faculty

The Faculty of Engineering began in 1871 as the Department of Practical and Applied Science in the Faculty of Arts with degree programs in Civil Engineering and Surveying, Mining Engineering and Assaying, and Practical Chemistry. Diploma courses had been offered from 1859, and by 1871 the staff and enrolments had increased sufficiently to justify the creation of the Department. Continued growth led to the formation of the Faculty of Applied Science in 1878. By 1910 there were ten degree programs offered, including Architecture and Railroad Engineering. Subsequent changes in the overall pattern of the University led to the creation of the Faculty of Engineering in 1931 with a departmental structure very similar to that which exists at present.

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## 28.3 Faculty of Engineering Facilities



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Van Thanh Van Nguyen; B.Mech.Eng.(Vietnam), M.Civil Eng.(Thailand), **Chair, Department of Civil Engineering and Applied Mechanics**  
Ph.D.(École Poly., Montr.), P.Eng.



## Minors

Construction Engineering and Management

Economics

Environmental Engineering

Environment

Management Minors: Minor in Finance, Minor in Management, Minor in Marketing, Minor in Operations Management

Materials Engineering

Mathematics

Mining Engineering

Physics

Technological Entrepreneurship

Software Engineering

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## 28.10 Engineering Internship Program

Employers value experience. Internships (four, eight, twelve or sixteen months) allow you to gain professional work experience during the course of your undergraduate studies while earning a salary within the average range for entry-level professional positions. Other benefits include the following:

- improved employment prospects upon graduation, often at a higher starting salary;
- the opportunity to explore career options prior to graduation;
- the opportunity to develop communication skills and to acquire a business perspective that cannot be learned in school.

An internship may begin in January, May or September. Employers choose the most suitable students for their organization through an application and interview process. While employed by the participating companies, you work on assignments related to your field of study. Internships will be recognized on your transcript as one or more non-credit courses entitled "Industrial Practicum." Successful completion of an internship of eight or more months qualifies you to graduate with the Internship Program designation on your transcript.

### 28.10.1 Student Eligibility

To participate in the Engineering Internship Program, you must

- have a CGPA of 2.00 or higher;
- be in good financial standing with the University;
- obtain approval from the Engineering Career Centre before registering for or starting your internship;
- be registered full-time in your program before and after your internship;
- remain a degree candidate while on internship;
- return to complete your undergraduate degree at McGill, with a minimum of 15 credits remaining in your program after your internship (i.e., you are not allowed to complete your degree during your internship).

Internship students will receive an automatic extension for the completion of their studies.

International students are eligible (a few restrictions may apply).

For more information, see [www.mcgill.ca/careers4engineers](http://www.mcgill.ca/careers4engineers) or send an email to [careers4engineers@mcgill.ca](mailto:careers4engineers@mcgill.ca).



#### Important Information:

- While on internship, you are expected to complete any deferrals you may have been granted, regardless of the location of the internship. If you do not write a deferred exam as scheduled, you will receive a final grade of J. The J grade will calculate as a failure in both TGPA and CGPA.
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## 28.11 Academic Programs

The programs and courses in the following pages have been approved for the 2010-11 session as listed, but the Faculty reserves the right to introduce changes as may be deemed necessary or desirable.

### 28.11.1 General Engineering Program

The General Engineering Program (GEP) is offered in addition to the Faculty of Engineering's majors (Chemical, Civil, Computer, Electrical, Materials, Mechanical, Mining, and Software Engineering). The GEP permits students with strong mathematics, physics and chemistry results in high school to pursue a common first year curriculum without declaring a particular major program at the time of application. The GEP spans one academic year only (Year 0), following which students enter into an engineering major program.

For more information about the General Engineering Program, see [www.mcgill.ca/engineering/degrees/general](http://www.mcgill.ca/engineering/degrees/general).

#### 28.11.1.1 Bachelor of Engineering (B.Eng.) - General Engineering - Undeclared (30 credits)

This is a 30-31 credit course of study for the first year of a Bachelor of Engineering degree for students who have not completed a Quebec CEGEP diploma. Upon successful completion of these requirements, students must transfer into a B.Eng. or B.S.E. program.

#### Year 0 (Freshman) Courses

(30-31 credits)

CHEM 110	(4)	General Chemistry 1
CHEM 120	(4)	General Chemistry 2
FACC 100	(1)	Introduction to the Engineering Profession
MATH 133	(3)	Linear Algebra and Geometry
MATH 140*	(3)	Calculus 1
MATH 141	(4)	Calculus 2
PHYS 131	(4)	Mechanics and Waves
PHYS 142	(4)	Electromagnetism and Optics

\* Students may take MATH 139 (Calculus) (4 credits) instead of MATH 140, but only with permission from the Department of Mathematics and Statistics.

#### Humanities and Social Sciences, Management Studies and Law

3 credits at the 200-level or higher from the following departments:

Anthropology (ANTH)

Economics (any 200- or 300-level course excluding ECON 208, ECON 217, ECON 227 and ECON 337)

History (HIST)

Philosophy (excluding PHIL 210 and PHIL 310)

Political Science (POLI)

Psychology (excluding PSYC 204 and PSYC 305, but including PSYC 100)

Religious Studies (RELG)

School of Social Work (SWRK)

Sociology (excluding SOCI 350)

OR one of the following:

ARCH 350	(3)	The Material Culture of Canada
BUSA 465*	(3)	Technological Entrepreneurship
ENVR 203	(3)	Knowledge, Ethics and Environment
ENVR 400	(3)	Environmental Thought
FACC 220	(3)	Law for Architects and Engineers

T

FACC 501	(3)	Technology Business Plan Project
INDR 294*	(3)	Introduction to Labour-Management Relations
MATH 338	(3)	History and Philosophy of Mathematics
MATH 352	(1)	Problem Seminar
MGCR 222*	(3)	Introduction to Organizational Behaviour
MRKT 360*	(3)	Marketing of Technology
ORGB 321*	(3)	Leadership
ORGB 423*	(3)	Human Resources Management

\*Note: Management courses have limited enrolment and registration dates. See Important Dates at: <http://www.mcgill.ca/importantdates/>

Students who successfully complete one or more Science Placement Exams will obtain credit(s) for the equivalent(s), i.e., CHEM 110, CHEM 120, MATH 140, MATH 141, MATH 133, PHYS 131, PHYS 142. Please see <http://www.mcgill.ca/student-records/exam/placement> for information on Science Placement Exams.

## 28.11.2 School of Architecture

### 28.11.2.1 Location

Macdonald-Harrington Building, Room 201  
815 Sherbrooke Street West  
Montreal, Quebec H3A 2K6

Telephone: 514-398-6700

Fax: 514-398-7372

Website: [www.mcgill.ca/architecture](http://www.mcgill.ca/architecture)

### 28.11.2.2 About the School of Architecture

The School of Architecture at McGill University was founded in 1896. Our mission is to educate professionals who will contribute to the socio-economic and cultural development of Quebec, Canada and the broader global community through responsible participation in the process of the design, construction and interpretation of the built environment.

The School offers the non-professional B.Sc.(Arch.) program, the M.Arch. (Professional) program, and post-professional research programs, including the M.Arch. (Post-professional) and Ph.D.

### 28.11.2.3 Architectural Certification in Canada

In Canada, all provincial associations recommend a degree from an accredited professional degree program as a prerequisite for licensure. The Canadian Architectural Certification Board (CACB), which is the sole agency authorized to accredit Canadian professional degree programs in architecture, recognizes two types of accredited degrees: the Bachelor of Architecture and the Master of Architecture. A program may be granted a five-year, three-year, or two-year term of accreditation, depending on its degree of conformance with established educational standards.

Master's degree programs may consist of a preprofessional undergraduate degree and a professional graduate degree, which, when earned sequentially, comprise an accredited professional education. However, the preprofessional degree is not, by itself, recognized as an accredited degree.

Since all provincial associations in Canada recommend any applicant for licensure to have graduated from a CACB-accredited program, obtaining such a degree is an essential aspect of preparing for the professional practice of architecture. While graduation from a CACB-accredited program does not assure registration, the accrediting process is intended to verify that each accredited program substantially meets those standards that, as a whole, comprise an appropriate education for an architect.

### 28.11.2.4 Programs of Study

Students in the B.Sc.(Arch.) program who intend to proceed to the professional degree must satisfy certain minimum requirements. Students must

- complete the B.Sc.(Arch.) degree, including the series of required and complementary courses stipulated for professional studies, with a minimum CGPA of 3.00;
- submit a portfolio of work executed in the sequence of six design studios, as well as samples of professional and personal work;
- complete the minimum period of relevant work experience according to the current Work Experience Guidelines (see [www.mcgill.ca/architecture/bboard/bscmai/workexperience](http://www.mcgill.ca/architecture/bboard/bscmai/workexperience)).

Further information on the M.Arch. (Professional) program and application procedures is available at [www.mcgill.ca/architecture](http://www.mcgill.ca/architecture).

#### **28.11.24.1 Student Exchanges**

A limited number of qualified students may participate in an exchange with schools of architecture at other universities which have agreements with the McGill School of Architecture, for a maximum of one term in the second year of the B.Sc.(Arch.) program. These include the following: Università Iuav di Venezia (Venice, Italy); Fakultät für Raumplanung und ArchitekV

### **Assistant Professors**

Nik Luka; B.A.A.(Ryerson), M.Arch.(Laval), Ph.D.(Tor.), M.C.I.P.

Aaron Sprecher; B.Arch.(Bezalel), M.Arch.(Calif.-LA)

### **Adjunct Professors**

Robert Claiborne

Howard Davies

François Émond

Julia Gersovitz

Phyllis Lambert

Joanna Nash

Mark Poddubiuk

Conor Sampson

Jozef Zorko

### **Planetary Society Visiting Professor in Architecture**

Torben Berns

### **Course Lecturers**

Tom Balaban

Sinisha Brdar

Nancy Dunton

Leila Marie Farah

Jean-François Fortin

Andrew King

Andrea MacElwee

Sybil McKenna

Suresh Perera

Carlos Rueda

Pierina Saia

### **Senior Critic**

Dan Hanganu

### **Visiting Critics and Lecturers**

Each year, visitors are involved in o1wr1 1lv



program. For detailed information about admission procedures and requirements, please see the Undergraduate Admissions Guide at <http://www.mcgill.ca/applying>.

The second part, for students with the McGill B.Sc.(Arch.) degree or equivalent non-professional undergraduate architecture degree, is either a three-term (fall/winter/summer) or a two-year program leading to the Master of Architecture (Professional) degree. There are two options for the completion of M.Arch. (Professional) program: Design Studio (45 credits) and Design Studio-Directed Research (60 credits). The M.Arch. (Professional) degree is accredited by the Canadian Architectural Certification Board (CACB), and is recognized as accredited by the National Council of Architectural Registration Boards (NCARB) in the U.S.

For more information on program structure and courses, visit the School of Architecture website at <http://www.mcgill.ca/architecture>.

### **Required Year 0 (Freshman) Courses**

26 credits

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ARCH 321	(1)	Freehand Drawing 3
ARCH 322	(1)	Freehand Drawing 4
ARCH 324	(1)	Sketching School
ARCH 354	(3)	Architectural History 3
ARCH 355	(3)	Architectural History 4
ARCH 375	(2)	Landscape
ARCH 377	(3)	Energy, Environment and Buildings
ARCH 405	(6)	Design and Construction 3
ARCH 406	(6)	Design and Construction 4
ARCH 447	(2)	Lighting
ARCH 451	(2)	Building Regulations and Safety

### **Complementary Courses**

9 credits from the following:

ARCH 318	(3)	Design Sketching
ARCH 319	(3)	The Camera and Perception
ARCH 350	(3)	The Material Culture of Canada
ARCH 352	(3)	Art and Theory of House Design
ARCH 363	(2)	Structure, Organization and Form
ARCH 378	(3)	Site Usage
ARCH 379	(3)	Summer Course Abroad
ARCH 383	(3)	Geometry and Architecture
ARCH 461	(1)	Freehand Drawing and Sketching
ARCH 471	(2)	Computer-Aided Building Design
		Selected Topics in Design

ARCH 535	(3)	History of Architecture in Canada
ARCH 536	(3)	Heritage Conservation
ARCH 540	(3)	Selected Topics in Architecture 1
ARCH 541	(3)	Selected Topics in Architecture 2
ARCH 554	(2)	Mechanical Services
ARCH 555	(2)	Environmental Acoustics
ARCH 564	(3)	Design for Development
ARCH 566	(3)	Cultural Landscapes Seminar
OCC1 442	(2)	Environments for the Disabled

### **Electives**

6 credits of elective courses outside the School of Architecture must be completed, subject to approval by the student adviser.

### **28.11.3 Department of Chemical Engineering**



## Adjunct Professors

M. Fokas

D.J. McKeagan

B. McNicoll

A. De Mori

M. Perrier

B.E. Sarkis

J. Simandl

B. Théorét

R.C. Urquhart

### 28.11.3.6 Bachelor of Engineering (B.Eng.) - Chemical Engineering (111 credits)

The discipline of chemical engineering is distinctive in being based equally on physics, mathematics and chemistry. Application of these three fundamental sciences is basic to a quantitative understanding of the process industries. Those with an interest in the fourth major science, biology, will find several courses in the chemical engineering curriculum which integrate aspects of the biological sciences relevant to process industries such as food processing, fermentation, biomedical and water pollution control. Courses on the technical operations and economics of the process industries are added to this foundation. The core curriculum concludes with process design courses taught by practising design engineers. Problem-solving, experimenting, planning and communication skills are emphasized in courses throughout the core curriculum.

Certain students who take advantage of summer session courses can complete the departmental program in three calendar years.

In some cases students from university science disciplines have sufficient credits to complete the requirements for the B.Eng. (Chemical) program in two years. Those concerned should discuss this with their adviser.

Students must obtain a grade of C or better in all core courses. For the Department of Chemical Engineering, core courses include all required courses (departmental and non-departmental) as well as complementary courses (departmental).

#### Note to CEGEP students

If you have successfully completed a course at CEGEP that is equivalent to CHEM 212 or CHEM 234, you may request exemption for either or both courses. However, you must replace each course with another university-level course of an equal number of credits or more. McGill courses beginning with subject codes ATOC, BIOL, CHEM, EPSC, ESYS, PHYS are acceptable substitutes.

#### Required Year 0 (Freshman) Courses

30 credits

Generally, students admitted to Engineering from Quebec CEGEPs are granted transfer credit for these Year 0 (Freshman) courses (except FACC 100).

For information on transfer credit for French Baccalaureate, International Baccalaureate exams, Advanced Placement exams, Advanced Levels and Science Placement Exams, see <http://www.mcgill.ca/engineering/student/sao/newstudents/credit> and select your term of admission.

CHEM 110	(4)	General Chemistry 1
CHEM 120	(4)	General Chemistry 2
FACC 100	(1)	Introduction to the Engineering Profession
MATH 133	(3)	Linear Algebra and Geometry
MATH 140*	(3)	Calculus 1
MATH 141	(4)	Calculus 2
PHYS 131	(4)	Mechanics and Waves
PHYS 142	(4)	Electromagnetism and Optics

AND 3 credits selected from the approved list of courses in Humanities and Social Sciences, Management Studies and Law, listed below under Complementary

CHEM 212	(4)	Introductory Organic Chemistry 1
CHEM 234	(3)	Topics in Organic Chemistry
COMP 208	(3)	Computers in Engineering
FACC 100	(1)	Introduction to the Engineering Profession
FACC 400	(1)	Engineering Professional Practice
MATH 262	(3)	Intermediate Calculus
MATH 263	(3)	Ordinary Differential Equations for Engineers
MATH 264	(3)	Advanced Calculus for Engineers
MIME 310	(3)	Engineering Economy

### Required Chemical Engineering Courses

72 credits

CHEE 200	(4)	Introduction to Chemical Engineering
CHEE 204	(3)	Chemical Manufacturing Processes
CHEE 220	(3)	Chemical Engineering Thermodynamics
CHEE 291	(4)	Instrumental Measurement Laboratory
CHEE 310	(3)	Physical Chemistry for Engineers
CHEE 314	(4)	Fluid Mechanics
CHEE 315	(4)	Heat and Mass Transfer
CHEE 340	(3)	Process Modelling
CHEE 351	(3)	Separation Processes
CHEE 360	(1)	Technical Paper 1
CHEE 370	(3)	Elements of Biotechnology
CHEE 380	(3)	Materials Science
CHEE 392	(4)	Project Laboratory 1
CHEE 393	(5)	Project Laboratory 2
CHEE 423	(4)	Chemical Reaction Engineering
CHEE 453	(4)	Process Design
CHEE 455	(4)	Process Control
CHEE 456	(1)	Design Project 1
CHEE 457	(5)	Design Project 2
CHEE 462	(1)	Technical Paper 2
CHEE 474	(3)	Biochemical Engineering
CHEE 484	(3)	Materials Engineering

**Tec**

CHEE 592 or MECH 534

CHEE 593 or CIVE 430

BIOT 505**	(3)	Selected Topics in Biotechnology
CHEE 363	(2)	Projects Chemical Engineering 1
CHEE 438	(3)	Engineering Principles in Pulp and Paper Processes
CHEE 452	(3)	Particulate Systems

GEOG 203	(3)	Environmental Systems
GEOG 205	(3)	Global Change: Past, Present and Future
GEOG 302	(3)	Environmental Management 1
MECH 526	(3)	Manufacturing and the Environment
MGPO 440	(3)	Strategies for Sustainability
MIME 308	(3)	Social Impact of Technology
PHIL 343	(3)	Biomedical Ethics
RELG 270	(3)	Religious Ethics and the Environment
SOCI 235	(3)	Technology and Society
SOCI 312	(3)	Sociology of Work and Industry
URBP 201	(3)	Planning the 21st Century City

**Group B - Humanities and Social Sciences, Management Studies and Law**

3 credits at the 200-level or higher from the following departments:

Anthropology (ANTH)

Economics (any 200- or 300-level course excluding ECON 208, ECON 217, ECON 227, and ECON 337)

History (HIST)

Philosophy (excluding PHIL 210 and PHIL 310)

Political Science (POLI)

Psychology (excluding PSYC 204 and PSYC 305, but including PSYC 100)

Religious Studies (RELG)

School of Social Work (SWRK)

Sociology (excluding SOCI 350)

OR one of the following:

ARCH 350	(3)	The Material Culture of Canada
BUSA 465*	(3)	Technological Entrepreneurship
ENVR 203	(3)	Knowledge, Ethics and Environment
ENVR 400	(3)	Environmental Thought
FACC 220	(3)	Law for Architects and Engineers
FACC 500	(3)	Technology Business Plan Design
FACC 501	(3)	Technology Business Plan Project
INDR 294*	(3)	Introduction to Labour-Management Relations
MATH 338	(3)	History and Philosophy of Mathematics
MGCR 222*	(3)	Introduction to Organizational Behaviour
MGCR 352*	(3)	Marketing Management 1
MRKT 360*	(3)	Marketing of Technology
ORGB 321*	(3)	Leadership
ORGB 423*	(3)	Human Resources Management

\*Note: Management courses have limited enrolment and registration dates. See Important Dates at <http://www.mcgill.ca/importantdates>.

**Language Courses**

If you are not proficient in a certain language, 3 credits will be given for one 6-credit course in that language.

However, 3 credits may be given for any language course that has a sufficient cultural component. You must have this course approved by a faculty adviser.









**Required Civil Engineering Courses**

61 credits

CIVE 202	(4)	Construction Materials
CIVE 205	(3)	Statics
CIVE 206	(3)	Dynamics
CIVE 207	(4)	Solid Mechanics
CIVE 208	(3)	Civil Engineering System Analysis
CIVE 210	(2)	Surveying
CIVE 225	(4)	Environmental Engineering
CIVE 290	(3)	Thermodynamics and Heat Transfer
CIVE 302	(3)	Probabilistic Systems
CIVE 311	(4)	Geotechnical Mechanics
CIVE 317	(3)	Structural Engineering 1
CIVE 318	(3)	Structural Engineering 2
CIVE 319	(3)	Transportation Engineering
CIVE 323	(3)	Hydrology and Water Resources
CIVE 324	(3)	Construction Project Management
CIVE 327	(4)	Fluid Mechanics and Hydraulics
CIVE 418	(4)	Design Project
CIVE 432	(1)	Technical Paper

**Complementary Courses**

21 credits consisting of:

Technical Complementary Courses

15 credits from List A and List B

Complementary Studies

6 credits from Group A and Group B

**List A - Design Technical Complementaries**

6-15 credits from the following:

CIVE 416	(3)	Geotechnical Engineering
CIVE 421	(3)	Municipal Systems
CIVE 428	(3)	Water Resources and Hydraulic Engineering
CIVE 430	(3)	Water Treatment and Pollution Control
CIVE 462	(3)	Design of Steel Structures
CIVE 463	(3)	Design of Concrete Structures

**List B - General Technical Complementaries**

0-9 credits from the following, or from other suitable undergraduate or 500-level courses:

CIVE 433	(3)	Urban Planning
CIVE 440	(3)	Traffic Engineering
CIVE 446	(3)	Construction Engineering
CIVE 451	(3)	Geoenvironmental Engineering

CIVE 460	(3)	Matrix Structural Analysis
CIVE 470	(3)	Undergraduate Research Project
CIVE 512	(3)	Advanced Civil Engineering Materials
CIVE 527	(3)	Renovation and Preservation: Infrastructure
CIVE 540	(3)	Urban Transportation Planning
CIVE 550	(3)	Water Resources Management
CIVE 551	(3)	Environmental Transport Processes
CIVE 553	(3)	Stream Pollution and Control
CIVE 555	(3)	Environmental Data Analysis
CIVE 572	(3)	Computational Hydraulics
CIVE 573	(3)	Hydraulic Structures
CIVE 574	(3)	Fluid Mechanics of Water Pollution
CIVE 577	(3)	River Engineering
CIVE 584	(3)	Groundwater Engineering
CIVE 587	(3)	Pavement Design

### Complementary Studies

6 credits

#### Group A - Impact of Technology on Society

3 credits from the following:

ANTH 212	(3)	Anthropology of Development
BTEC 502	(3)	Biotechnology Ethics and Society
CHEE 430	(3)	Technology Impact Assessment
CIVE 469	(3)	Infrastructure and Society
ECON 225	(3)	Economics of the Environment
ECON 347	(3)	Economics of Climate Change
ENVR 201	(3)	Society and Environment
GEOG 200	(3)	Geographical Perspectives: World Environmental Problems
GEOG 203	(3)	Environmental Systems
GEOG 205	(3)	Global Change: Past, Present and Future
GEOG 302	(3)	Environmental Management 1
MECH 526	(3)	Manufacturing and the Environment
MGPO 440	(3)	Strategies for Sustainability
MIME 308	(3)	Social Impact of Technology
PHIL 343	(3)	Biomedical Ethics
RELG 270	(3)	Religious Ethics and the Environment
SOCI 235	(3)	Technology and Society
SOCI 312	(3)	Sociology of Work and Industry
URBP 201	(3)	Planning the 21st Century City

#### Group B - Humanities and Social Sciences, Management Studies and Law

3 credits at the 200-level or higher from the following departments:

Anthropology (ANTH)

Economics (any 200- or 300-level course excluding ECON 208, ECON 217, ECON 227 and ECON 337)

History (HIST)

Philosophy (excluding PHIL 210 and PHIL 310)

Political Science (POLI)

Psychology (excluding PSYC 204 and PSYC 305, but including PSYC 100)

Religious Studies (RELG)

School of Social Work (SWRK)

Sociology (excluding SOCI 350)

OR one of the following:

ARCH 350 (3) The Material Culture of Canada

BUSA 465\* (3) Technological Entrepreneurship

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## **Associate Professors**

Tal Arbel; M.Eng., Ph.D.(McG.)

Jan Bajcsy; B.Sc.(Harv.), M.Eng., Ph.D.(Prin.)



## Associate Members

Nathaniel J. Quitoriano; B.S.(Calif.), Ph.D.(MIT)

## Adjunct Professors

Ray Bartnikas

Eric Boisvert

Charalambos Charalambous

Robert DiRaddo

Danny Grant

Cedric Guss

Cheng K. Jen

Irene Leszkowicz

Miguel Marin

Douglas O'Shaughnessy

Katarzyna Radecka

Farouk Rizk

Anthony Rodolakis

Robert Sabourin

Leszek Szczecinski

Kenneth D. Wagner

### 28.11.5.4 Bachelor of Engineering (B.Eng.) - Electrical Engineering (109 credits)

The program gives students a broad understanding of the key principles that are responsible for the extraordinary advances in the technology of computers, micro-electronics, automation and robotics, telecommunications and power systems. These areas are critical to the development of our industries and, more generally, to our economy. A graduate of this program is exposed to all basic elements of electrical engineering and can function in any of our client industries. This breadth is what distinguishes an engineer from, say, a computer scientist or physicist.

In addition to technical complementary courses, students in the Electrical Engineering program take general complementary courses in social sciences, administrative studies and humanities. These courses allow students to develop specific interests in areas such as psychology, economics, management or political science.

Total program credit weight: 109-110 credits.

### Required Year 0 (Freshman) Courses

30 credits

Generally, students admitted to Engineering from Quebec CEGEPs are granted transfer credit for these Year 0 (Freshman) courses (except FACC 100).

For information on transfer credit for French Baccalaureate, International Baccalaureate exams, Advanced Placement exams, Advanced Levels and Science Placement Exams, see

<http://www.mcgill.ca/engineering/student/sao/newstudents/credit> and select your term of admission.

CHEM 110	(4)	General Chemistry 1
CHEM 120	(4)	General Chemistry 2
FACC 100	(1)	Introduction to the Engineering Profession
MATH 133	(3)	Linear Algebra and Geometry
MATH 140*	(3)	Calculus 1
MATH 141	(4)	Calculus 2
PHYS 131	(4)	Mechanics and Waves
PHYS 142	(4)	Electromagnetism and Optics

AND 3 credits selected from the approved list of courses in Humanities and Social Sciences, Management Studies and Law, listed below under Complementary Studies (Group B).

\*Students may take MATH 139 (Calculus) instead of MATH 140, but only with permission from the Department of Mathematics and Statistics.

## Complementary Courses

20-21 credits

### Technical Complementaries

12 credits from the following:

ECSE 404	(3)	Control Systems
ECSE 405	(3)	Antennas
ECSE 411	(3)	Communications Systems 1
ECSE 412	(3)	Discrete Time Signal Processing
ECSE 413	(3)	Communications Systems 2
ECSE 414	(3)	Introduction to Telecommunication Networks
ECSE 420	(3)	Parallel Computing
ECSE 421	(3)	Embedded Systems
ECSE 422	(3)	Fault Tolerant Computing
ECSE 423	(3)	Fundamentals of Photonics
ECSE 424	(3)	Human-Computer Interaction
ECSE 425	(3)	Computer Organization and Architecture
ECSE 426	(3)	Microprocessor Systems
ECSE 427	(3)	Operating Systems
ECSE 430	(3)	Photonic Devices and Systems
ECSE 431	(3)	Introduction to VLSI CAD
ECSE 432	(3)	Physical Basis: Transistor Devices
ECSE 435	(3)	Mixed-Signal Test Techniques
ECSE 436	(3)	Signal Processing Hardware
ECSE 450	(3)	Electromagnetic Compatibility
ECSE 451	(3)	EM Transmission and Radiation
ECSE 460*	(3)	Appareillage électrique (Electrical Power Equipment)
ECSE 462	(3)	Electromechanical Energy Conversion
ECSE 464	(3)	Power Systems Analysis 1
ECSE 465	(3)	Power Electronic Systems

ECSE 486	(2)	Power Laboratory
ECSE 487	(2)	Computer Architecture Laboratory
ECSE 488	(2)	High Frequency Laboratory
ECSE 489	(2)	Telecommunication Network Laboratory
ECSE 490	(2)	Digital Signal Processing Laboratory
ECSE 491	(2)	Communication Systems Laboratory
ECSE 493	(2)	Control and Robotics Laboratory

**Complementary Studies**

6 credits from Group A and Group B

**Group A - Impact of Technology on Society**

3 credits from the following:

ANTH 212	(3)	Anthropology of Development
BTEC 502	(3)	Biotechnology Ethics and Society
CHEE 430	(3)	Technology Impact Assessment
CIVE 469	(3)	Infrastructure and Society
ECON 225	(3)	Economics of the Environment
ECON 347	(3)	Economics of Climate Change
ENVR 201	(3)	Society and Environment
GEOG 200	(3)	Geographical Perspectives: World Environmental Problems
GEOG 203	(3)	Environmental Systems
GEOG 205	(3)	Global Change: Past, Present and Future
GEOG 302	(3)	Environmental Management 1
MECH 526	(3)	Manufacturing and the Environment
MGPO 440	(3)	Strategies for Sustainability
MIME 308	(3)	Social Impact of Technology
PHIL 343	(3)	Biomedical Ethics
RELG 270	(3)	Religious Ethics and the Environment
SOCI 235	(3)	Technology and Society
SOCI 312	(3)	Sociology of Work and Industry
URBP 201	(3)	Planning the 21st Century City

**Group B - Humanities and Social Sciences, Management Studies and Law**

3 credits at the 200-level or higher from the following departments:

Anthropology (ANTH)

Economics (any 200- or 300-level course excluding ECON 208, ECON 217, ECON 227 and ECON 337)

History (HIST)

Philosophy (excluding PHIL 210 and PHIL 310)

Political Science (POLI)

Psychology (excluding PSYC 204 and PSYC 305, but including PSYC 100)

Religious Studies (RELG)

School of Social Work (SWRK)

Sociology (excluding SOCI 350)

OR one of the following:

## Required Courses

9 credits

ECSE 462	(3)	Electromechanical Energy Conversion
ECSE 464	(3)	Power Systems Analysis I
ECSE 465	(3)	Power Electronic Systems

PHYS 131	(4)	Mechanics and Waves
PHYS 142	(4)	Electromagnetism and Optics

AND 3 credits selected from the approved list of courses in Humanities and Social Sciences, Management Studies and Law, listed below under Complementary Studies (Group B).

\*Students may take MATH 139 (Calculus) instead of MATH 140, but only with permission from the Department of Mathematics and Statistics.

### Required Non-Departmental Courses

32 credits

CCOM 206	(3)	Communication in Engineering
CIVE 281*	(3)	Analytical Mechanics
COMP 202	(3)	Introduction to Computing 1
FACC 100	(1)	Introduction to the Engineering Profession
FACC 400	(1)	Engineering Professional Practice
MATH 262	(3)	Intermediate Calculus
MATH 263*	(3)	Ordinary Differential Equations for Engineers
MATH 264	(3)	Advanced Calculus for Engineers
MATH 271*	(3)	Linear Algebra and Partial Differential Equations
MATH 381*	(3)	Complex Variables and Transforms
MIME 310	(3)	Engineering Economy
PHYS 271	(3)	Introduction to Quantum Physics

\*Though not required to do so, students in the Honours program or wishing to enter the Honours program are encouraged to take the following advanced math and physics courses instead of the required courses marked by (\*):

MATH 247 (Honours Applied Linear Algebra) instead of MATH 271

MATH 249 (Honours Complex Variables) instead of MATH 381

MATH 325 (Honours Ordinary Differential Equations) instead of MATH 263

PHYS 251 (Honours Classical Mechanics) instead of CIVE 281

### Required Electrical Engineering Courses

60 credits

ECSE 200	(3)	Electric Circuits 1
ECSE 210	(3)	Electric Circuits 2
ECSE 211	(3)	Design Principles and Methods
ECSE 212*	(3)	Properties of Materials in Electrical Engineering
ECSE 221	(3)	Introduction to Computer Engineering
ECSE 291	(2)	Electrical Measurements Laboratory
ECSE 303	(3)	Signals and Systems 1
ECSE 304	(3)	Signals and Systems 2
ECSE 305	(3)	Probability and Random Sig. 1
ECSE 322	(3)	Computer Engineering
ECSE 323	(5)	Digital System Design
ECSE 330	(3)	Introduction to Electronics
ECSE 334	(3)	Introduction to Microelectronics
ECSE 351	(3)	Electromagnetic Fields
ECSE 352	(3)	Electromagnetic Waves

ECSE 361	(3)	Power Engineering
ECSE 434	(2)	Microelectronics Laboratory
ECSE 498	(3)	Honours Thesis 1
ECSE 499	(3)	Honours Thesis 2
ECSE 543	(3)	Numerical Methods in Electrical Engineering
MIME 262*	(3)	Properties of Materials in Electrical Engineering

\*Students select either ECSE 212 or MIME 262 from the list above.

**Complementary Courses**

17-18 credits

11-12 credits from List A and List B

**List A - Technical Complementaries**

9 credits chosen from 500-level ECSE courses OR one of the following and 6 credits chosen from 500-level ECSE courses (no more than one 400-level course can be chosen as a technical complementary):

ECSE 425	(3)	Computer Organization and Architecture
ECSE 427	(3)	Operating Systems
ECSE 451	(3)	EM Transmission and Radiation

**Laboratory Complementaries**

2-3 credits from the following:

ECSE 426	(3)	Microprocessor Systems
ECSE 431	(3)	Introduction to VLSI CAD
ECSE 435	(3)	Mixed-Signal Test Techniques
ECSE 436	(3)	Signal Processing Hardware
ECSE 450	(3)	Electromagnetic Compatibility
ECSE 485	(2)	IC Fabrication Laboratory
ECSE 486	(2)	Power Laboratory
ECSE 487	(2)	Computer Architecture Laboratory
ECSE 488	(2)	High Frequency Laboratory
ECSE 489	(2)	Telecommunication Network Laboratory
ECSE 490	(2)	Digital Signal Processing Laboratory
ECSE 491	(2)	Communication Systems Laboratory
ECSE 493	(2)	Control and Robotics Laboratory

**Complementary Studies**

6 credits from Group A and Group B

**Group A - Impact of Technology on Society**

3 credits from the following:

ANTH 212	(3)	Anthropology of Development
BTEC 502	(3)	Biotechnology Ethics and Society
CHEE 430	(3)	Technology Impact Assessment
CIVE 469	(3)	Infrastructure and Society



ECON 225	(3)	Economics of the Environment
ECON 347	(3)	Economics of Climate Change
ENVR 201	(3)	Society and Environment
GEOG 200	(3)	Geographical Perspectives: World Environmental Problems
GEOG 203	(3)	Environmental Systems
GEOG 205	(3)	Global Change: Past, Present and Future
GEOG 302	(3)	Environmental Management 1
MECH 526	(3)	Manufacturing and the Environment
MGPO 440	(3)	Strategies for Sustainability
MIME 308	(3)	Social Impact of Technology
PHIL 343	(3)	Biomedical Ethics
RELG 270	(3)	Religious Ethics and the Environment
SOCI 235	(3)	Technology and Society
SOCI 312	(3)	Sociology of Work and Industry
URBP 201	(3)	Planning the 21st Century City

### Group B - Humanities and Social Sciences, Management Studies and Law

3 credits at the 200-level or higher from the following departments:

Anthropology (ANTH)

Economics (any 200- or 300-level course excluding ECON 208, ECON 217, ECON 227 and ECON 337)

History (HIST)

Philosophy (excluding PHIL 210 and PHIL 310)

Political Science (POLI)

Psychology (excluding PSYC 204 and PSYC 305, but including PSYC 100)

Religious Studies (RELG)

School of Social Work (SWRK)

Sociology (excluding SOCI 350)

OR one of the following:

ARCH 350	(3)	The Material Culture of Canada
BUSA 465*	(3)	Technological Entrepreneurship
ENVR 203	(3)	Knowledge, Ethics and Environment
ENVR 400	(3)	Environmental Thought
FACC 220	(3)	Law for Architects and Engineers
FACC 500	(3)	Technology Business Plan Design
FACC 501	(3)	Technology Business Plan Project
INDR 294*	(3)	Introduction to Labour-Management Relations
MATH 338	(3)	History and Philosophy of Mathematics
MGCR 222*	(3)	Introduction to Organizational Behaviour
MGCR 352*	(3)	Marketing Management 1
MRKT 360*	(3)	Marketing of Technology
ORGB 321*	(3)	Leadership
ORGB 423*	(3)	Human Resources Management

\*Note: Management courses have limited enrolment and registration dates. See Important Dates at <http://www.mcgill.ca/importantdates>.

## Language Courses

If you are not proficient in a certain language, 3 credits will be given for one 6-credit course in that language.

However, 3 credits may be given for any language course that has a sufficient cultural component. You must have this course approved by a faculty adviser.

### 28.11.5.6 Bachelor of Engineering (B.Eng.) - Computer Engineering (107 credits)

The Computer Engineering program provides students with greater depth and breadth of knowledge in the hardware and software aspects of computers. Students are exposed to both theoretical and practical issues of both hardware and software in well-equipped laboratories. Although the program is designed to meet the growing demands by industry for engineers with a strong background in modern computer technology, it also provides the underlying depth for graduate studies in all fields of Computer Engineering.

In addition to technical complementary courses, students in the program take general complementary courses in social sciences, management studies and humanities. These courses allow students to develop specific interests in areas such as psychology, economics, management or political science.

Total program credit weight: 107-111 credits.

### Required Year 0 (Freshman) Courses

30 credits

Generally, students admitted to Engineering from Quebec CEGEPs are granted transfer credit for these Year 0 (Freshman) courses (except FACC 100).

For information on transfer credit for French Baccalaureate, International Baccalaureate exams, Advanced Placement exams, Advanced Levels and Science Placement Exams, see

<http://www.mcgill.ca/student-records/exam/placement>.

CHEM 110	(4)	General Chemistry 1
CHEM 120	(4)	General Chemistry 2
FACC 100	(1)	Introduction to the Engineering Profession
MATH 133	(3)	Linear Algebra and Geometry
MATH 140*	(3)	Calculus 1
MATH 141	(4)	Calculus 2
PHYS 131	(4)	Mechanics and Waves
PHYS 142	(4)	Electromagnetism and Optics

AND 3 credits selected from the approved list of courses in Humanities and Social Sciences, Management

### Required Computer Engineering Courses

55 credits

ECSE 200	(3)	Electric Circuits 1
ECSE 210	(3)	Electric Circuits 2

## LIST B

6 credits from the following:

COMP 424	(3)	Artificial Intelligence
ECSE 404	(3)	Control Systems
ECSE 411	(3)	Communications Systems I
ECSE 412	(3)	Discrete Time Signal Processing
ECSE 420	(3)	Parallel Computing
ECSE 421	(3)	Embedded Systems
ECSE 422	(3)	Fault Tolerant Computing
ECSE 429	(3)	Software Validation
ECSE 436	(3)	Signal Processing Hardware
ECSE 443	(3)	Introduction to Numerical Methods in Electrical Engineering
ECSE 450	(3)	Electromagnetic Compatibility
ECSE 530	(3)	Logic Synthesis
ECSE 532	(3)	Computer Graphics
ECSE 548	(3)	Introduction to VLSI Systems

## Laboratory Complementaries

2-3 credits

Note: The lab course is intended to strengthen the practical knowledge within one of the body of knowledge core units and as such should complement one of the core unit lecture courses, namely ECSE 334, ECSE 414, or ECSE 425.

ECSE 434	(2)	Microelectronics Laboratory
ECSE 436	(3)	Signal Processing Hardware
ECSE 487	(2)	Computer Architecture Laboratory
ECSE 489	(2)	Telecommunication Network Laboratory
ECSE 490	(2)	Digital Signal Processing Laboratory
ECSE 491	(2)	Communication Systems Laboratory
ECSE 493	(2)	Control and Robotics Laboratory

## Complementary Studies

6 credits from Group A and Group B

### Group A - Impact of Technology on Society

3 credits from the following:

ANTH 212	(3)	Anthropology of Development
BTEC 502	(3)	Biotechnology Ethics and Society
CHEE 430	(3)	Technology Impact Assessment
CIVE 469	(3)	Infrastructure and Society
ECON 225	(3)	Economics of the Environment
ECON 347	(3)	Economics of Climate Change
ENVR 201	(3)	Society and Environment
		Geographical Perspectives: World En

GEOG 205	(3)	Global Change: Past, Present and Future
GEOG 302	(3)	Environmental Management 1
MECH 526	(3)	Manufacturing and the Environment
MGPO 440	(3)	Strategies for Sustainability
MIME 308	(3)	Social Impact of Technology
PHIL 343	(3)	Biomedical Ethics
RELG 270	(3)	Religious Ethics and the Environment
SOCI 235	(3)	Technology and Society
SOCI 312	(3)	Sociology of Work and Industry
URBP 201	(3)	Planning the 21st Century City

### Group B - Humanities and Social Sciences, Management Studies and Law

3 credits at the 200-level or higher from the following departments:

Anthropology (ANTH)

Economics (any 200- or 300-level course excluding ECON 208, ECON 217, ECON 227 and ECON 337)

History (HIST)

Philosophy (excluding PHIL 210 and PHIL 310)

Political Science (POLI)

Psychology (excluding PSYC 204 and PSYC 305, but including PSYC 100)

Religious Studies (RELG)

School of Social Work (SWRK)

Sociology (excluding SOCI 350)

OR one of the following:

ARCH 350	(3)	The Material Culture of Canada
BUSA 465*	(3)	Technological Entrepreneurship
ENVR 203	(3)	Knowledge, Ethics and Environment
ENVR 400	(3)	Environmental Thought
FACC 220	(3)	Law for Architects and Engineers
FACC 500	(3)	Technology Business Plan Design
FACC 501	(3)	Technology Business Plan Project
INDR 294*	(3)	Introduction to Labour-Management Relations
MATH 338	(3)	History and Philosophy of Mathematics
MGCR 222*	(3)	Introduction to Organizational Behaviour
MGCR 352*	(3)	Marketing Management 1
MRKT 360*	(3)	Marketing of Technology
ORGB 321*	(3)	Leadership
ORGB 423*	(3)	Human Resources Management

\*Note: Management courses have limited enrolment and registration dates. See Important Dates at <http://www.mcgill.ca/importantdates>.

### Language Courses

If you are not proficient in a certain language, 3 credits will be given for one 6-credit course in that language.

However, 3 credits may be given for any language course that has a sufficient cultural component. You must have this course approved by a faculty adviser.

### 28.11.5.7 Bachelor of Software Engineering (B.S.E.) - Software Engineering (106 credits)

This program offers students the opportunity to focus their studies on the skills needed to design and develop complex software systems. This emerging field of engineering is a major component of the growing Information Technology (IT) sector of the economy, in which the demand for qualified personnel continues to outstrip supply. Graduates of this program will have a solid foundation for careers in the software industry.

In addition to technical complementary courses, students take general complementary courses in social sciences, management studies and humanities. These courses allow students to develop specific interests in areas such as psychology, economics, management or political science.

Total program credit weight: 109-115 credits.

#### Required Year 0 (Freshman) Courses

30 credits

Generally, students admitted to Engineering from Quebec CEGEPs are granted transfer credit for these Year 0 (Freshman) courses (except FACC 100).

For information on transfer credit for French Baccalaureate, International Baccalaureate exams, Advanced Placement exams, Advanced Levels and Science Placement Exams, see <http://www.mcgill.ca/student-records/exam/placement> and select your term of admission.

CHEM 110	(4)	General Chemistry 1
CHEM 120	(4)	General Chemistry 2
FACC 100	(1)	Introduction to the Engineering Profession
MATH 133	(3)	Linear Algebra and Geometry
MATH 140*	(3)	Calculus 1
MATH 141	(4)	Calculus 2
PHYS 131	(4)	Mechanics and Waves
PHYS 142	(4)	Electromagnetism and Optics

AND 3 credits select 0 0i 70.52,dM0 0 1 67.521) sector onR1 88.8ono(AND 3 credij1 0 0 1 67.5)

FACC 400	(1)	Engineering Professional Practice
MATH 262	(3)	Intermediate Calculus
MATH 263	(3)	Ordinary Differential Equations for Engineers
MATH 264	(3)	Advanced Calculus for Engineers
MATH 270	(3)	Applied Linear Algebra
MATH 363	(3)	Discrete Mathematics

### **Engineering Breadth Required Courses**

23 credits

CCOM 206	(3)	Communication in Engineering
ECSE 200	(3)	Electric Circuits 1
ECSE 210	(3)	Electric Circuits 2
ECSE 291	(2)	Electrical Measurements Laboratory
ECSE 305	(3)	Probability and Random Sig. 1
ECSE 306	(3)	Fundamentals of Signals and Systems
ECSE 330	(3)	Introduction to Electronics
MIME 310	(3)	Engineering Economy

### **Complementary Courses**

18-26 credits

#### **Basic Science Complementary Courses (for CEGEP students only)**

0-6 credits

Students from CEGEP are required to complete two 3-credit courses at the 200-level or higher, chosen from the following science departments, approved

ECSE 529 (3) Computer and Biological Vision

### List B

6-8 credits from the following:

COMP 535*	(3)	Computer Networks 1
COMP 557**	(3)	Fundamentals of Computer Graphics
ECSE 323	(5)	Digital System Design
ECSE 404	(3)	Control Systems
ECSE 411	(3)	Communications Systems 1
ECSE 412	(3)	Discrete Time Signal Processing
ECSE 413	(3)	Communications Systems 2
ECSE 414*	(3)	Introduction to Telecommunication Networks
ECSE 421	(3)	Embedded Systems
ECSE 422	(3)	Fault Tolerant Computing
ECSE 424	(3)	Human-Computer Interaction
ECSE 425	(3)	Computer Organization and Architecture
ECSE 426	(3)	Microprocessor Systems
ECSE 504	(3)	Sampled Data Control
ECSE 530	(3)	Logic Synthesis
ECSE 532**	(3)	Computer Graphics

\*Students choose either COMP 535 or ECSE 414.

\*\*Students choose either COMP 557 or ECSE 532.

### Complementary Studies

6 credits

3 credits selected from the Impact of Technology on Society course list below.

3 credits selected from the Humanities and Social Sciences, Management Studies and Law course lists below.

Note: Out-of-province (high school) students completing the basic science requirements for students entering outside Quebec need an additional 3 credits of pre-engineering Humanities and Social Sciences (HSS) courses. Please contact the Faculty of Engineering for information.

### Group A - Impact of Technology on Society

3 credits from the following:

ANTH 212	(3)	Anthropology of Development
BTEC 502	(3)	Biotechnology Ethics and Society
CHEE 430	(3)	Technology Impact Assessment
CIVE 469	(3)	Infrastructure and Society
ECON 225	(3)	Economics of the Environment
ECON 347	(3)	Economics of Climate Change
ENVR 201	(3)	Society and Environment
GEOG 200	(3)	Geographical Perspectives: World Environmental Problems
GEOG 203	(3)	Environmental Systems
GEOG 205	(3)	Global Change: Past, Present and Future
GEOG 302	(3)	Environmental Management 1
MECH 526	(3)	Manufacturing and the Environment



MGPO 440	(3)	Strategies for Sustainability
MIME 308	(3)	Social Impact of Technology
PHIL 343	(3)	Biomedical Ethics
RELG 270	(3)	Religious Ethics and the Environment
SOCI 235	(3)	Technology and Society
SOCI 312	(3)	Sociology of Work and Industry
URBP 201	(3)	Planning the 21st Century City

**Group B - Humanities and Social Sciences, Management Studies and Law**

3 courses at the 200-level or higher from the following departments:

817 Sherbrooke Street West  
Montreal, Quebec H3A 2K6

Telephone: 514-398-6296

Fax: 514-398-7365

Website: [www.mcgill.ca/mecheng](http://www.mcgill.ca/mecheng)

### **28.11.6.2 About the Department of Mechanical Engineering**

Mechanical engineers are traditionally concerned with the conception, design, implementation and operation of mechanical systems. Typical fields of work are aerospace, energy, manufacturing, machinery, and transportation. Because of the very broad nature of the discipline there is usually a high demand for mechanical engineers.

Many mechanical engineers follow other career paths. Graduate studies are useful for the specialists working in research establishments, consulting firms, or in corporate research and development.

To prepare the mechanical engineer for a wide range of career possibilities, there is a heavy emphasis in our curriculum on the fundamental analytical disciplines. This is balanced by a sequence of experimental and design engineering courses which include practice in design, manufacturing and experimentation. In these courses students learn how to apply their analytical groundwork to the solution of practical problems.

Concentrations in Aeronautical Engineering, Mechatronics, and Design are av

## Professors

Luc Mongeau; B.S.M.E., M.S.(École Poly., Montr.), Ph.D.(Penn. St.) (*Tier 1 Canada Research Chair*), *Associate Dean, Academic Affairs, Director, Graduate Admissions and Scholarships*

Christophe Pierre; B.Eng.(École Centrale, Paris), M.Sc.(Prin.), Ph.D.(Duke) (*Tier 1 Canada Research Chair*),

## Required Year 0 (Freshman) Courses

30 credits

Generally, students admitted to Engineering from Quebec CEGEPs are granted transfer credit for these Year 0 (Freshman) courses (except FACC 100).

For information on transfer credit for French Baccalaureate, International Baccalaureate exams, Advanced Placement exams, Advanced Levels and Science Placement Exams, see <http://www.mcgill.ca/engineering/student/sao/newstudents> and select your term of admission.

CHEM 110	(4)	General Chemistry 1
CHEM 120	(4)	General Chemistry 2
FACC 100	(1)	Introduction to the Engineering Profession
MATH 133	(3)	Linear Algebra and Geometry
MATH 140*	(3)	Calculus 1
MATH 141	(4)	Calculus 2
PHYS 131	(4)	Mechanics and Waves
PHYS 142	(4)	Electromagnetism and Optics

AND 3 credits selected from the approved list of courses in Humanities and Social Sciences, Management Studies and Law, listed below under Complementary Studies (Group B).

\*Students may take MA

MECH 314	(3)	Dynamics of Mechanisms
MECH 315	(4)	Mechanics 3
MECH 321	(3)	Mechanics of Deformable Solids
MECH 331	(3)	Fluid Mechanics 1
MECH 341	(3)	Thermodynamics 2
MECH 346	(3)	Heat Transfer
MECH 362	(2)	Mechanical Laboratory 1
MECH 383	(3)	Applied Electronics and Instrumentation
MECH 393	(3)	Machine Element Design
MECH 412	(3)	Dynamics of Systems
MECH 430	(3)	Fluid Mechanics 2
MECH 463D1	(3)	Mechanical Engineering Project
MECH 463D2	(3)	Mechanical Engineering Project

### Complementary Courses

15 credits

6 credits at the 300-level or higher, chosen from Mechanical Engineering courses (subject code MECH). One of these two courses (3 credits) must be from the following list:

CHEE 563*	(3)	Biofluids and Cardiovascular Mechanics
MECH 497	(3)	Value Engineering
MECH 498	(3)	Interdisciplinary Design Project 1
MECH 499	(3)	Interdisciplinary Design Project 2
MECH 513	(3)	Control Systems
MECH 524	(3)	Computer Integrated Manufacturing
MECH 528	(3)	Product Design
MECH 541	(3)	Kinematic Synthesis
MECH 543	(3)	Design with Composite Materials
MECH 553	(3)	Design and Manufacture of Microdevices
MECH 554	(3)	Microprocessors for Mechanical Systems
MECH 557	(3)	Mechatronic Design
MECH 563*	(3)	Biofluids and Cardiovascular Mechanics
MECH 565	(3)	Fluid Flow and Heat Transfer Equipment
MECH 573	(3)	Mechanics of Robotic Systems
MECH 577	(3)	Optimum Design
MECH 593	(3)	Design Theory and Methodology

\*Students select either CHEE 563 or MECH 563

3 credits chosen from courses at the 300-level or higher in the Faculty of Engineering (including MECH courses) or from courses in the Faculty of Science, including MATH courses, approved by the Department.

### Complementary Studies

6 credits from Group A and Group B

#### Group A - Impact of Technology on Society

3 credits from the following:

ANTH 212	(3)	Anthropology of Development
BTEC 502	(3)	Biotechnology Ethics and Society
CHEE 430	(3)	Technology Impact Assessment
CIVE 469	(3)	Infrastructure and Society
ECON 225	(3)	Economics of the Environment
ECON 347	(3)	Economics of Climate Change
ENVR 201	(3)	Society and Environment
GEOG 200	(3)	Geographical Perspectives: World Environmental Problems
GEOG 203	(3)	Environmental Systems
GEOG 205	(3)	Global Change: Past, Present and Future
GEOG 302	(3)	Environmental Management 1
MECH 526	(3)	Manufacturing and the Environment
MGPO 440	(3)	Strategies for Sustainability
MIME 308	(3)	Social Impact of Technology
PHIL 343	(3)	Biomedical Ethics
RELG 270	(3)	Religious Ethics and the Environment
SOCI 235	(3)	Technology and Society
SOCI 312	(3)	Sociology of Work and Industry
URBP 201	(3)	Planning the 21st Century City

**Group B - Humanities and Social Sciences, Management Studies and Law**

3 credits at the 200-level or higher from the following departments:

Anthropology (ANTH)

Economics (any 200- or 300-level course excluding ECON 208, ECON 217, ECON 227 and ECON 337)

History (HIST)

Philosophy (excluding PHIL 210 and PHIL 310)

Political Science (POLI)

Psychology (excluding PSYC 204 and PSYC 305, but including PSYC 100)

Religious Studies (RELG)

School of Social Work (SWRK)

Sociology (excluding SOCI 350)

OR one of the following:

ARCH 350	(3)	The Material Culture of Canada
BUSA 465*	(3)	Technological Entrepreneurship
ENVR 203	(3)	Knowledge, Ethics and Environment
ENVR 400	(3)	Environmental Thought
FACC 220	(3)	Law for Architects and Engineers
FACC 500	(3)	Technology Business Plan Design
FACC 501	(3)	Technology Business Plan Project
INDR 294*	(3)	Introduction to Labour-Management Relations
MATH 338	(3)	History and Philosophy of Mathematics
MGCR 222*	(3)	Introduction to Organizational Behaviour
MGCR 352*	(3)	Marketing Management 1



FACC 400	(1)	Engineering Professional Practice
MATH 262	(3)	Intermediate Calculus
MATH 263	(3)	Ordinary Differential Equations for Engineers
MATH 264	(3)	Advanced Calculus for Engineers
MATH 271	(3)	Linear Algebra and Partial Differential Equations
MIME 310	(3)	Engineering Economy

### Required Mechanical Engineering Courses

61 credits

MECH 201	(2)	Introduction to Mechanical Engineering
MECH 210	(2)	Mechanics 1
MECH 220	(4)	Mechanics 2
MECH 240	(3)	Thermodynamics 1
MECH 260	(2)	Machine Tool Laboratory
MECH 262	(3)	Statistics and Measurement Laboratory
MECH 289	(3)	Design Graphics
MECH 292	(3)	Conceptual Design
MECH 309	(3)	Numerical Methods in Mechanical Engineering
MECH 321	(3)	Mechanics of Deformable Solids
MECH 331	(3)	Fluid Mechanics 1
MECH 341	(3)	Thermodynamics 2
MECH 346	(3)	Heat Transfer
MECH 362	(2)	Mechanical Laboratory 1
MECH 383	(3)	Applied Electronics and Instrumentation
MECH 403D1	(3)	Thesis (Honours)
MECH 403D2	(3)	Thesis (Honours)
MECH 404	(3)	Honours Thesis 2
MECH 419	(4)	Advanced Mechanics of Systems
MECH 430	(3)	Fluid Mechanics 2
MECH 494	(3)	Honours Design Project

### Complementary Courses

24 credits

3 credits from the following, chosen with the approval of either the thesis supervisor or the coordinator of the honours program, when a thesis supervisor has not yet been secured:

MATH 327	(3)	Matrix Numerical Analysis
MATH 381	(3)	Complex Variables and Transforms
MATH 417	(3)	Mathematical Programming

6 credits from the following:

MECH 546	(3)	Finite Element Methods in Solid Mechanics
MECH 562	(3)	Advanced Fluid Mechanics



MECH 578 (3) Advanced Thermodynamics

6 credits at the 300-level or higher, chosen from Mechanical Engineering courses (subject code MECH). One of these two courses (3 credits) must be from the following list:

CHEE 563*	(3)	Biofluids and Cardiovascular Mechanics
MECH 497	(3)	Value Engineering
MECH 498	(3)	Interdisciplinary Design Project 1
MECH 499	(3)	Interdisciplinary Design Project 2
MECH 513	(3)	Control Systems
MECH 524	(3)	Computer Integrated Manufacturing
MECH 526	(3)	Manufacturing and the Environment
MECH 528	(3)	Product Design
MECH 541	(3)	Kinematic Synthesis
MECH 543	(3)	Design with Composite Materials
MECH 553	(3)	Design and Manufacture of Microdevices
MECH 554	(3)	Microprocessors for Mechanical Systems
MECH 557	(3)	Mechatronic Design
MECH 563*	(3)	Biofluids and Cardiovascular Mechanics
MECH 565	(3)	Fluid Flow and Heat Transfer Equipment
MECH 573	(3)	Mechanics of Robotic Systems
MECH 577	(3)	Optimum Design
MECH 593	(3)	Design Theory and Methodology

\*Students choose either CHEE 563 or MECH 563.

3 credits chosen from courses at the 300-level or higher in the Faculty of Engineering (including MECH courses) or MIME 360 or from courses in the Faculty of Science, including MATH courses, approved by the Department.

### **Complementary Studies**

6 credits

#### **Group A - Impact of Technology on Society**

3 credits from the following:

ANTH 212	(3)	Anthropology of Development
BTEC 502	(3)	Biotechnology Ethics and Society
CHEE 430	(3)	Technology Impact Assessment
CIVE 469	(3)	Infrastructure and Society
ECON 225	(3)	Economics of the Environment
ECON 347	(3)	Economics of Climate Change
ENVR 201	(3)	Society and Environment Geographical Perspecti

MIME 308	(3)	Social Impact of Technology
PHIL 343	(3)	Biomedical Ethics
RELG 270	(3)	Religious Ethics and the Environment
SOCI 235	(3)	Technology and Society
SOCI 312	(3)	Sociology of Work and Industry
URBP 201	(3)	Planning the 21st Century City

**Group B: Humanities and Social Sciences, Management Studies and Law**

3 credits at the 200-level or higher from the following departments:

Anthropology (ANTH)

Economics (any 200- or 300-level course excluding ECON 208, ECON 217, ECON 227 and ECON 337)

History (HIST)

Philosophy (excluding PHIL 210 and PHIL 310)

Political Science (POLI)

Psychology (excluding PSYC 204 and PSYC 305, but including PSYC 100)

Religious Studies (RELG)

School of Social Work (SWRK)

Sociology (excluding SOCI 350)

OR one of the following:

ARCH 350	(3)	The Material Culture of Canada
BUSA 465*	(3)	Technological Entrepreneurship
ENVR 203	(3)	Knowledge, Ethics and Environment
ENVR 400	(3)	Environmental Thought
FACC 220	(3)	Law for Architects and Engineers
FACC 500	(3)	Technology Business Plan Design
FACC 501	(3)	Technology Business Plan Project
INDR 294*	(3)	Introduction to Labour-Management Relations
MATH 338	(3)	History and Philosophy of Mathematics
MGCR 222*	(3)	Introduction to Organizational Behaviour
MGCR 352*	(3)	Marketing Management 1
MRKT 360*	(3)	Marketing of Technology
ORGB 321*	(3)	Leadership
ORGB 423*	(3)	Human Resources Management

\*Note: Management courses have limited enrolment and registration dates. See Important Dates at <http://www.mcgill.ca/importantdates>.

**Language Courses**

If you are not proficient in a certain language, 3 credits will be given for one 6-credit course in that language.

However, 3 credits may be given for any language course that has a sufficient cultural component. You must have this course approved by a faculty adviser.

**Typical Program of Study**

Students entering the program from CEGEP follow a different curriculum than those entering from out of province. Students will be advised by the Department as to which courses they should select from the course lists above.

For a detailed curriculum, see <http://www.mcgill.ca/mecheng/undergrad/curriculum>.

For all minors and concentrations, students should complete a Course Authorization Form, available from the Student Affairs Office (Engineering Student Center) or from the Undergraduate Program Secretary, indicating their intention to take the minor or concentration.



MECH 539	(3)	Computational Aerodynamics
MECH 565	(3)	Fluid Flow and Heat Transfer Equipment

**Bac**



MECH 554	(3)	Microprocessors for Mechanical Systems
MECH 557	(3)	Mechatronic Design
MECH 572	(3)	Introduction to Robotics

### Complementary Courses

6 credits from the following:

MECH 528	(3)	Product Design
MECH 541	(3)	Kinematic Synthesis
MECH 573	(3)	Mechanics of Robotic Systems
MECH 576	(3)	Geometry in Mechanics

## 28.11.7 Department of Mining and Materials Engineering

### 28.11.7.1 Location

#### General Office:

Wong Building, Room 2140  
3610 University Street  
Montreal, Quebec H3A 2B2

Website: [www.mcgill.ca/minmat](http://www.mcgill.ca/minmat)

#### Materials

Wong Building, Room 2140  
3610 University Street  
Montreal, Quebec H3A 2B2  
Telephone: 514-398-1040  
Fax: 514-398-4492  
Email: [coordinator.minmat@mcgill.ca](mailto:coordinator.minmat@mcgill.ca)

#### Mining

Frank Dawson Adams Building, Room 125  
3450 University Street  
Montreal, Quebec H3A 2A7  
Telephone: 514-398-2215  
Fax: 514-398-7099  
Email: [admin.mining@mcgill.ca](mailto:admin.mining@mcgill.ca)

### 28.11.7.2 About the Department of Mining and Materials Engineering

The Department of Mining and Materials Engineering offers programs leading to the BacTj0 Tc/F3grame:

**28.11.7.3 Department of Mining and Materials Engineering Faculty****Chair**

Stephen Yue

**Associate Chair, Student Affairs**

Frank Mucciardi

**Associate Chair, Research**

James A. Finch

**Associate Chair, Graduate Studies**

George P. Demopoulos

**Emeritus Professors**

John E. Gruzleski; B.Sc., M.Sc.(Qu.), Ph.D.(Tor.), Eng. (*Gerald G. Hatch Emeritus Professor*)

John J. Jonas; B.Eng.(McG.), Ph.D.(Camb.), Eng. (*Henry Birks Emeritus Professor*)

Gordon W. Smith; B.Eng., M.Eng., Ph.D.(McG.), Eng.

William M. Williams; B.Sc., M.Sc.(Brist.), Ph.D.(Tor.), Eng. (*Henry Birks Emeritus Professor*)

**Post-Retirement**

Michel L. Bilodeau; B.A.Sc.(Montr.), M.Sc.App., Ph.D.(McG.), Eng.

**Professors**

George P. Demopoulos; Dipl. Eng.(NTU Athens), M.Sc., Ph.D.(McG.), Eng.

Roussos Dimitrakopoulos; B.Sc., M.Sc.(Alta.), Ph.D.(École Poly., Montr.)

James A. Finch; B.Sc.(Birm.), M.Eng., Ph.D.(McG.), Eng. (*Gerald G. Hatch Professor*)

Raynald Gauvin; B.Eng., Ph.D.(Montr.), Eng.

Roderick I.L. Guthrie; B.Sc., Ph.D.(Lond.), D.I.C., A.R.S.M., Eng. (*William C. Macdonald Professor*)

Faramarz (Ferri) P. Hassani; Ph.D.(Nott.), (*George Boyd Webster Professor*)

Hani S. Mitri; B.Sc.(Cairo), M.Eng., Ph.D.(McM.), Eng.

Stephen Yue; B.Sc., Ph.D.(Leeds) (*James McGill Professor*)

**Associate Professors**

Mainul Hasan; B.Eng.(Dhaka), M.Sc.(Dhahran), Ph.D.(McG.)

Frank Mucciardi; B.Eng., M.Eng., Ph.D.(McG.), Eng.

Mihriban Pegguleryuz; B.Eng., M.Eng.(Flor.), Ph.D.(McG.)

**Assistant Professors**

Mathieu Brochu; B.Eng.(Laval), Ph.D.(McG.)

Marta Cerruti; Ph.D., Laurea in Chemistry (Torino)

Richard Chromik; B.Sc.(Penn. St.), M.Sc., Ph.D.(SUNY, Binghamton)

In-Ho Jung; B.Sc.(South Korea), Ph.D.(École Poly., Montr.)

Showan Nazhat; B.Eng., M.Sc., Ph.D.(Lond.)

Nathaniel Quitoriano; B.Sc.(Calif.), Ph.D.(MIT)

Kristian Waters; M.Sc., M.Eng.(Manc.), Ph.D.(Birm.)

**Faculty Lecturer**

Florence Paray; B.Eng.(CSP), M.Eng., Ph.D.(McG.)



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MECH 289 (3) Design Graphics

**Required Materials Engineering Courses**

70-71 credits

ECSE 461*	(3)	Electric Machinery
MIME 209	(3)	Mathematical Applications
MIME 212	(3)	Engineering Thermodynamics
MIME 250	(3)	Introduction to Extractive Metallurgy
MIME 261	(3)	Structure of Materials
MIME 280	(2)	Industrial Training 1
MIME 310	(3)	Engineering Economy
MIME 311	(3)	Modelling and Automatic Control
MIME 317	(3)	Analytical and Characterization Techniques
MIME 337*	(2)	Electrotechnology
MIME 341	(3)	Introduction to Mineral Processing
MIME 345	(3)	Applications of Polymers
MIME 350	(3)	Extractive Metallurgical Engineering
MIME 352	(3)	Hydrochemical Processing
MIME 356	(4)	Heat, Mass and Fluid Flow
MIME 360	(3)	Phase Transformations: Solids
MIME 362	(3)	Mechanical Properties
MIME 367	(3)	Electronic Properties of Materials
MIME 380	(2)	Industrial Training 2
MIME 442	(3)	Analysis, Modelling and Optimization in Mineral Processing
MIME 452	(4)	Process and Materials Design
MIME 455	(3)	Advanced Process Engineering
MIME 456	(3)	Steelmaking and Steel Processing
MIME 465	(3)	Metallic and Ceramic Powders Processing
MIME 480	(2)	Industrial Training 3

\*Students select either ECSE 461 or MIME 337.

**Complementary Courses**

18 credits

**Technical Complementaries**

12 credits of Technical Complementaries

9-12 credits from the following:

CIVE 512	(3)	Advanced Civil Engineering Materials
MECH 530	(3)	Mechanics of Composite Materials
MIME 410	(3)	Research Project
MIME 457	(3)	Light Metals Extraction and Processing
MIME 470	(3)	Engineering Biomaterials
MIME 512	(3)	Corrosion and Degradation of Materials



MIME 308	(3)	Social Impact of Technology
PHIL 343	(3)	Biomedical Ethics
RELG 270	(3)	Religious Ethics and the Environment
SOCI 235	(3)	Technology and Society
SOCI 312	(3)	Sociology of Work and Industry
URBP 201	(3)	Planning the 21st Century City

**Group B - Humanities and Social Sciences, Management Studies and Law**

3 credits at the 200-level or higher from the following departments:

Anthropology (ANTH)

Economics (any 200- or 300-level course excluding ECON 208, ECON 217, ECON 227 and ECON 337)

History (HIST)

Philosophy (excluding PHIL 210 and PHIL 310)

Political Science (POLI)

Psychology (excluding PSYC 204 and PSYC 305, but including PSYC 100)

Religious Studies (RELG)

School of Social Work (SWRK)

Sociology (excluding SOCI 350)

OR one of the following:

ARCH 350	(3)	The Material Culture of Canada
BUSA 465*	(3)	Technological Entrepreneurship
ENVR 203	(3)	Knowledge, Ethics and Environment
ENVR 400	(3)	Environmental Thought
FACC 200	(0)	Industrial Practicum 1
FACC 500	(3)	Technology Business Plan Design
FACC 501	(3)	Technology Business Plan Project
INDR 294*	(3)	Introduction to Labour-Management Relations
MATH 338	(3)	History and Philosophy of Mathematics
		Introduction to Organizational Behaviour

**Required Year 0 (Freshman) Courses**

30 credits

Generally, students admitted to Engineering from Quebec CEGEPs are granted transfer credit for these Year 0 (Freshman) courses (except FACC 100).

For information on transfer credit for French Baccalaureate, International Baccalaureate exams, Advanced Placement exams, Advanced Levels and Science Placement Exams, see <http://www.mcgill.ca/engineering/student/sao/newstudents> and select your term of admission.

CHEM 110	(4)	General Chemistry 1
CHEM 120	(4)	General Chemistry 2
FACC 100	(1)	Introduction to the Engineering Profession
MATH 133	(3)	Linear Algebra and Geometry
MATH 140*	(3)	Calculus 1
MATH 141	(4)	Calculus 2
PHYS 131	(4)	Mechanics and Waves
PHYS 142	(4)	Electromagnetism and Optics

AND 3 credits selected from the approved list of courses in Humanities and Social Sciences, Management Studies and Law, listed below under Complementary Studies (Group B).

\*Students may take MATH 139 (Calculus) instead of MATH 140, but only with permission from the Department of Mathematics and Statistics.

**Required Non-Departmental Courses**

31 credits

CCOM 206	(3)	Communication in Engineering
CIVE 205	(3)	Statics
CIVE 207	(4)	Solid Mechanics
COMP 208	(3)	Computers in Engineering
EPSC 221	(3)	General Geology
EPSC 225	(1)	Properties of Minerals
FACC 100	(1)	Introduction to the Engineering Profession
FACC 400	(1)	Engineering Professional Practice
MATH 262	(3)	Intermediate Calculus
MATH 263	(3)	Ordinary Differential Equations for Engineers
MATH 264	(3)	Advanced Calculus for Engineers
MECH 289	(3)	Design Graphics

**Required Mining Engineering Courses**

72-73 credits

ECSE 461*	(3)	Electric Machinery
MIME 200	(3)	Introduction to the Minerals Industry
MIME 203	(2)	Mine Surveying
MIME 209	(3)	Mathematical Applications
MIME 260	(3)	Materials Science and Engineering
MIME 290	(2)	Industrial Work Period 1
MIME 291	(2)	Industrial Work Period 2
MIME 310	(3)	Engineering Economy
MIME 322	(3)	Rock Fragmentation



MIME 521	(3)	Stability of Underground Openings
MIME 525	(3)	Stochastic Orebody Modelling
MIME 526	(3)	Mineral Economics
MIME 527	(3)	Selected Topics in Mineral Resource Engineering
MIME 528	(3)	Mining Automation
MIME 544	(3)	Analysis: Mineral Processing Systems 1
MIME 545	(3)	Analysis: Mineral Processing Systems 2
MPMC 320	(3)	CAO et informatique pour les mines
MPMC 327	(3)	Hydrogéologie appliquée

\* Mining courses taken at École Polytechnique

### **Complementary Studies**

6 credits

**Gr**

Religious Studies (RELG)

School of Social Work (SWRK)

Sociology (excluding SOCI 350)

OR one of the following:

ARCH 350	(3)	The Material Culture of Canada
BUSA 465*	(3)	Technological Entrepreneurship
ENVR 203	(3)	Knowledge, Ethics and Environment
ENVR 400	(3)	Environmental Thought
FACC 220	(3)	Law for Architects and Engineers
FACC 500	(3)	Technology Business Plan Design
FACC 501	(3)	Technology Business Plan Project
INDR 294*	(3)	Introduction to Labour-Management Relations
MATH 338	(3)	History and Philosophy of Mathematics
MGCR 222*	(3)	Introduction to Organizational Behaviour
MGCR 352*	(3)	Marketing Management 1
MRKT 360*	(3)	Marketing of Technology
ORGB 321*	(3)	Leadership
ORGB 423*	(3)	Human Resources Management

\*Note: Management courses have limited enrolment and registration dates. See Important Dates at <http://www.mcgill.ca/importantdates>

### Language Courses

If you are not proficient in a certain language, 3 credits will be given for one 6-credit course in that language.

However, 3 credits may be given for any language course that has a sufficient cultural component. You must have this course approved by a faculty adviser.

## 28.11.8 School of Urban Planning

### 28.11.8.1 Location

Macdonald-Harrington Building, Room 400  
815 Sherbrooke Street West  
Montreal, Quebec H3A 2K6

Telephone: 514-398-4075

Fax: 514-398-8376

Email: [admissions.planning@mcgill.ca](mailto:admissions.planning@mcgill.ca)

Website: [www.mcgill.ca/urbanplanning](http://www.mcgill.ca/urbanplanning)

### 28.11.8.2 About the School of Urban Planning

Modern urban planning developed into a profession in the early decades of the 20th century



Students come to the School from diverse backgrounds, the physical sciences, the traditional professions, such as architecture and engineering, and the social sciences. Alumni of the School work as planners and designers at various levels of government, in non-profi

### **Assistant Professors**

Nik Luka; B.A.(Ryerson), M.Arch.(Laval), Ph.D.(Tor.) (*joint appoint. with Architecture*)

### **Instructors**

Heather Braiden; B.E.S.(Wat.), M.L.Arch.(Tor.)

Marc-André Lechasseur; LL.B.(Sher.), LL.M.(Montr.)

Alain Trudeau; B.Sc.(UQAM), M.U.P.(McG.)

### **Adjunct Professors**

David Farley; B.Arch.(McG.), M.Arch., M.C.P.(Harv.)

Mario Polèse; B.A.(CUNY), M.A., Ph.D.(Penn.)

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Some of the courses offered by the Department of Biomedical Engineering (subject code BMDE) may be of interest to Engineering students, and may be approved as complementary courses. The Faculty of Engineering also offers a Minor in Biomedical Engineering; for more information, see [section 28.11.10.2: Biomedical Engineering Minor](#).

### **28.11.10 Minor Programs**

Minors are coherent sequences of courses taken in addition to the courses required for the B.Eng., B.S.E., or B.Sc.(Arch.) degree. Minors normally consist of 18 to 24 credits, allowing 9 to 12 credits of overlap with the degree program. The real credit cost to the student is typically 9 to 15 credits, representing one term beyond the B.Eng., B.S.E., or B.Sc.(Arch.) degree program. All courses in a minor must be passed with a grade of C or better.

Engineering students choose from a considerable variety of complementary courses under the categories of technical and complementary studies. Students should refer to their department for information concerning complementary course sel

In general, B.Eng. and B.S.E. students may use courses from the Complementary Studies lists (Group A and Group B) in their program that are offered by the Faculty of Arts to satisfy some of these requirements. No more than 9 credits of these courses can be credited toward the Arts minor.

#### **28.11.10.2 Biomedical Engineering Minor**

Biomedical engineering can be defined as the application of engineering principles to medicine and the life sciences. Students in the Biomedical Engineering Minor take courses in life sciences (anatomy, biology, chemistry and physiology) and choose courses from area(s) within the list from ar00

BIOC 312	(3)	Biochemistry of Macromolecules
BIOC 458*	(3)	Membranes and Cellular Signaling
BMDE 506	(3)	Molecular Biology Techniques
COMP 302	(3)	Programming Languages and Paradigms
COMP 360	(3)	Algorithm Design Techniques
COMP 421	(3)	Database Systems
COMP 424	(3)	Artificial Intelligence
COMP 462	(3)	Computational Biology Methods
COMP 526	(3)	Probabilistic Reasoning and AI

\*Students select either ANAT 365 or BIOC 458.

### **Biomaterials, Biosensors and Nanotechnology**

BMDE 504	(3)	Biomaterials and Bioperformance
BMDE 505	(3)	Cell and Tissue Engineering
CHEE 380	(3)	Materials Science
ECSE 424	(3)	Human-Computer Interaction
MECH 553	(3)	Design and Manufacture of Microdevices
MIME 360	(3)	Phase Transformations: Solids
MIME 362	(3)	Mechanical Properties
PHYS 534	(3)	Nanoscience and Nanotechnology

### **Biomechanics and Prosthetics**

BMDE 503	(3)	Biomedical Instrumentation
CHEE 563*	(3)	Biofluids and Cardiovascular Mechanics
MECH 315	(4)	Mechanics 3
MECH 321	(3)	Mechanics of Deformable Solids
MECH 530	(3)	Mechanics of Composite Materials
MECH 561	(3)	Biomechanics of Musculoskeletal Systems
MECH 563*	(3)	Biofluids and Cardiovascular Mechanics
MIME 360	(3)	Phase Transformations: Solids
MIME 362	(3)	Mechanical Properties

\*Students select either CHEE 563 or MECH 563.

### **Medical Physics and Imaging**

BMDE 519	(3)	Biomedical Signals and Systems
COMP 302	(3)	Programming Languages and Paradigms
COMP 360	(3)	Algorithm Design Techniques
COMP 423	(3)	Data Compression
COMP 424	(3)	Artificial Intelligence
COMP 558	(3)	Fundamentals of Computer Vision
ECSE 303	(3)	Signals and Systems 1
ECSE 304	(3)	Signals and Systems 2

ECSE 412	(3)	Discrete Time Signal Processing
PHYS 557	(3)	Nuclear Physics

### Neural Systems and Biosignal Processing

BMDE 501	(3)	Selected Topics in Biomedical Engineering
BMDE 502	(3)	BME Modelling and Identification
BMDE 503	(3)	Biomedical Instrumentation
BMDE 519	(3)	Biomedical Signals and Systems
ECSE 526	(3)	Artificial Intelligence
PHYS 413	(3)	Physical Basis of Physiology

### Complementary Courses

0-6 credits

Up to 6 credits in the B.Eng., B.S.E. or B.Sc.(Arch.) program can also be credited to the Minor, with the permission of the departmental adviser and approval of the Minor adviser. In particular, courses at the 200-level or higher that are prerequisites for certain specialization courses would be eligible, with permission of the Minor adviser. By careful selection of complementary courses, the Minor can be satisfied with 9 additional credits in the undergraduate program or a maximum of 12 credits overlap with the degree program.

#### 28.11.10.3 Biotechnology Minor

Biotechnology can be defined as the science of understanding, selecting and promoting useful organisms and specific gene products for therapeutic purposes. It requires a broad comprehension of biology and engineering and detailed knowledge of at least one basic subject such as molecular genetics, protein chemistry, microbiology, or chemical engineering.

The Minor in Biotechnology, offered by the Faculties of Engineering and of Science, emphasizes an area relevant to biotechnology that is complementary to the student's main program. It is designed specifically for Chemical Engineering students; other Engineering students interested in taking this Minor should contact the Program Supervisor, Dr. Hugh Bennett (see below for contact information).

Students who are interested in this Minor should inform their academic adviser and the Program Supervisor in Year 1 and at the time of registration in Year 2. With the agreement of their academic adviser, students should submit their course list to the Program Supervisor, who will certify that the proposed program conforms to the requirements for the Minor.

The Biotechnology Minor is administered by the Faculty of Engineering Student Affairs Office, Engineering Student Centre, and by the Faculty of Science by Dr. Hugh Bennett, Program Supervisor.

Dr. Hugh Bennett  
 Sheldon Biotechnology Centre  
 3773 University Street  
 Montreal, Quebec H3A 2B4  
 Tel: 512-398-8083  
 Email: [hugh.bennett@mcgill.ca](mailto:hugh.bennett@mcgill.ca)

#### 28.11.10.3.1 Bachelor of Engineering (B.Eng.) - Minor Biotechnology (for Engineering Students) (24 credits)

This minor is al.

CHEE 204	(3)	Chemical Manufacturing Processes
CHEE 474	(3)	Biochemical Engineering

OR

**Alternative Required Courses (for Chemical Engineering students)**

A Chemical Engineering student may complete the Biotechnology Minor by taking the courses below plus one course from the list of complementary courses not including MIME 310.

BIOL 200	(3)	Molecular Biology
BIOL 201	(3)	Cell Biology and Metabolism
BIOL 202	(3)	Basic Genetics
BIOT 505	(3)	Selected Topics in Biotechnology
MIMM 211	(3)	Introductory Microbiology

**Complementary Courses**

12 credits selected from courses outside the department of the student's main program. Alternatively, or in addition, courses may be taken from the lists below. In this case, at least three courses must be taken from one area of concentration as grouped.

**Biomedicine**

ANAT 541	(3)	Cell and Molecular Biology of Aging
EXMD 504	(3)	Biology of Cancer
PATH 300	(3)	Human Disease

**Chemistry**

CHEM 382	(3)	Organic Chemistry: Natural Products
CHEM 502	(3)	Advanced Bio-Organic Chemistry
CHEM 552	(3)	Physical Organic Chemistry

**General**

MIME 310	(3)	Engineering Economy
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**Immunology**

ANAT 261	(4)	Introduction to Dynamic Histology
BIOC 503	(3)	Immunochemistry
MIMM 314	(3)	Immunology
MIMM 414	(3)	Advanced Immunology
PHGY 513	(3)	Cellular Immunology

**Management**

Note: Engineering students may not use these courses to count toward a Management minor, nor toward the Complementary Studies requirement.

ECON 208	(3)	Microeconomic Analysis and Applications
MGCR 211	(3)	Introduction to Financial Accounting
MGCR 341	(3)	Finance 1
MGCR 352	(3)	Marketing Management 1





Please consult the program coordinators for more information: Professor David Cooper (Chemical Engineering) and Dr. Gonzalo Cosa (Chemistry).

**Bachelor of Engineering (B.Eng.) - Minor Chemistry (25 credits)**

**28.11.10.5 Computer Science Courses and Minor Program**

The School of Computer Science offers an extensive range of courses for Engineering students interested in computers. Engineering students may obtain a Computer Science Minor as part of their B.Eng., B.S.E. or B.Sc.(Arch.) degree by satisfying the 24-credit requirement from courses passed with a grade of C or better. For further information, please see the School of Computer Science website, [www.cs.mcgill.ca](http://www.cs.mcgill.ca).

**28.11.10.5.1 Bachelor of Engineering (B.Eng.) - Minor Computer Science (24 credits)**

Note: This minor is open to B.Eng., B.S.E. and B.Sc.(Arch.) students in Engineering.

**Computer Science Courses**

The School of Computer Science offers an extensive range of courses for Engineering students interested in computers. The course taken by students in most B.Eng. programs (COMP 208) and other courses included in the core of the various B.Eng. and B.S.E. programs are listed below.

See the course listing at <http://www.mcgill.ca/students/courses/calendars/search> for other courses offered by the School of Computer Sciences (subject code COMP).

COMP 202	(3)	Introduction to Computing 1
COMP 208	(3)	Computers in Engineering
COMP 250	(3)	Introduction to Computer Science
COMP 302	(3)	Programming Languages and Paradigms

Note: COMP 202 and COMP 208 (compulsory for some Engineering students) do not form part of the Minor in Computer Science.

**B.Eng. - Minor Computer Science (24 credits)**

Engineering students may obtain the Computer Science minor as part of their B.Eng., B.S.E. or B.Sc.(Arch.) degree by satisfying the 24-credit requirement from courses passed with a grade of C or better. In general, some complementary courses within B.Eng. and B.S.E. programs may be used to satisfy some of these requirements, but the minor will require at least 12 extra credits from Computer Science (COMP) courses beyond those needed for the B.Eng. or B.S.E. degree. Students should consult their departments about the use of complementaries, and credits that can be double counted.

Students should see the undergraduate secretary in the Lorne Trotter Building, Room 2060, to obtain the appropriate forms and to make an appointment to see the minor adviser for approval of their course selection. Forms must be approved before the end of the Course Change (drop/add) period of the student's final term.

For further information, please see the School of Computer Science website at <http://www.cs.mcgill.ca>.

**Required Course**

3 credits

COMP 206	(3)	Introduction to Software Systems
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**Complementary Courses**

21 credits

3 credits from the following:

COMP 203	(3)	Introduction to Computing 2
COMP 250	(3)	Introduction to Computer Science

3 credits from the following:

COMP 302	(3)	Programming Languages and Paradigms
COMP 303	(3)	Software Development

3 credits from the following:

COMP 273	(3)	Introduction to Computer Systems
ECSE 221	(3)	Introduction to Computer Engineering

3 credits from the following:

COMP 350	(3)	Numerical Computing
MECH 309	(3)	Numerical Methods in Mechanical Engineering

0-3 credits from the following:

COMP 251	(3)	Data Structures and Algorithms
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6-9 credits chosen from other computer science courses at the 300 level or higher.

Notes:

A. COMP 203 and COMP 250 are considered to be equivalent from a prerequisite point of view, and cannot both be taken for credit.

B. COMP 208 may be taken before COMP 250; however, it cannot be taken for credit in the same term or afterwards.

C. COMP 396 (Undergraduate Research Project) cannot be taken for credit towards this minor.

Courses that make considerable use of computing from other departments may also be selected, with the approval of the School of Computer Science. Students should consult with their advisers about counting specific courses.

#### **28.11.10.6 Construction Engineering and Management Minor**

Students taking the Minor in Construction Engineering and Management complete 15 credits of required courses in management and law. Students choose complementary courses from the areas of either building structures or heavy construction, and from other construction- and management-related courses.

For further information about this minor and course selection, contact Professor L. Chouinard at 514-398-6446, Room 488, Macdonald Engineering Building.

#### **28.11.10.6.1 Bachelor of Engineering (B.Eng.) - Minor Construction Engineering and Management (24 credits)**

Note: This minor is open to B.Eng., B.S.E. and B.Sc.(Arch.) students.

All courses in the minor program must be passed with a grade of C or better.

For further information, contact Professor L. Chouinard at 514-398-6446, Room 488, Macdonald Engineering Building.

Total minor credit weight: 24-25 credits.

#### **Prerequisites**

CIVE 208	(3)	Civil Engineering System Analysis
CIVE 302	(3)	Probabilistic Systems
COMP 208	(3)	Computers in Engineering
MIME 310	(3)	Engineering Economy

#### **Required Courses: Management and Law**

15 credits

CIVE 324	(3)	Construction Project Management
FACC 220	(3)	Law for Architects and Engineers
INDR 294	(3)	Introduction to Labour-Management Relations
MGCR 211	(3)	Introduction to Financial Accounting
MGCR 341	(3)	Finance 1

#### **Complementary Courses**

3-4 credits (4 credits from List A OR 3 credits from List B)

List A - Building Structures

4 credits from the following:



9 credits from:

ECON 225	(3)	Economics of the Environment
ECON 302D1	(3)	Money and Banking
ECON 302D2	(3)	Money and Banking
ECON 303	(3)	Canadian Economic Policy
ECON 305	(3)	Industrial Organization
ECON 306D1	(3)	Labour Economics and Institutions
ECON 306D2	(3)	Labour Economics and Institutions
ECON 308	(3)	Governmental Policy Towards Business
ECON 311	(3)	United States Economic Development
ECON 313	(3)	Economic Development 1
ECON 314	(3)	Economic Development 2
ECON 316	(3)	The Underground Economy
ECON 326	(3)	Ecological Economics
ECON 329	(3)	Economics of Confederation
ECON 330D1	(3)	Macroeconomic Theory
ECON 330D2	(3)	Macroeconomic Theory
ECON 331	(3)	Economic Development: Russia and USSR
ECON 335	(3)	The Japanese Economy
ECON 337	(3)	Introductory Econometrics 1
ECON 344	(3)	The International Economy 1830-1914
ECON 345	(3)	The International Economy since 1914
ECON 347	(3)	Economics of Climate Change
ECON 348	(3)	Urban Economics
ECON 404	(3)	Transportation
ECON 405	(3)	Natural Resource Economics
ECON 406	(3)	Topics in Economic Policy
ECON 408	(3)	Public Sector Economics 1
ECON 409	(3)	Public Sector Economics 2
ECON 411	(3)	Economic Development: A World Area
ECON 416	(3)	Topics in Economic Development 2
ECON 420	(3)	Topics in Economic Theory
ECON 423D1	(3)	International Trade and Finance
ECON 423D2	(3)	International Trade and Finance
ECON 426	(3)	Labour Economics
ECON 434	(3)	Current Economic Problems
ECON 440	(3)	Health Economics

Economics of Information and U192 0M33i,

Note: Mining Engineering students will be permitted to include Mineral Economics (MIME 526) among these 18 credits.

**28.11.10.8 Environmental Engineering Minor**

The Environmental Engineering Minor is offered for students in Engineering and in the Department of Bioresource Engineering wishing to pursue studies in this area. Students completing this Minor take an introductory course in environmental engineering, bio-environmental engineering, or environmental aspects of technology, then choose from a wide variety of complementary courses within and outside the Faculty of Engineering on environmental topics. Students may choose to participate in the Barbados Field Study Semester (BFSS) or in the Barbados Interdisciplinary Tropical Studies (BITS) field semester and have the field study courses count toward this Minor.

The Environmental Engineering Minor Program is administered by the Department of Civil Engineering and Applied Mechanics. Further information may be obtained from Professor Gehr, Room 487, Macdonald Engineering Building.

For more information on the Barbados Field Study Semester, see [www.mcgill.ca/bfss](http://www.mcgill.ca/bfss).

For more information on the Barbados Interdisciplinary Tropical Studies field semester, see [www.mcgill.ca/bits](http://www.mcgill.ca/bits).

For more information on environmental studies in the Faculty of Engineering, see [www.mcgill.ca/enveng](http://www.mcgill.ca/enveng).

**28.11.10.8.1 Bachelor of Engineering (B.Eng.) - Minor Environmental Engineering (22 credits)**

The Environmental Engineering Minor is administered by the Department of Civil Engineering and Applied Mechanics and is offered for all students in Engineering (including B.S.E. students) and in the Department of Bioresource Engineering wishing to pursue studies in this area.

A maximum of 12 credits of coursework in the student's major may double-count with the Minor.

Further information may be obtained from Professor Ronald Gehr, Room 487, Macdonald Engineering Building.

To complete the Minor in Environmental Engineering, students must obtain a grade of C or better in all approved courses in the Minor, and satisfy the requirements of both the minor and their major program.

Note: Not all courses listed are offered every year. Students should see the course listing at <http://www.mcgill.ca/students/courses/calendars/search> to know when a course is offered.

Total minor credit weight: 21-22 credits.

**Complementary Courses**

21-22 credits

18 credits from Stream A, B or C below

and

One course from the following list:

BREE 327	(3)	Bio-Environmental Engineering
CHEE 230	(3)	Environmental Aspects of Technology
CIVE 225	(4)	Environmental Engineering

**Stream A**

15 credits\* from the Engineering Course List and 3 credits from the Non-Engineering Course List below

\*A minimum of 6 credits must be from outside the student's department. A maximum of 6 credits of research project courses may be counted toward this category, provided the project has sufficient environmental engineering content (project requires approval of project supervisor and coordinator of the Minor).

**Stream B**

15 credits of courses that make up the "Barbados Field Study Semester" below, provided the project for CIVE/AGRI/URBP 519 Sustainable Development Plans has sufficient environmental engineering content (project requires approval of the Coordinator of the Minor);

3 credits chosen from the Engineering Course List below, excluding CHEE 496.

**Barbados Field Study Courses**

**Required Courses**

6 credits

URBP 507	(3)	Planning and Infrastructure
URBP 520	(3)	Globalization: Planning and Change

**Complementary Courses**

9 credits

One of the following cross-listed courses:

AGRI 452	(3)	Water Resources in Barbados
CIVE 452	(3)	Water Resources in Barbados

and one of the following cross-listed project courses:

AGRI 519	(6)	Sustainable Development Plans
CIVE 519	(6)	Sustainable Development Plans
URBP 519	(6)	Sustainable Development Plans

### Stream C

9 credits of courses specified from the "Barbados Interdisciplinary Tropical Studies (BITS)" field semester below, provided the project has sufficient environmental engineering content (project requires approval of the Coordinator of the Minor);

AEBI 425	(3)	Tropical Energy and Food
AEBI 427	(6)	Barbados Interdisciplinary Project

and 9 credits chosen from the Engineering Course List below, excluding CHEE 496.

### Engineering Course List

Courses offered at the Macdonald campus:

BREE 217	(3)	Hydrology and Water Resources
BREE 322	(3)	Organic Waste Management
BREE 416	(3)	Engineering for Land Development
BREE 518	(3)	Bio-Treatment of Wastes

Courses offered at the downtown campus:

ARCH 377	(3)	Energy, Environment and Buildings
CHEE 351	(3)	Separation Processes
CHEE 370	(3)	Elements of Biotechnology
CHEE 496	(3)	Environmental Research Project
CHEE 591	(3)	Environmental Bioremediation
CHEE 592	(3)	Industrial Air Pollution Control
CHEE 593	(3)	Industrial Water Pollution Control
CIVE 225	(4)	Environmental Engineering
CIVE 323	(3)	Hydrology and Water Resources
CIVE 421	(3)	Municipal Systems
CIVE 428	(3)	Water Resources and Hydraulic Engineering
CIVE 430	(3)	Water Treatment and Pollution Control
CIVE 451	(3)	Geoenvironmental Engineering
CIVE 550	(3)	Water Resources Management
CIVE 555	(3)	Environmental Data Analysis
CIVE 572	(3)	Computational Hydraulics
CIVE 573	(3)	Hydraulic Structures

CIVE 574	(3)	Fluid Mechanics of Water Pollution
CIVE 577	(3)	River Engineering
CIVE 584	(3)	Groundwater Engineering
MECH 447	(3)	Combustion
MECH 526	(3)	Manufacturing and the Environment
MECH 534	(3)	Air Pollution Engineering
MECH 535	(3)	Turbomachinery and Propulsion
MIME 422	(3)	Mine Ventilation
MIME 512	(3)	Corrosion and Degradation of Materials
MPMC 328	(3)	Environnement et gestion des rejets miniers
URBP 506	(3)	Environmental Policy and Planning

### **Non-Engineering Course List**



GEOG 404	(3)	Environmental Management 2
MIMM 211	(3)	Introductory Microbiology

#### **28.11.10.9 Minor in Environment**

Environmental studies involve the interactions between humans and their natural or technological environment. Environmental problems are frequently comprehensive and complex, and their satisfactory solutions require the synthesis of humanistic, scientific, and institutional knowledge.

The Minor in Environment is offered and administered by the McGill School of Environment (MSE). Inquiries should be directed to Ms. Kathy Roulet, MSE Program Adviser; email: [kathy.roulet@mcgill.ca](mailto:kathy.roulet@mcgill.ca), or telephone: 514-398-4306.

Since the program comprises a total of 18 credits for the Minor, additional credits beyond those needed for the B.Eng. degree are required. Students wishing to receive the Minor should prepare a program and have it approved by both their regular Engineering adviser and the MSE adviser. For program details, see *McGill School of Environment > Minor in Environment*.

#### **28.11.10.10 Minor Programs in Finance, Management, Marketing, and Operations Management**

##### **Prerequisite: None**

Many engineers begin to assume management functions within a few years of graduation. They can, at this stage, tak

### **Complementary Courses**

9 credits from the following:

CHEE 487	(3)	Chemical Processing: Electronics Industry
ECSE 545	(3)	Microelectronics Technology
MECH 530	(3)	Mechanics of Composite Materials
MIME 360	(3)	Phase Transformations: Solids
MIME 512	(3)	Corrosion and Degradation of Materials
MIME 560	(3)	Joining Processes
MIME 561	(3)	Advanced Materials Design
MIME 563	(3)	Hot Deformation of Metals
MIME 566	(3)	Texture, Structure & Properties of Polycrystalline Materials
MIME 569	(3)	Electron Beam Analysis of Materials

### **28.11.10.12 Mathematics Minor**

MATH 315	(3)	Ordinary Differential Equations
MATH 319	(3)	Introduction to Partial Differential Equations
MATH 325	(3)	Honours Ordinary Differential Equations

### **2811.10.13 Mining Engineering Minor**

Students taking the Mining Engineering Minor complete 12 credits of required courses in mining engineering, including an introduction to the minerals industry, courses in mining science and technology, rock fragmentation and materials handling, and an industrial work term. Students choose 12 credits from mining-related courses within the departments of Mining and Materials Engineering, Mechanical Engineering, Civil Engineering, and Chemical Engineering.

One of the required courses is a work term for which enrolment may be limited. Interested students should contact the coordinator, Professor Hani Mitri, Room 121, Adams Building.

### **2811.10.131 Bachelor of Engineering (B.Eng.) - Minor Mining Engineering (24 credits)**

Students in Engineering may obtain the Mining Engineering Minor by completing 24 credits of required and complementary courses, as listed below.

One of the required courses is a work term for which enrolment may be limited. Interested students should contact the coordinator, Professor Hani Mitri, Room 121, Adams Building.

#### **Required Courses**

12 credits

MIME 200	(3)	Introduction to the Minerals Industry
MIME 291	(2)	Industrial Work Period 2
MIME 313	(1)	Mining Science and Technology Seminar
MIME 322	(3)	Rock Fragmentation
MIME 333	(3)	Materials Handling

#### **Complementary Courses**

12 credits selected from the following lists:

##### **List A: Mining Engineering**

6-12 credits from the following:

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MECH 573	(3)	Mechanics of Robotic Systems
MECH 577	(3)	Optimum Design

### List C: Civil Engineering

0-6 credits from the following:

CIVE 416	(3)	Geotechnical Engineering
CIVE 451	(3)	Geoenvironmental Engineering
CIVE 462	(3)	Design of Steel Structures
CIVE 463	(3)	Design of Concrete Structures
CIVE 527	(3)	Renovation and Preservation: Infrastructure

### List D: Chemical Engineering

0-6 credits from the following:

CHEE 453	(4)	Process Design
CHEE 455	(4)	Process Control
CHEE 484	(3)	Materials Engineering

### 28.11.10.14 Physics Minor

Students in Honours Electrical Engineering taking the Physics Minor take 9 credits of required courses in thermal physics and honours quantum physics and choose three other physics courses (subject code PHYS).

Interested students should contact the Department of Physics concerning this Minor.

### 28.11.10.141 Bachelor of Engineering (B.Eng.) - Minor Physics (18 credits)

Students in Honours Electrical Engineering may obtain this minor as part of their B.Eng. degree by completing 18 credits of physics courses, as listed below.

Please consult the Department of Physics for an adviser.

### Required Courses

9 credits

PHYS 253	(3)	Thermal Physics
PHYS 357*	(3)	Honours Quantum Physics 1
PHYS 457*	(3)	Honours Quantum Physics 2

\* Students who take PHYS 357 and PHYS 457 can omit PHYS 271 from their normal Electrical Engineering program.

### Complementary Courses

PHYS 567 (3) Particle Physics

### **28.11.10.15 Technological Entrepreneurship Minor**

This Minor is offered jointly by the Faculties of Engineering and Management. It will appeal to those students who have a concept, process or product idea in mind and who want to explore the opportunity of commercializing it. It will also be of interest to students who have a general interest in entrepreneurship and intend to pursue a career in small and medium-sized high technology/engineering companies.

Students taking the Minor choose 18 credits from courses in technological entrepreneurship (entrepreneurship, marketing management, organization policy, marketing of technology, leadership and human resources management). Students can also choose to take business plan design and project courses, which gives students an opportunity to design a business plan and develop a technology or engineering project.

Students considering this Minor should consult with a faculty adviser in the Student Affairs Office, Engineering Student Centre, Frank Dawson Adams, Suite 22.

### **28.11.10.15.1 Bachelor of Engineering (B.Eng.) - Minor Technological Entrepreneurship (18 credits)**

This minor is offered jointly by the Faculties of Engineering and Management. It will appeal to those students who have a concept, process or product idea in mind and who want to explore the opportunity of commercializing it. It will also be of interest to students who have a general interest in entrepreneurship and intend to pursue a career in small and medium-sized high technology/engineering companies.

Engineering students (including B.Eng. and B.Sc.(Arch.) students) may obtain the Technological Entrepreneurship Minor by completing six courses (18 credits). B.Eng. and B.S.E. student may double-count up to two courses (6 credits) of Complementary Studies (Humanities and Social Sciences courses, Group B) toward the Minor.

Students considering this minor should consult with a faculty adviser in the Student Affairs Office, Engineering Student Centre, Frank Dawson Adams, Suite 22.

### **Complementary Courses**

18 credits (six courses) from the following:

BUSA 465	(3)	Technological Entrepreneurship
FACC 500	(3)	Technology Business Plan Design
FACC 501	(3)	Technology Business Plan Project
MGCR 352	(3)	Marketing Management 1
MGCR 423	(3)	Organizational Policy
MRKT 360	(3)	Marketing of Technology
ORGB 321	(3)	Leadership
ORGB 423	(3)	Human Resources Management

### **28.11.10.16 Software Engineering Minor**

This Minor will prepare an engineering student for a career in software engineering. It will provide a foundation in basic computer science, computer programming and software engineering practice.

Students considering this Minor should consult with a faculty adviser in the Student Affairs Office, Engineering Student Centre, Frank Dawson Adams, Suite 22.

### **28.11.10.16.1 Bachelor of Engineering (B.Eng.) - Minor Software Engineering (24 credits)**

The Software Engineering Minor will prepare an engineering student for a career in software engineering. It will provide a foundation in basic computer science, computer programming and software engineering practice.

This minor consists of 24 credits (eight courses). Up to four courses (12 credits) may be double-counted for credit towards the B. Eng. degree in Electrical Engineering or Computer Engineering. Students in other programs may double-count up to three courses (9 credits).

Students considering the Minor Software Engineering should consult with a faculty adviser in the Student Affairs Office, Engineering Student Centre, Frank Dawson Adams, Suite 22.

### **Required Courses**

9 credits

ECSE 221	(3)	Introduction to Computer Engineering
ECSE 321	(3)	Introduction to Software Engineering
ECSE 428	(3)	Software Engineering Practice

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## Complementary Courses

15 credits

3 credits from the following:

COMP 203	(3)	Introduction to Computing 2
COMP 250	(3)	Introduction to Computer Science

3-12 credits from the following engineering courses:

CHEE 458	(3)	Computer Applications
CHEE 571	(3)	Small Computer Applications: Chemical Engineering
CIVE 460	(3)	Matrix Structural Analysis
CIVE 550	(3)	Water Resources Management
CIVE 572	(3)	Computational Hydraulics
ECSE 322	(3)	Computer Engineering
ECSE 420	(3)	Parallel Computing
ECSE 421	(3)	Embedded Systems
ECSE 422	(3)	Fault Tolerant Computing
ECSE 424	(3)	Human-Computer Interaction
ECSE 427	(3)	Operating Systems
ECSE 429	(3)	Software Validation
ECSE 526	(3)	Artificial Intelligence
ECSE 532	(3)	Computer Graphics
MECH 474	(3)	Selected Topics in Operations Research
MECH 524	(3)	Computer Integrated Manufacturing
MECH 539	(3)	Computational Aerodynamics
MECH 545	(3)	Advanced Stress Analysis
MECH 576	(3)	Geometry in Mechanics

0-6 credits from the following computer science courses (no more than 6 credits will count toward the minor):

COMP 302	(3)	Programming Languages and Paradigms
COMP 335	(3)	Software Engineering Methods
COMP 420	(3)	Secondary Storage Algorithms and Data Structures
COMP 421	(3)	Database Systems
COMP 424	(3)	Artificial Intelligence
COMP 431	(3)	Algorithms for Engineers
COMP 527	(3)	Logic and Computation

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## 29 Desautels Faculty of Management

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### 29.1 About Desautels Faculty of Management

For over a century the Desautels Faculty of Management has been among the world's top international business schools. The Faculty is home to 10 research centres, four unique executive development programs, and 11 academic programs with 3,500 students at the undergraduate, masters, executive, and PhD levels. Nearly half of the Faculty's students and 80% of its tenured professors come from outside of Canada, creating a truly rich global learning environment.

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### 29.2 History of the Faculty

Management education began at McGill University in 1906. The department of Commerce was first established within the Faculty of Arts, offering commercial courses to train people as accountants, clerks, and the like. In 1912, the Commerce Program was named the School of Commerce, and the first BCom degrees were awarded by McGill in 1915. Five years later, McGill's School of Commerce was founded, independent of the Faculty of Arts. In 1972, the Samuel Bronfman building, now home to the Desautels Faculty of Management, was opened at 1001 Sherbrooke Street West at the heart of downtown Montreal. A generous donation from the Bronfman family made the construction of the building possible. The Bronfman family is well known for their Seagram Company.

More than a century later, foundations for a world-class business school expanded to offer a BCom program; an MBA program; Specialized Masters programs; MBA Japan, the first Canadian degree program offered in Japan; a joint bilingual EMBA with HEC Montréal, a program first of its kind in North America; a Ph.D. program; and numerous Executive programs. On November 17, 2005, a landmark gift of \$22 million from the Canadian Management Foundation through Mr. Marcel Desautels was donated to the Faculty, ushering in a new era in business education at McGill. The gift fostered changes to its facilities, revamping of the BCom and MBA curriculums, and hiring of new professors. In honour of his gift, the Faculty was named the Desautels Faculty of Management.

Telephone: 514-398-4068

Faculty website: [www.mcgill.ca/desautels](http://www.mcgill.ca/desautels)

Degree website: [www.mcgill.ca/desautels/bcom](http://www.mcgill.ca/desautels/bcom)

The BCom Student Affairs Office of the Desautels Faculty of Management and the office of the Director, BCom Program are located in the Samuel Bronfman Building, room 110. The BCom Student Affairs Office serves all students taking management courses.

#### 29.4.2 Administrative Officers

Peter Todd; B.Com.(McG.), Ph.D.(Br. Col.)

**Dean**

Emine Sarigöllü; B.A., M.B.A.(Bogazici), M.A., Ph.D.(Penn.)

**Associate Dean, Student Affairs**

Glenn Zabowski; B.Com., M.B.A.(McG.)

**Director, BCom Program**

#### 29.4.3 The Bachelor of Commerce Program

Internationally acclaimed for its high academic standards and excellence in teaching/research, and widely recognized as Canada's leading international business school, McGill University consistently attracts top students and faculty members from around the world.

The primary objective of the McGill BCom program is to prepare you for an effective professional and managerial career. This preparation includes developing in you a capacity for critical thinking, for integrating knowledge across different disciplines, and for utilizing current theory in approaching practical business problems. You are also expected to become comfortable with taking risks, working as part of a team, and developing the necessary skills to lead others. You will acquire the critical management competencies which will enable you to offer the expertise organizations need to respond to the ever-changing and increasingly complex global marketplace.

The BCom highly flexible curriculum offers you both breadth and depth. Breadth is achieved through a broad-based core of required courses which provide the necessary quantitative, analytical, and communication skills, while grounding you in applied theory and practice across the major management disciplines. Depth is achieved through three alternate specializations of study designed to meet the needs of a highly diverse student body with a wide range of career interests and priorities.

In the General Management Concentration, you will pursue focused study in two different areas. You must choose one Concentration in Management, and for your second area of study, you have two options: 1) choosing a second Concentration in Management; or 2) pursuing a Minor in another faculty. This option is ideal if you are looking for a general business education, are interested in continuing your education in a related field such as law or industrial relations, or want to pursue a career in a specific sector such as the arts, applied science, or public administration.

Majors and Honours programs are available if you want to focus your study in primarily one area in order to get maximum exposure to your chosen field. This option is for students with clearly defined career objectives or those interested in further professional training, such as a CA, CMA, CGA, or CFA designation.

In International Management, you have a chance to pursue interdisciplinary global studies. All students in the Major complete the requirements of the International Business Concentration. You choose to complete social science and humanities courses in one of the following themes: comparative global



You normally will be allowed to take only 6 credits in each of the two parts of Summer session. If you want to follow a full-time period of study, you will be permitted to enrol for more than 6 credits per part only with special permission of the Director, BCom Program. In no circumstance will students be allowed to take more than 12 credits in either part of the Summer session, and may take no more than 18 credits in a single summer.

If you want to pursue courses at another institution, credit will be granted for such courses only if they fit into your overall program, and if written permission to complete such courses for credit has been obtained in advance from the BCom Student Affairs Office. A course which overlaps with material already completed in your program, or a language course which does not substantially progress beyond corresponding language courses already taken, will not receive credit approval. Please see [section 29.4.7: Transfer Credit and Advanced Standing](#) for more information about transferring credits.

#### **29.4.6 International Student Exchange Program**

You are encouraged to take advantage of opportunities to study abroad for a term or year. The international exposure and academic experience gained by taking part in a student exchange are highly worthwhile. Through this program, you may study and earn academic credits at over 70 universities in countries around the world. Exchange opportunities are open to students in most specializations.

More information can be obtained from the BCom Student Affairs Office at 514-398-4068, [bcom.mgmt@mcgill.ca](mailto:bcom.mgmt@mcgill.ca), or on the McGill 1 0 0 1r7an c-3981 rg0 0 1 RG/F4

If you have transferred with advanced standing to the Desautels Faculty of Management from another university, you are required to complete a minimum of 60 credits while registered in the BCom program, including required courses that are deemed necessary, to become eligible for the degree of BCom.

### **29.6.2 Cumulative Grade Point Average (CGPA)**

You will be eligible for graduation upon satisfactory completion of the minimum credit requirement for the degree as indicated in your letter of acceptance, subject to the curriculum and CGPA of 2.00 (3.00 for Honours) requirements.

### **29.6.3 Course Requirements**

All required and complementary courses used to fulfil program requirements, including the Freshman Program, must be completed with a grade of C or better. If you fail to obtain a satisfactory grade in a required course (core, part of a concentration, minor, major or honours program), you must repeat the course. Course substitution will be allowed only in special cases; you should consult your academic adviser. Normally, you are permitted to repeat a failed course only once (failure is considered to be a grade of less than C or the administrativ

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### 29.6.8.1.1 Faculty constraints

#### Agriculture & Environmental Sciences

- All courses require approval by a student adviser in the BCom Student Affairs Office.

#### Arts

- All courses are approved, subject to Course Overlap and the above notes, with a maximum of 6 credits approved in EAPR, ESLN, EDEC, CEEN, and CEGL (combined), or SWRK (approved courses only). ECON 208 and ECON 209 may not be taken for credit within the BCom program.

#### Continuing Education

- A maximum of 6 credits are approved from the language courses offered; no credit will be granted for other CCE courses with subject codes beginning with a "C", such as CCTR or CMIS.

#### Education

- A maximum 6 credits are approved from the following subject codes (combined): EDEA 201, 204, 205, 296, 304, 305, 307, 496, 497; EDEC 200, 202, 205, 208, 236, 239, 241, 242, 247, 248, 260, 261, 305, 308, 309, 403; EDEE 325; EDEM 220; EDER 207, 209, 309, 394, 395, 461, 473, 494; EDES 366; EDKP 205, 206, 261, 292, 293, 303, 330, 391, 395, 566; EDPC 510; EDPE 377; EDPE 526.

- No courses are approved from subject codes EDET, EDFC, EDFE, EDPT or EDSL.

#### Engineering

- Most courses in subject codes ARCH, CHEE, CIVE, ECSE, MECH, MIME, URBP with approval of an Adviser.

- No courses are approved from subject codes FACC or MPMC.

- The following courses are not approved: CHEE 291, 360, 462; CIVE 210, 432; ECSE 443; MECH 201, 260, 262, 289; MIME 202, 221, 280, 290, 291, 310, 380, 392, 480, 481, 494.

#### School of Environment

- All courses are approved.

#### Music

- All courses are approved in subject codes MUGT, MUHL, MUMT, MUPP, MUSR, MUTH and MUAR (taught by Arts).

- A maximum of 6 credits is approved from the following (combined): MUCO, MUCT, MUEN, MUIN, MUIT, MUJZ, MUPG and MUSP.

#### Religious Studies

- All courses are approved.

#### Science

- All courses are approved, subject to Course Overlap and the above note 1, except COMP 102; MATH 111, 112, 122, 123, 133, 139, 140, 141, 150, 151, 152 and 203.

- A maximum 6 credits may be taken from the World of Chemistry courses CHEM 180, 181, 182, 183.

### 29.6.8.2 Electives

Subject to the requirements and restrictions for Non-Management electives as outlined above, all remaining elective credits may be taken in any Faculty, Management or otherwise.

## 29.6.9 Academic Standing

Academic standing is based primarily on your cumulative grade point average (CGPA), but may also be affected by your term grade point average (TGPA). Academic standing is assessed in January for the Fall term, in May for the Winter term, and in September for the Summer term. Academic standing in each term determines whether you will be allowed to continue your studies in the next term and whether any conditions will be attached to your registration.

Decisions about academic standing in the Fall term are based only on grades that are available in January. Grades for courses in which you have deferred examinations and Fall-term grades for courses that span the Fall and Winter terms do not affect your academic standing for the Fall term, even though they will ultimately affect your Fall TGPA. Therefore, academic standings for the Fall term are designated as "interim". **Interim standing decisions are mentioned below only if the rules for them differ from those for regular standing decisions.**

**If you are not in Satisfactory Standing, you are strongly advised to consult with Naomi Neuburger or Heather McCombie in the BCom Student Affairs Office about your course selection before the withdrawal deadlines.**

### 29.6.9.1 Satisfactory/Interim Satisfactory Standing

If you are in satisfactory standing, you may continue in your program.

- New students are admitted to satisfactory standing.
- Students with a CGPA of 2.00 or greater are in satisfactory standing.

### **29.6.9.2 Probationary/Interim Probationary Standing**

If you are in probationary standing, you may continue in your program, but must carry a reduced load (maximum 14 credits per term) and raise your TGPA and CGPA to return to satisfactory standing (see above). You should see your student adviser to discuss your course selection.

If you are in interim probationary standing, you may continue in your program, but should evaluate your course load and reduce it as appropriate. You are

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## 29.7 Grading and Credit

During the first week of lectures, each instructor will provide you with a written course outline that should include:

- A description of the topics to be considered in the course.
- A list of required or recommended textbooks and reading materials.
- A grading scheme or description of the methods of evaluation to be used in the course, along with due dates for assignments and dates/times of exams. All term work must be assigned early enough in the term for students to complete the assignment(s) by the last day of class. The due date for term work must be no later than the last day of classes. Changes in the distributed grading scheme are permitted only with the unanimous consent of all students registered in the course. In practice, therefore, the grading scheme is almost never changed during the term.
- The instructor's office hours for students, office location, telephone number for office appointments and secretarial contact information.
- Academic Integrity statement: **McGill University values academic integrity. Therefore, all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the *Code of Student Conduct and Disciplinary Procedures* (see [www.mcgill.ca/integrity](http://www.mcgill.ca/integrity) for more inf**

with the instructor of the course before requesting a reread of coursework. Requests for rereads must be made within 10 working days of the date of return of the graded materials. Reassessments should normally be completed within 20 working days of the request.

**29.7.2.2 Rereads of Final Exams**

These rereads are administered by the BCom Student Affairs Office. You must apply in writing to the BCom Student Affairs Office by March 31 for courses in the Fall term and by September 30 for courses in the Winter or Summer terms (these deadlines are strictly enforced, and no requests will be accepted past them). You are assessed a fee of \$35.00 for such rereads. It is strongly recommended, but not required, that you consult with the instructor of the course before requesting a reread of a final exam.

Reassessments and rereads in courses not in the Desautels Faculty of Management are subject to the deadlines, rules, and regulations of the relevant faculty.

**29.7.3 Awards and Honorary Designations: Honours and First-Class Honours**

Graduating students registered in an Honours program may be awarded Honours or First-Class Honours under the following conditions:

- for Honours, the CGPA at graduation must be at least 3.0 overall and in the specified courses of the program;
- for First-Class Honours, the CGPA at graduation must be at least 3.5 overall and in the specified courses of the program.

Students in an Honours program whose GPA or CGPA is below 3.0, or who did not satisfy certain additional program requirements, must consult their student adviser to determine whether they are eligible to graduate in a program other than Honours.

**29.7.4 Awards and Honorary Designations: Distinction**

For information on the designation of Distinction awarded at graduation, see *Distinction* in the *University Regulations and General Information* section of this publication.

**29.7.5 Awards and Honorary Designations: Dean's Honour List**

For information on the designation of Dean's Honour List awarded at graduation, see *Dean's Honour List* in the *University Regulations and General Information* section of this publication.

**29.7.6 Awards and Honorary Designations: Scholarships, Prizes and Medals**

Various scholarships, prizes and medals are open to returning and graduating students. Full details can be found in the *Undergraduate Scholarships and Awards Calendar* available at [www.mcgill.ca/students/courses/calendars](http://www.mcgill.ca/students/courses/calendars). For information, see *University Regulations and General Information > Scholarships and Student Aid*.

As a registered student, you are automatically considered by the Undergraduate Scholarships Committee for each award for which you are eligible, with the following exceptions for in-course scholarships: James Hartt Schurman Memorial Award, Rio Tinto Alcan – Richard Evans International Exchange Award, Danny and Monica Gold Award for Academic Excellence, Hundreth Anniversary MUS Graduating Class of 2007 Scholarship, Sheila Wellington BMO Financial Group Awards, KPMG Scholarship, Commerce '55 Scholarships, Hyman Herbert Stein Award, Donald R. McRobie Award, Great-West Life & London Life Scholarship, Hugh Howson Memorial Prize, Dr. Alex Paterson Scholarship, Paul-Hervé Desrosiers Scholarship in Entrepreneurial Studies, Shirin Yeganegi Memorial Scholarship, HSBC Bank Canada Management Awards, Bruce and Jocelyn Pearson Scholarship, and RSM Richter Scholarship in Accounting. The Stephen S. Goldbloom Memorial Prize is the exception for a graduating student. For these, the Undergraduate Scholarships Committee welcomes applications and recommendations, substantiated by curriculum vitae, from individual students, student groups and clubs. Such information should be forwarded to Heather McCombie in the BCom Student Affairs Office. A minimum of 27 graded credits must have been completed in the year to be eligible; 14 credits in one term.

**29.8 Overview of Programs Offered by the Desautels Faculty of Management**

120-Credit Program, Freshman Course Distribution
Management Core
General Management Program (Concentrations)
Minors for Management Students
Minors for Non-Management Students
Majors
Honours

**29.8.1 BCom Program Credit Structure: General Management Program (Concentrations)**

<b>2 Concentrations</b>	<b>90 credit</b>	<b>120 credit</b>
Freshman Requirements	0	18
Core	36	36
2 Concentrations	30	30
Non-Mgmt Electives	6	12
Electives	18	24
Total	90	120

<b>1 Concentration &amp; 1 Minor (18 credits)</b>	<b>90 credit</b>	<b>120 credit</b>
Freshman Requirements	0	18
Core	36	36
1 Concentration + 1 Minor (18 credits)	33	33
Non-Mgmt Electives	0	12
Electives	21	21
Total	90	120

<b>1 Concentration &amp; 1 Minor (24 credits)</b>	<b>90 credit</b>	<b>120 credit</b>
Freshman Requirements	0	18
Core	36	36
1 Concentration + 1 Minor (24 credits)	39	39
Non-Mgmt Electives	0	12
Electives	15	15
Total	90	120

**Concentrations**

- Accounting
- Entrepreneurship
- Finance
- Information Systems
- International Business
- Labour-Management Relations
- Marketing
- Operations Management
- Organizational Behaviour
- Strategic Management

**29.8.1.1 Minors/Minor Concentrations for Management Students**

Although only the Mathematics and Statistics Minors are outlined in this section, a wide variety of programs are available as listed in the sections for the Faculties of Arts and Science. Popular choices include Anthropology, Canadian Studies, Computer Science, English - Literature, Environmental Studies, Geological Sciences, German, History, International Development, Political Science, Women's Studies, etc. Students interested in the Minor in Economics must see an adviser in the BCom Student Affairs Office for Faculty approval.

**It should be noted that a minimum of 18 credits of the Minor's requirements must not overlap with any other part of the student's program.**







- Economics/Finance
- Investment Management

### **29.8.3 120-Credit Program, Freshman Course Distribution**

Students admitted to a program requiring 97 to 120 credits (four years) register in a Freshman Year in which they must complete MATH 122 and MATH 123 (or equivalents) as well as the 12 credits of Complementary Courses specified below.

A minimum grade of C is required for all MATH and Freshman Complementary

## 29.8.4 Management Core

All BCom students take the 36-credit Core curriculum set out below, except where modifications are specifically required by a Major or Honours program. A grade of C or better is required for all core courses. If a D is obtained in a core course, the course must be repeated.

### 29.8.4.1 Core Course Distribution

Required Courses (36 credits)		
ECON 295 <sup>2</sup>	(3)	Macroeconomic Policy
MGCR 211	(3)	Introduction to Financial Accounting
MGCR 222	(3)	Introduction to Organizational Behaviour
MGCR 271 <sup>1</sup>	(3)	Business Statistics
MGCR 293 <sup>2</sup>	(3)	Managerial Economics
MGCR 331	(3)	Information Systems
MGCR 341	(3)	Finance 1
MGCR 352	(3)	Marketing Management 1
MGCR 360	(3)	Social Context of Business
MGCR 382	(3)	International Business
MGCR 423	(3)	Organizational Policy
MGCR 472	(3)	Operations Management

#### Program Footnotes:

1. Students considering a Major Concentration in Mathematics, a Major Concentration in Statistics, or a Minor in Statistics, are exempted from MGCR 271 by MATH 324. Students considering an Honours or Joint Honours Program in Economics replace MGCR 271 with ECON 257D1/ECON 257D2. Students entering the Major in Economics will only count the 3 credits of MGCR 271 in core.
2. Students entering an Economics program are exempted from MGCR 293 by either ECON 230D1/ECON 230D2 (for the Majors program) or ECON 250D1/ECON 250D2 (for the Honours Program), and are exempted from ECON 295 in U2 by either ECON 330D1/ ECON 330Djors program) or mxh2ha7 458.20

**Required Courses (6 credits)**

ACCT 351	(3)	Intermediate Financial Accounting 1
ACCT 361	(3)	Intermediate Management Accounting 1

**Complementary Courses (9 credits)**

Selected from the following:

ACCT 352	(3)	Intermediate Financial Accounting 2
ACCT 354	(3)	Financial Statement Analysis
ACCT 362	(3)	Intermediate Management Accounting 2
ACCT 385	(3)	Principles of Taxation
ACCT 434	(3)	Topics in Accounting
ACCT 452	(3)	Financial Reporting Valuation
ACCT 453	(3)	Advanced Financial Accounting
ACCT 454	(3)	Financial Reporting
ACCT 463	(3)	Advanced Management Accounting
ACCT 475	(3)	Principles of Auditing
ACCT 486	(3)	Business Taxation 2

**29.8.5.2 Bachelor of Commerce (B.Com.) - Concentration in Entrepreneurship (15 credits)**

Mentors: Professors A. Burlton, G. Vit

The Entrepreneurship Concentration is concerned with the genesis and development of entrepreneurial activities. It deals with the integration of marketing, finance, organization and policy in the development and expansion of business enterprise. Included are the evaluation of new business ventures, the role of acquisitions, and the strate

MRKT 453	(3)	Advertising Management
MRKT 483	(3)	International Marketing Management
ORGB 380	(3)	Cross Cultural Management

or a 400-level course appro

INSY 332	(3)	Accounting Information Systems
INSY 339	(3)	IT Consulting
INSY 341	(3)	Developing Business Applications
INSY 430	(3)	IT in Financial Markets
INSY 431	(3)	System Design and Implementation
INSY 432	(3)	Information Technology in Business
INSY 434	(3)	Advanced Topics
INSY 437	(3)	Managing Data & Databases
INSY 440	(3)	E-Business
INSY 444	(3)	Managing Knowledge with Information Technology
INSY 450	(3)	Information Systems Project Management
INSY 454	(3)	Technological Foundation for E-Commerce

### **29.8.5.5 Bachelor of Commerce (B.Com.) - Concentration in International Business (15 credits)**

Mentor: Professors H. Etemad, M.S. Jo, E. Sarigöllü

The objective of the International Business Concentration is to help the student develop conceptual and analytical skills needed to formulate feasible and effective management policies in an international setting. With economic and business activity becoming increasingly internationalized, the program provides useful preparation for careers in a variety of internationally oriented organizations, including local business firms involved in international trade, licensing or financial arrangements; headquarters or subsidiaries of multinational companies; banks and other international financial institutions; and various governmental organizations.

#### **Required Courses (3 credits)**

BUSA 356	(3)	Management in Global Context
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#### **Complementary Courses (12 credits)**

Selected from the following:

ACCT 356	(3)	International Accounting
BUSA 391	(3)	International Business Law
BUSA 394	(3)	Managing in Asia
BUSA 395	(3)	Managing in Europe
BUSA 401	(3)	Independent Studies in International Business
BUSA 433	(3)	Topics in International Business 1
BUSA 481	(3)	Managing in North America
BUSA 493	(3)	Global Economic Competitiveness
FINE 480	(3)	Global Investments
FINE 482	(3)	International Finance 1
FINE 492	(3)	International Finance 2
INDR 459	(3)	International Employment Relations
MGPO 383	(3)	International Business Policy
MGPO 469	(3)	Managing Globalization
MGPO 475	(3)	Strategies for Developing Countries
MRKT 451	(3)	Marketing Research
	(3)	International Marketing Management

**29.8.5.6 Bachelor of Commerce (B.Com.) - Concentration in Labour-Management Relations (15 credits)**

Mentor: Professor R. Hebdon

The objective of the Labour-Management Relations Concentration is to provide a general understanding of the factors affecting employer-employee relations, both at the micro-level and in relation to the socio-economic context in which they occur. Students interested in more intensive study of this area are urged to consider the Major Program in Labour-Management Relations.

**Required Courses (6 credits)**

INDR 294	(3)	Introduction to Labour-Management Relations
INDR 496	(3)	Collective Bargaining

**Complementary Courses (9 credits)**

Selected from the following:

INDR 434	(3)	Topics: Labour Management Relations
INDR 449	(3)	Occupational Health and Safety
INDR 459	(3)	International Employment Relations
INDR 492	(3)	Globalization and Labour Policy
INDR 494	(3)	Labour Law
INDR 495	(3)	Labour Relations: Public Sector
INDR 497	(3)	Contract Administration

**29.8.5.7 Bachelor of Commerce (B.Com.) - Concentration in Marketing (15 credits)**

Mentors: Professors M.S. Jo, A. Mukherjee

The Marketing Concentration prepares the student for a wide variety of career opportunities. Marketing graduates historically have found employment in the fields of product management, advertising, sales management, marketing management, pricing, marketing research, distribution and retailing. The Marketing Concentration provides a balance between courses focusing on fundamental, theoretical and "need to know" material, and courses with a strong practical and applied orientation.

**Required Courses (12 credits)**

MRKT 354	(3)	Marketing Management 2
MRKT 357	(3)	Marketing Planning 1
MRKT 451	(3)	Marketing Research
MRKT 452	(3)	Consumer Behaviour

**Complementary Courses (3 credits)**

One course selected from:

MRKT 351	(3)	Marketing and Society
MRKT 355	(3)	Services Marketing
MRKT 365	(3)	New Products
MRKT 434	(3)	Topics in Marketing 1
MRKT 438	(3)	Brand Management
MRKT 455	(3)	Sales Management
MRKT 456	(3)	Business to Business Marketing
MRKT 459	(3)	Retail Management
MRKT 461	(3)	Advertising Practicum
MRKT 483	(3)	International Marketing Management



MRKT 557 (3) Marketing Productivity

### 29.8.5.8 Bachelor of Commerce (B.Com.) - Concentration in Operations Management (15 credits)

Mentors: Professors T. Boyaci, M. Gumus, S. Li, S. Ray, M. Yalovsky

Operations Management is concerned with the design, planning, control, coordination and improvement of business processes, systems and resources integral to the creation of the firm's products and services. Emphasizing quantitative analysis and cross-functional thinking, the Operations Management Concentration provides training on traditional as well as emerging operations strategies, concepts, models and techniques that are essential to any firm in today's competitive marketplace. Operations management graduates find career opportunities in a variety of industries and fields including consulting, manufacturing, distribution, retail, transportation, health care, public sector, among others.

#### Required Courses (6 credits)

MGSC 373 (3) Operations Research 1  
MGSC 431 (3) Operations Analysis

#### Complementary Courses (9 credits)

Selected from the following:

MGSC 272 (3) Advanced Business Statistics  
MGSC 402 (3) Operations Strategy  
MGSC 403 (3) Introduction to Logistics Management  
MGSC 405 (3) Quality Management  
MGSC 415 (3) Supplier Management  
MGSC 434 (3) Topics in Management Science  
MGSC 479 (3) Applied Optimization  
MGSC 575 (3) Applied Time Series Analysis Managerial Forecasting  
MGSC 578 (3) Simulation of Management Systems

or approved courses in other areas or faculties

### 29.8.5.9 Bachelor of Commerce (B.Com.) - Concentration in Organizational Behaviour (15 credits)

Mentor: Professor A. Jaeger

The Organizational Behaviour Concentration provides an opportunity for students to increase their awareness of behavioural issues encountered in job and organizational settings, and prepare themselves for graduate study in the behavioural sciences or for careers in general management or human resource management.

#### Complementary Courses (15 credits)

Selected from the following:

ORGB 321 (3) Leadership  
ORGB 325 (3) Negotiations and Conflict Resolution  
ORGB 380 (3) Cross Cultural Management  
ORGB 409 (3) Organizational Research Methods  
ORGB 420 (3) Managing Organizational Teams  
ORGB 421 (3) Managing Organizational Change  
ORGB 423 (3) Human Resources Management  
ORGB 429D1\* (3) Organizational Behaviour for Course Counsellors  
ORGB 429D2\* (3) Organizational Behaviour for Course Counsellors  
ORGB 434 (3) Advanced Topics in Organizational Behaviour  
ORGB 435 (3) Women as Global Leaders and Managers

ORGB 525

(3)

Compensation Management

\* If ORGB 429 is taken, only 3 credits will count tow

MGPO 475 (3) Strategies for Developing Countries

the remaining credits to be chosen from:

BUSA 391 (3) International Business Law

MGPO 383 (3) International Business Policy

Topics in Polic

MGSC 575	(3)	Applied Time Series Analysis Managerial Forecasting
MGSC 578	(3)	Simulation of Management Systems

the remaining 3 credits selected from:

MATH 316	(3)	Complex Variables
MATH 317	(3)	Numerical Analysis
MATH 319	(3)	Introduction to Partial Differential Equations
MATH 323	(3)	Probability
MATH 326	(3)	Nonlinear Dynamics and Chaos
MATH 340	(3)	Discrete Structures 2
MATH 407	(3)	Dynamic Programming
MATH 417	(3)	Mathematical Programming

**Bachelor of Commer**

### **29.8.7 Minors for Non-Management Students**

The Desautels Faculty of Management has introduced four Minors that allow undergraduates to develop a variety of managerial skills that will serve them throughout their chosen careers. The Minors have limited enrolment. Applicants for the Minors must have a minimum CGPA of 3.0 **although successful completion of the minimum requirements does not guarantee acceptance.** All Minors are 18 credits split between a fix

**Category A**

3 credits selected from:

MGCR 211	(3)	Introduction to Financial Accounting
MGCR 341*	(3)	Finance 1

**Category B**

9 credits selected from:

MGCR 222	(3)	Introduction to Organizational Behaviour
MGCR 271**	(3)	Business Statistics
MGCR 293***	(3)	Managerial Economics
MGCR 331	(3)	Information Systems
MGCR 352	(3)	Marketing Management 1
MGCR 382	(3)	International Business
MGCR 472*	(3)	Operations Management

**Category C**

6 credits selected from:

3-6 credits from any 300- or 400-level management courses for which prerequisites have been met.

0-3 credits may be from a specifically designated course by the student's home faculty.

\*Prerequisite: MGCR 271, Business Statistics, or another equivalent statistics course approved by the program adviser.

\*\* 3 credits of statistics: Students who have taken an equivalent statistics course in another faculty may not count those credits towards the minor; an additional 3-credit Complementary course must be chosen from the course list above.

\*\*\* Students who have taken an equivalent economics course in another faculty may not count those credits toward the minor; an additional 3-credit Complementary course must be chosen from the course list above.

Note: Students should select their statistics course only after consulting the "Course Overlap" section in the Faculty of Arts, the "Course Overlap" section in the Faculty of Science, and the "Course Overlap" section in the Desautels Faculty of Management to avoid overlapping statistics courses.

**29.8.7.3 Minor in Management for Economics Students**

This minor is no longer available and has been replaced by the *Minor in Management (For Non-Management Students)*.

**29.8.7.4 Minor in Management for Engineering Students**

This minor is no longer available and has been replaced by the *Minor in Management (For Non-Management Students)*.

**29.8.7.5 Minor in Management for Science Students**

This minor is no longer available and has been replaced by the *Minor in Management (For Non-Management Students)*.

**29.8.7.6 Minor Marketing (For Non-Management Students) (18 credits)**

The Minor Marketing consists of 18 credits of Management courses and is currently offered to non-management students in the Faculties of Arts, Engineering, Science and the Schulich School of Music.

This minor is designed to provide students with an understanding of the fundamental concepts in marketing and a framework for applying marketing in a decision-making context. Students will be introduced to the basic concepts in marketing. The use of marketing theory and concepts for decision making will be covered. Marketing research methods for marketing decisions is introduced. Subsequently, students will be able to specialize by choosing from the list of complementary courses.

**Required Courses (9 credits)**

MGCR 352	(3)	Marketing Management 1
MRKT 354	(3)	Marketing Management 2
MRKT 451	(3)	Marketing Research







ACCT 477	(3)	External Auditing
ACCT 486	(3)	Business Taxation 2

### 29.8.8.2 Bachelor of Commerce (B.Com.) - Major Economics for Management Students (36 credits)

Mentors: Professors P. Dickinson, J. Kurien and J. Handa; Department of Economics, Faculty of Arts

Please consult the Economics department website.

This major is comprised of 36 credits of Economics courses (9 credits of which are counted as Core credits).

#### Required Courses (18 credits)

ECON 230D1*	(3)	Microeconomic Theory
ECON 230D2*	(3)	Microeconomic Theory
ECON 330D1**	(3)	Macroeconomic Theory
ECON 330D2**	(3)	Macroeconomic Theory
MGCR 271***	(3)	Business Statistics
MGSC 272	(3)	Advanced Business Statistics

\* 3 of the 6 credits for Microeconomic Theory exempt MGCR 293 in Core.

\*\* 3 of the 6 credits for Macroeconomic Theory exempt ECON 295 in Core.

\*\*\* 3 of the 3 credits for MGCR 271 will count in Core.

#### Complementary Courses (18 credits)

Selected from other 200, 300 and 400 level courses in Economics (ECON), excluding courses with numbers below 210. At least 6 of these 18 credits should be taken from courses with 400 level numbers. No more than 6 of the 18 credits may be taken at the 200 level.

### 29.8.8.3 Bachelor of Commerce (B.Com.) - Major Finance (30 credits)

Mentors: Professors L. Barras, M. Bouvard, A. Durnev

Case Competition Mentors: Professors M. Chaudhury, V. di Pietro

The 30-credit Finance Major has been designed to meet the increasing demand for expertise in this rapidly growing functional area of business. This major is designed to provide in-depth knowledge of finance theory, financial institutions, investment analysis, risk management, and applied techniques. Employment for graduates is most often obtained in investment and commercial banking, manufacturing and service firms, non-profit organizations and governments, and non-financial firms.

#### Required Courses (15 credits)

FINE 342	(3)	Finance 2
FINE 441	(3)	Investment Management
FINE 443	(3)	Applied Corporate Finance
FINE 448	(3)	Financial Derivatives
FINE 482	(3)	International Finance 1

#### Complementary Courses (15 credits)

at least 9 credits from:

FINE 434	(3)	Topics in Finance
FINE 442	(3)	Capital Markets and Institutions
FINE 449	(3)	Market Risk Models
		Fix

FINE 541D1	(1.5)	Applied Investments
FINE 541D2	(1.5)	Applied Investments
FINE 547	(3)	Advanced Finance Seminar

the remainder, if any, from:

ACCT 351	(3)	Intermediate Financial Accounting 1
ACCT 352	(3)	Intermediate Financial Accounting 2
ACCT 354	(3)	Financial Statement Analysis
ACCT 385	(3)	Principles of Taxation
FINE 445	(3)	Real Estate Finance

#### **29.8.8.4 Bachelor of Commerce (B.Com.) - Major Information Systems (30 credits)**

This 30-credit major prepares students for the multitude of IT-related career opportunities available in industry. It employs a blend of theoretical concepts, hands-on tools, and actual case studies to train students to identify business problems and opportunities, analyze business processes, and dev

2) Global Politics and Economy,

3) Global Well-Being and Development.

This major is interdisciplinary and integrative and includes a Business Component: 15-credit International Business Concentration; an Area of Stup42G.

- B.A. Minor Concentration in Islamic Studies (18 cr.)
- B.A. Minor Concentration in Jewish Studies (18 cr.)
- B.A. Minor Concentration in Middle East Studies (18 cr.)
- B.A. Minor Concentration in Quebec Studies (18 cr.)
- B.A. Minor Concentration in Russian Culture (18 cr.)
- B.A. Minor Concentration in South Asia (18 cr.)
- B.A. Minor Concentration in World Religions (18 cr.)

\* Students should choose economics (ECON) courses with a regional focus. Course numbers above ECON 209 (excluding ECON 295) are required, with at least 6 credits at the 300, 400, or 500 levels. Credits for the introductory sequence MGCR 293 and ECON 295 that are prerequisites for 300-level courses in economics do not count as part of this Minor Concentration. ECON 227 will not count if it is taken to meet other BCom requirements.

### **Theme 2: Global Politics and Economy**

This theme focuses on aspects of public policy from the perspective of global transactions and finance. Students may select a minor concentration in the area of international relations and investigate policy on a global scale and its operations in the context of policy, war and peace, the economy, security, trade, human rights, and international organizations. Graduates with this option would be poised to apply their educational background to careers with world government, trade or economic organizations, NGOs, national governments, or businesses with global interests. The choices of programs include Economics, Geography, Political Science or a selected group of courses.

- B.A. Minor Concentration in Economics (18 cr.)
- B.A. Minor Concentration in International Relations (18 cr.)
- B.A. Minor Concentration in Political Economy (18 cr.)
- B.A. Minor Concentration in Political Science (18 cr.)
- B.A. Minor Concentration in Politics, Law and Society (18 cr.)
- B.A. Minor Concentration in Political Theory (18 cr.)

OR

### **Global Governance, Conflict and Human Rights Concentration**

18 credits of the following courses with at least 6 credits at the 300 level or above:

ANTH 212	(3)	Anthropology of Development
ANTH 214	(3)	Violence, Warfare, Culture
ANTH 222	(3)	Legal Anthropology
ANTH 333	(3)	Class and Ethnicity
CANS 307	(3)	Canada in the World
CANS 412	(3)	Canada and Americas Seminar
COMS 230	(3)	Communication and Democracy
COMS 320	(3)	Media and Empire
HIST 221	(3)	United States since 1865
HIST 302	(3)	International Relations History 1: 1750-1950
		International Relations History 2: Cold W

POLI 244	(3)	International Politics: State Behaviour
POLI 322	(3)	Political Change in South Asia
POLI 345	(3)	International Organizations
POLI 351	(3)	The Causes of Major Wars
POLI 360	(3)	Security: War and Peace
POLI 440	(3)	Civil-Military Relations
POLI 450	(3)	Peacebuilding
RELG 370	(3)	Religion and Human Rights
RELG 371	(3)	Ethics of Violence/Non-Violence
SOCI 210	(3)	Sociological Perspectives
SOCI 230	(3)	Sociology of Ethnic Relations
SOCI 265	(3)	War, States and Social Change
SOCI 307	(3)	Sociology of Globalization
SOCI 386	(3)	Contemporary Social Movements
SOCI 511	(3)	Movements/Collective Action

### Theme 3: Global Well-Being and Development

Broad-based, interdisciplinary topics will allow students to study current issues of social importance ranging from: poverty and inequality health promotion and the environment, sustainability, and natural resource management. Students will be prepared to apply business practices to the protection of the vulnerable and the planet. Students will be poised to work for multinationals, governments, or non-governmental organizations.

B.A. Minor Concentration in Anthropology (18 cr.)

B.A. Minor Concentration in Economics\* (18 cr.)

B.A. Minor Concentration in Geography (18 cr.)

B.A. Minor Concentration in International Development Studies (18 cr.)

B.A. Minor Concentration in Social Studies of Medicine (18 cr.)

B.A. Minor Concentration in Sociology (18 cr.)

B.A. Minor Concentration in Environment: McGill School of Environment (18 cr.)

B.Sc. Minor Concentration in Environment: McGill School of Environment (18 cr.)

B.Sc. Field Study Minor (18 cr.)

\* Students should choose economics (ECON) courses related to the environment, development, and health. Course numbers above ECON 209 (excluding ECON 295) are required, with at least 6 credits at the 300, 400, or 500 levels. Credits for the introductory sequence MGCR 293 and ECON 295 that are prerequisites for 300-level courses in economics do not count as part of this Minor Concentration. ECON 227 will not count if it is taken to meet other BCom requirements.

### Language Component (9-12 credits)

9 credits of language in First or Second Level EAST (Asian Languages and Literature)\*

or

9 credits of ISLA 521D1/D2 Introductory Arabic\*\*

\* Students may choose to complete additional credits in Japanese, Chinese, Korean for a total of 18 credits. Only 9 credits of EAST languages will count toward the Major and any optional additional credits will count as electives or toward another component if the student has sufficient credits to complete it within their degree. Students may not exceed the total credits required to graduate in order to complete these additional language credits.

\*\* Students with no prior knowledge of Arabic may choose two levels of Arabic. Only ISLA 521 will count toward the Major and any additional optional credits in ISLA 522 or 523 will count as electives.

OR

12 credits of language courses, at the 500 level or lower, chosen from ONE of the fo/F0 8.3 Tf1 0 r2of theo(OR)Tj1 0 f the fo/F0 8.3 Tf1 0 r2of theOwchosen f Tf1 0 0

FRSL (French as a Second Language)

GERM (German Studies) [German]

HISP (Hispanic Studies) [Spanish, Portuguese]

\*\*\*ISLA (Middle East Studies) [Lower and Higher Intermediate Level Arabic, Turkish, Urdu, Persian]

\*\*\*\*ITAL (Italian Studies) [Italian]

JWST (Jewish Studies) [Hebrew, Yiddish]

RUSS (Russian) [Russian]

\*\*\* Students placed in Lower Intermediate Arabic will complete ISLA 522D1/D2 and ISLA 523D1/D2 for a total of 12 credits.

\*\*\*\* Students wishing to register for ITAL 205 should do so in their first year as this course is open only to U0 and U1 students. ITAL 206 is open to U0, U1 and U2 students. ITAL 210, ITAL 215 and ITAL 216 can be taken by all students.

Note: Registration processes for language courses vary by department but usually involve placement tests or departmental approval. Students should consult with the individual departments to ensure that they register for the appropriate level.

### **Experiential Learning Component (0-3 credits)**

#### **Internship Component**

Students may complete a 3-credit internship as part of their experiential credit. The internship will consist of a minimum of 150 hours of work over a period of 8 to 12 weeks at an approved host institution. The institution should be located either overseas or have an international focus. Major in International

**29.8.8.7 Bachelor of Commerce (B.Com.) - Major Marketing (30 credits)**

Mentors: Professors M.S. Jo, A. Mukherjee

This 30-credit major is designed to provide students with a strong background in marketing to prepare them for the wide variety of marketing careers available. The Major is most appropriate for those students seeking a career in brand management, small business marketing, selling and sales management and business-to-business marketing.

**Required Courses (15 credits)**

MRKT 354	(3)	Marketing Management 2
MRKT 357	(3)	Marketing Planning 1
MRKT 451	(3)	Marketing Research
MRKT 452	(3)	Consumer Behaviour
MRKT 453	(3)	Advertising Management

**Complementary Courses (15 credits)**

Five courses selected from:

BUSA 464	(3)	Management of Small Enterprises
MRKT 351	(3)	Marketing and Society
MRKT 355	(3)	Services Marketing
MRKT 365	(3)	New Products
MRKT 438	(3)	Brand Management
MRKT 455	(3)	Sales Management
MRKT 456	(3)	Business to Business Marketing
MRKT 459	(3)	Retail Management
MRKT 461	(3)	Advertising Practicum
MRKT 483	(3)	International Marketing Management
MRKT 557	(3)	Marketing Productivity

**29.8.8.8 Bachelor of Commerce (B.Com.) - Major Concentration Mathematics for Management Students (39 credits)**

Mentor: Professor A. Hundemer; Department of Mathematics and Statistics, Faculty of Science

This program is comprised of 39 credits.

Students entering the Major Concentration in Mathematics are normally expected to have completed MATH 133, MATH 140, and MATH 141 or their equivalents. Otherwise they will be required to make up any deficiencies in these courses over and above the 39 credits required by the program.

**Required Courses (30 credits)**

MATH 222	(3)	Calculus 3
MATH 235	(3)	Algebra 1
MATH 236	(3)	Algebra 2
MATH 242	(3)	Analysis 1
MATH 243	(3)	Analysis 2
MATH 314	(3)	Advanced Calculus
MATH 315	(3)	Ordinary Differential Equations
MATH 323	(3)	Probability
MATH 324*	(3)	Statistics
MGSC 373	(3)	Operations Research 1

\* credits for MATH 324 are counted toward Management Core, where they replace MGCR 271.

### Complementary Courses (9 credits)

6 credits selected from:

MATH 204**	(3)	Principles of Statistics 2
MATH 316	(3)	Complex Variables
MATH 317	(3)	Numerical Analysis
MATH 319	(3)	Introduction to Partial Differential Equations
MATH 326	(3)	Nonlinear Dynamics and Chaos
MATH 340	(3)	Discrete Structures 2
MATH 407	(3)	Dynamic Programming
MATH 410	(3)	Majors Project
MATH 417	(3)	Mathematical Programming
MATH 423***	(3)	Regression and Analysis of Variance

3 credits selected from:

MGSC 272***	(3)	Advanced Business Statistics
MGSC 479	(3)	Applied Optimization
MGSC 575	(3)	Applied Time Series Analysis Managerial Forecasting
MGSC 578	(3)	Simulation of Management Systems

\*\* MATH 204 cannot be taken for credit after credit for MATH 324 has been obtained. The two courses can be taken concurrently. Students should consult the rules for credit for statistics courses in the Course Overlap section.

\*\*\* MGSC 272 and MATH 423 cannot both be taken for program credit.

### 29.8.8.9 Bachelor of Commerce (B.Com.) - Major Psychology for Management Students (30 credits)

Mentor: Professor H. Vough

This major is comprised of 30 credits, 24 of which are taken in Psychology and 6 are taken in Management.

The Desautels Faculty of Management, in collaboration with the Psychology Department, Faculty of Science, offers programs of study in organizational and consumer psychology leading to the B.Com. degree. These programs concentrate on providing an education in the fundamentals of experimental and social psychology. In view of rapid changes in practical m7(w 43 rod Chaospsor H. and)Ttechniqu premp11 0 0 1 352.61 42186561 Tm(w of y 30byr ial F Chaospsor H. and)



PSYC 340	(3)	Psychology of Language
PSYC 341	(3)	The Psychology of Bilingualism
PSYC 351	(3)	Research Methods in Social Psychology
PSYC 352	(3)	Cognitive Psychology Laboratory
	(3)	Modern Psychology in Historical Perspective



Calculus 1 and 2 are required for entering this Honours program. Please see section "120-credit program, freshman course distribution" for a detailed explanation regarding Calculus 1 and 2. It is also important to check on its statistics requirements, which are listed on the Department's website at: <http://www.mcgill.ca/economics>.

**Required Courses (27 credits)**

ECON 250D1*	(3)	Introduction to Economic Theory: Honours
ECON 250D2*	(3)	Introduction to Economic Theory: Honours
ECON 257D1**	(3)	Economic Statistics - Honours
ECON 257D2**	(3)	Economic Statistics - Honours
ECON 352D1***	(3)	Macroeconomics - Honours
ECON 352D2***	(3)	Macroeconomics-Honours
		Advanced Economic



ACCT 354	(3)	Financial Statement Analysis
ACCT 362	(3)	Intermediate Management Accounting 2
ACCT 385	(3)	Principles of Taxation
ACCT 452	(3)	Financial Reporting Valuation
ACCT 453	(3)	Advanced Financial Accounting
ACCT 463	(3)	Advanced Management Accounting
ACCT 475	(3)	Principles of Auditing
ACCT 486	(3)	Business Taxation 2

#### **29.8.9.4 Bachelor of Commerce (B.Com.) - Joint Honours Economics and Finance (54 credits)**

Mentor in Economics: Professor M. Sinitsyn; Department of Economics, Faculty of Arts

Mentors in Finance: Professors L. Barras, M. Bouvard, A. Durnev

Finance Case Competition Mentors: Professors M. Chaudhury and V. di Pietro

Please consult the Economics department website.

The B.Com. Joint Honours in Economics and Finance requires the completion of 30 credits of Honours Economics courses (9 credits of which are counted as Core credits) and 24 credits in Finance. This program is designed to take advantage of both McGill's Finance and Economics course offerings to produce a student who is well trained in these two complementary areas.

Calculus 1 and 2 are required for entering this Honours program. Please consult the section "120-credit program, freshman course distribution" for a detailed explanation regarding Calculus 1 and 2. It is also important to check on its statistics requirements, which are listed on the Department's website at <http://www.mcgill.ca/economics>.

To earn the Honours in Economics and Finance designation, students must maintain a minimum CGPA of 3.00 and maintain a minimum program GPA of 3.00. Students must achieve a grade of B- or better in all Finance courses.

#### **Required Courses (39 credits)**

ECON 250D1*	(3)	Introduction to Economic Theory: Honours
ECON 250D2*	(3)	Introduction to Economic Theory: Honours
ECON 257D1**	(3)	Economic Statistics - Honours
ECON 257D2**	(3)	Economic Statistics - Honours
ECON 352D1***	(3)	Macroeconomics - Honours
ECON 352D2***	(3)	Macroeconomics-Honours
ECON 450D1	(3)	Advanced Economic Theory - Honours
ECON 450D2	(3)	Advanced Economic Theory - Honours
ECON 468	(3)	Econometrics 1 - Honours
FINE 342	(3)	Finance 2
FINE 441	(3)	Investment Management
FINE 443	(3)	Applied Corporate Finance
FINE 547	(3)	Advanced Finance Seminar

ECON 469 (3) Econometrics 2 - Honours

12 credits from the following:

FINE 434 (3) Topics in Finance  
 FINE 448 (3) Financial Derivatives  
 FINE 449 (3) Market Risk Models  
 FINE 451 (3) Fixed Income Analysis  
 FINE 480 (3) Global Investments  
 FINE 482 (3) International Finance 1  
 FINE 492 (3) International Finance 2  
 FINE 541D1 (1.5) Applied Investments  
 FINE 541D2 (1.5) Applied Investments

## 29.9 Academic Staff

Adler, Nancy J.; B.A., M.B.A., Ph.D.(Calif.-LA); Professor, Organizational Behaviour (*Samuel Bronfman Chair in Management*)  
 Animesh; B.A.(Delhi), M.I.S.(Carn. Mell), Ph.D.(Md.); Assistant Professor, Information Systems  
 Armstrong, Donald E.; B.A., B.Com.(Alta.), Ph.D.(McG.); Emeritus Professor, Managerial Economics  
 Barbulescu, Roxana; B.A.(Stan.), M.S., Ph.D.(INSEAD); Assistant Professor, Organizational Behaviour  
 Barras, Laurent; B.B.S., M.E.F. & Ph.D.(HEC-U. of Geneva); Assistant Professor, Finance  
 Bassellier, Geneviève; B.Com., M.Sc.(HEC), Ph.D.(Br. Col.); Assistant Professor, Information Systems  
 Béchara, Antoine; Ph.D.(Tor.); Professor & Scientist (*joint appoint. Medicine and Management*)  
 Bouvard, Mattieu; M.Sc.(HEC, Paris), Ph.D.(Toulouse); Assistant Professor, Finance  
 Boyaci, Tamer; B.S.(Middle East Tech.,Turkey), M.S., Ph.D.(Col.); Associate Professor, Operations Management  
 Brenner, Reuven; B.Sc., M.A., Ph.D.(Hebrew); Professor, Finance (*Repap Professor of Economics*)  
 Carrieri, Francesca; Laurea-Law(U. di Bari), Ph.D.(USC); Associate Professor, Finance  
 Cecere, Ralph; B.Com., G.D.P.A.(McG.); Faculty Lecturer, Accounting  
 Cha, Sandra; B.A., M.A., Ph.D.(Harv.); Assistant Professor, Organizational Behaviour  
 Chakrabarti, Abhirup; B.S.(Calc.), M.S.(Singapore, NUS), Ph.D.(Duke); Assistant Professor, Strategy and Organization  
 Chaudhury, Mohammed; B.A., M.A.(Dhaka), M.A.(Wat.), Ph.D.(S. Fraser); Faculty Lecturer, Finance  
 Chauvin, Louis; B.A.(Ott.), M.A., Ph.D.(C' dia); Faculty Lecturer, Strategy and Organization  
 Christoffersen, Peter; B.A.(Copen.), M.A., Ph.D.(Penn.); Associate Professor, Finance  
 Christoffersen, Susan; B.A.(Qu.), M.A.(Br. Col.), Ph.D.(Penn.); Associate Professor, Finance (*William Dawson Scholar*)  
 Croitoru, Benjamin; DIAF(Institut de Statistique de l'Université Pierre et Marie Curie), Ph.D.(Penn.); Associate Professor, Finance  
 David, Robert; B.Eng., M.B.A.(McG.), Ph.D.(C' nell); Associate Professor, Strategy and Organization  
 De Motta, Adolfo; B.A.(Universidad De Valencia, Spain), Ph.D.(MIT); Assistant Professor, Finance  
 Di Pietro, Vadim; B.Eng.(McG.), M.A.(Tor.), Ph.D.(N'western); Faculty Lecturer, Finance  
 Donovan, Richard G.; B.Com.(McG.), G.D.I.T.(C' dia); Faculty Lecturer, Information Systems  
 Dotzel, Thomas; M.B.A.(Texas, Arlington), Ph.D.(Texas A & M); Assistant Professor, Finance  
 Dubé, Laurette; B.Sc.(Laval), M.B.A.(HEC), M.P.S., Ph.D.(C' nell); Professor, Marketing (*James McGill Professor*)  
 Durnev, Artyom; M.A.(Moscow), M.A.(Penn. St.), Ph.D.(Mich.); Assistant Professor, Finance  
 Ericsson, Jan; M.Sc., Ph.D.(Stockholm School of Economics); Associate Professor, Finance







The current student enrolment is over 600 at the undergraduate level and over 200 at the graduate level. The teaching staff includes 55 full-time and over 140 part-time members. Students and staff play a major role in Montreal's vibrant cultural scene, presenting over 700 concerts and events annually, as well as master classes, festivals, lectures, and symposia.

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## **30.2 History of the Faculty**

The Schulich School of Music of McGill University was founded as the Conservatorium of Music in 1904 and incorporated as a Faculty in 1920; the school moved to its current location in the impressive and historic Strathcona Music Building (formerly the main section of Royal Victoria College) in 1972. During its 2004-05 centennial season, the Faculty added a new eight-storey building that is a world-leading facility for sound recording and music technology research.

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## **30.3 Academic Staff**

### **30.3.1 Department of Music Research**

#### **Chair**

Whitesell, Lloyd; B.A.(Minn.), M.A., Ph.D.(SUNY, Stony Brook); Associate Professor; History and Literature

### **30.3.2 Composition Area**

Bouliane, Denys; B.Mus., M.Mus.(Laval), Graduate, Hochschule für Musik(Hamburg); Associate Professor; Composition, Orchestration, Contemporary Music Ensemble

Cherne

Fujinaga, Ichiro; B.Mus., B.Sc.(Alta.), M.A., Ph.D.(McG.); Associate Professor; Music Technology Area Chair; Music Technology  
McAdams, Stephen; B.Sc.(McG.), Ph.D.(Stan.), D.Sc.(Paris); Professor; Director, CIRMMT; Music T

### 30.3.10 Department of Performance

Chair

Roy,

[Redacted]

[Redacted]

[Redacted]

[Redacted]

### **Jazz Piano**

Jarczyk, Jan; B.A., M.A.(Academy of Music, Cracow), Dip.(Berklee); Associate Professor

Johnston, Jeffrey; Instructor

Rager, Josh; B.Mus., M.Mus.(McG.); Instructor

Roney, John; M.Mus.(McG.); Instructor

White, André; B.A.(C'ordia), M.Mus.(McG.); Associate Professor

### **Jazz Saxophone**

Bolduc, Rémi; Assistant Professor

Foote, Gordon; B.Sc., M.A.(Minn.); Associate Professor

Kennedy, Donny; B.Mus., M.Mus.(McG.); Instructor

Lozano, Frank; Instructor

Miller, Joel; B.Mus.(McG.); Instructor

Turner, Dave; Instructor

### **Jazz Trombone**

Abdul Al-Khabyr, Muhammad; Instructor

Grott, David; Instructor

### **Jazz Trumpet**

Couture, Jocelyn; Instructor

Dean, Kevin; B.M.E.(Iowa), M.Mus.(Miami); Professor

Di Lauro, Ron; B.Mus., M.Mus.(McG.); Instructor

Mahar, Bill; B.Mus.(McG.); Instructor

Sullivan, Joe; B.A.(Ott.), M.M.(New England Cons.); Associate Professor; Jazz Area Chair

### **Jazz Voice**

Lee, Rane; Instructor

Thériault, Madeleine; Instructor

## **30.3.16 Opera Area**

Hansen, Patrick; B.Mus.(Simpson), M.Mus.(Missouri); Associate Professor; Opera Director

Wachner, Julian; B.Mus., Mus.Doc.(Boston); Associate Professor; Principal Conductor

## **30.3.17 Organ Area**

Gilbert, Kenneth; D.Mus. honoris causa(McG.), O.C., F.R.S.C., HonRAM; Adjunct Professor

Grew, John; L.T.C.L.(Lond.), B.Mus.(Mt. All.), M.Mus.(Mich.), D.D.(United Theological Coll.), LL.D.(Mt. All.); University Organist; Professor; Organ Area Chair

Porter, William; Assistant Professor

## **30.3.18 Percussion Area**

Huang, Aiyun; B.A.(Tor.), D.M.A.(Calif.-San Diego); Assistant Professor; Percussion Area Chair

Marandola, Fabrice; Premier Prix(Conservatoire de Paris); M.Mus., Ph.D.(Sorbonne); Visiting Professor

### 30.3.19 Piano Area

Davidson, Thomas; B.Mus.(Qu.), M.Mus.(McG.), Cert. of Advanced Study(R.C.M., Lond.), A.R.C.M., L.T.C.L.; Assistant Professor

Gavrilova, Julia; M.Mus., D.Mus.(McG.); Instructor

Hashimoto, Kyoko; B.A.(Tokyo); Associate Professor

Laimon, Sara; B.Mus.(Br. Col.), M.Mus.(Yale), D.M.A.(SUNY, Stony Brook); Associate Professor; Piano Area Chair

McMahon, Michael; B.Mus.(McG.), Graduate, Hochschule für Musik(Vienna); Associate Professor

Mdivani, Marina; Post-graduate Dip.(Moscow Cons.); Associate Professor

Zuk, Luba; L.Mus.(McG.), Graduate, Conservatoire de musique de Québec; Associate Professor

### 30.3.20 String Area

#### Violin

Crow, Jonathan; B.Mus.(McG.); Assistant Professor

Fewer, Mark; B.Mus.(Tor.); Assistant Professor; String Area Co-Chair

Lupien, Denise; B.M., M.M.(Juilliard); Concertmaster, Orchestre Métropolitain; Assistant Professor

Roberts, Richard; B.Mus.(Ind.); Concertmaster, Montreal Symphony Orchestra; Assistant Professor

Williams, Thomas; B.Mus.(Bran.); Associate Professor

#### Viola

Marcotte, Anna-Belle; L.Mus.(McG.); Instructor

McNabney, Douglas; B.Mus.(Tor.), M.M.(W. Ont.), D.Mus.(Montr.); Associate Professor

Roy, André; B.Mus.(Curtis); Associate Professor



## Saxophone

Kestenberg, Abe; Associate Professor; Woodwind Area Chair

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### 30.4 About the Schulich School of Music (Undergraduate)

McGill's Schulich School of Music is the largest university-based school for professional musical training and music research in Canada. Founded as the Conservatorium of Music in 1904 and incorporated as a Faculty in 1920, the school moved to its current location in the impressive and historic Strathcona Music Building (formerly the main section of Royal Victoria College) in 1972. During its 2004-05 centennial season, the Faculty added a new eight-storey building that will evolve into a world-leading facility for sound recording and music technology research.

McGill Music is renowned for its orchestral, choral, opera, jazz, chamber, contemporary and early music programs and for its award-winning creative and research work in composition, music theory, musicology, music education, sound recording and music technology. Pollack Concert Hall (capacity: 600), Redpath Hall (300, with the University Organ), and Clara Lichtenstein Recital Hall (80) are among the busiest and best concert venues in Montreal. The New Music Building adds Tanna Schulich Hall, a 187-seat recital hall, the Wirth Opera Studio, an opera-rehearsal room, and the Multimedia Room, a scoring stage/acoustic research lab, and three control rooms. Three floors of the new building are dedicated to the Marvin Duchow Music Library ([www.mcgill.ca/library/library-using/branches/music-library](http://www.mcgill.ca/library/library-using/branches/music-library)), with its collection of well over 100,000 scores, recordings, books, and periodicals; in addition, the Performance Library has performing parts for over 6000 titles.

Both old and new buildings (as well as satellite locations) house labs for numerous specialized functions: digital composition and electronic music, music education research, multi-channel sound recording, music perception and cognition, sound processing and control, computational modeling, etc. Classrooms, teaching studios, practice rooms (90+), and a student-lounge and cafeteria round out the picture. The Faculty is also home to the Centre for Interdisciplinary Research in Music Media and Technology (CIRMMT), an inter-faculty, inter-university, international consortium that brings together researchers in music, sound recording, music technology, psychology, neuroscience, engineering, and medicine ([www.cirmmt.mcgill.ca](http://www.cirmmt.mcgill.ca)).

The current student enrolment is over 600 at the under graduate level and over 200 at the graduate level. The teaching staff includes 58 full-time and over 140 part-time members. Students and staff play a major role in Montreal's vibrant cultural scene, presenting over 650 concert events annually, as well as master classes, lectures, and symposia, all enhanced by very active student societies, a gig office, and e



Quynh-Ly Pham; B.Sc.(McG.)

Ishana Gopaul; B.Com.(McG.)

Diana Toni Dutz; B.Mus.(W. Ont.), Grad.Dip.(C'dia)

Devyn Nicholson; B.Mus.(Ott.), M.Mus.(McG.)

Charles Wan; B.Comp.Sc.(C'dia) (*on Developmental Assignment until Nov. 2010*)

Alain Terriault

**Budget Officer**

**Faculty Research Account Administrator**

**Administrative Coordinator to the Associate Deans**

**Technical Manager, Concerts/Recordings**

**Accounting Clerk**

**LAN Manager**

### **30.4.2.3 Graduate Studies**

**Director**

### **30.4.2.7 Concerts and Publicity**

Box Office (weekdays: 12:00 to 18:00): 514-398-4547

Concert Information: 514-398-4547 or 514-398-5145

Bookings: 514-398-8993

Louise Ostiguy; B.Mus.(Montr.), C.G.E.(HEC)

Kate Herzberg; B.Mus., Dip.Ed.(McG.), Dip.TEFL(Rutg.)

Marie Pothier; B.Mus.(Montr.)

**Director**

**Marketing and Publicity Supervisor**

**Publicity Secretary**

**Pr**

#### **30.4.2.11 Digital Composition Studio**

Telephone: 514-398-4552

Sean Ferguson; B.Mus.(Alta.), M.Mus., D.Mus.(McG.)

**Director**

Richard McKenzie

**Chief Electronics Technician**

#### **30.4.2.12 Recording Studio**

Telephone: 514-398-4549

Wieslaw Woszczyk; M.A., Ph.D.(F. Chopin Academy of Music, Warsaw)

**Director**

Ieronim Catanescu

**Electronics Technician**

#### **30.4.2.13 Music Technology Research Laboratories**

Fax: 514-398-2962

Darryl Cameron

**Chief Electronics Technician**

**Computational Acoustic Modeling Laboratory (CAML)**

Bennett Smith **Technical Manager**

#### **30.4.2.19 Real-Time Multimodal Laboratory (RTML)**

Telephone: 514-398-4535, ext. 094837

Stephen McAdams; B.Sc.(McG.), Ph.D.(Stan.), D.Sc.(Paris) **Director**

Bennett Smith **Technical Manager**

#### **30.4.2.20 Centre for Interdisciplinary Research in Music Media & Technology (CIRMMT)**

Telephone: 514-398-8793

Fax: 514-398-7414

Sean Ferguson; B.Mus.(Alta.), M.Mus., D.Mus.(McG.) **Director**

Harold Kilianski; B.Mus.(McG.) **Technical Manager**

Sara Gomez; B.A.(McG.) (*on leave until July 9, 2010*) **Research Administrator**

Rosemary Marland **Administrative Coordinator**

Mary Chin; B.A.(Wesl.) (*on temporary assignment until May 31, 2010*) **Secretary**

Aleksandra Duric **Acting Secretary**

Yves Méthot; B.Ing.(E.T.S.) **Electronics Coordinator**

Julien Boissinot **Systems Manager**

Fabrice Maraldola; Ph.D.(Sorbonne) **Associate Director, Artistic Research**

Gary P. Scavone; B.A., B.S.(Syr.), M.S., Ph.D.(Stan.) **Associate Director, Scientific and Technological Research**

#### **30.4.2.21 Music Education Research Laboratory**

Telephone: 514-398-4554

Joel Wapnick; B.A.(NYU), M.A.(SUNY), M.F.A.(Sarah L.), Ed.D.(Syr.) **Director**

#### **30.4.2.22 McGill University Records**

Telephone: 514-398-4537

Joel Wapnick; B.A.(NYU), M.A.(SUNY), M.F.A.(Sarah L.), Ed.D.(Syr.) **Director**

#### **30.4.2.23 McGill Conservatory, Community Program of the Schulich School of Music of McGill University**

Telephone: 514-398-4543 (Downtown Campus)

Telephone: 514-398-7673 (Macdonald Campus)

[www.mcgill.ca/conservatory](http://www.mcgill.ca/conservatory)

Clément Joubert; B.Mus.(McG.) **Director**

Nancy Soulsby; B.A., Dip.Ed.(McG.) **Administrative Assistant**

**Student Affairs Coordinator**

## 30.5 Overview of Programs

Performance, Music Research, Education, Composition, and Sound Recording are only a few of our programs, see here [www.mcgill.ca/music/prospective/undergraduate/information](http://www.mcgill.ca/music/prospective/undergraduate/information) for a detailed listing and description of our programs

The Schulich School of Music of McGill University offers the opportunity to pursue courses that reflect your multiple interests through collaboration with McGill's other faculties and departments. You may wish to consider partnering your music studies with subjects within Arts and Sciences that would lead to graduating with a Double Major or Minor.

### 30.5.1 Degrees and Diplomas Offered

#### 30.5.1.1 Degree of Bachelor of Music (B.Mus.)

The degree of Bachelor of Music may be obtained in any one of the following fields:

Majors
Composition
Faculty Program
Music Education – available only as a component of the Concurrent B.Mus./B.Ed. program
Music History
Music Theory
Performance
Early Music Performance
Jazz Performance

#### 30.5.1.2 Faculty Program

This program is designed to accommodate those students who are either undecided about the area of music in which they wish to specialize, or who are interested in a pattern of specialization not provided in the established major programs, or who are interested in combining studies in music with studies in other disciplines.

All of the above B.Mus. programs normally require three years of study following completion of the Quebec Diploma of Collegial Studies or four years of study following completion of secondary school elsewhere.

#### 30.5.1.3 B.A. Major Concentration in Music

The Faculty of Arts offers a Bachelor of Arts degree with a Major Concentration in Music. Further details on the program can be found under Music in the Faculty of Arts section.

#### 30.5.1.4 Minor Programs

A Minor in Music History is available to all students in Performance or Concentration programs (with the exception of students in the Major in Music History). This option will take the place of music electives, as well as history, literature and performance practice complementary courses.

Minors in Musical Applications of Technology and Musical Science and Technology are available to Music students who wish to graduate with a knowledge of newer technologies and the impact they are having on the field of music. (Space permitting, these minors are also available to students from other faculties.)

A Minor in Marketing and a Minor in Management are available to B.Mus. students. Further information on these minors can be found under the *Desautels Faculty of Management* > [section 29.8.7: Minors for Non-Management Students](#).

Minor programs in Music are also available to students in the Faculty of Arts and the Faculty of Science. Further information on these Minors can be found under the *Faculty of Arts*, [section 25.10.38: Music \(MUAR\)](#) and the *Faculty of Science* > [section 32.13.23: Music](#).

#### 30.5.1.5 M.Mus. Performance (Prerequisite courses)

Students wishing to prepare for the Master of Music in Performance should include, in their Bachelor of Music program, the courses listed under [section 30.8.2.14: Special Prerequisite Courses for M.Mus. in Performance](#).

### 30.5.1.6 M.Mus. Sound Recording (Prerequisite courses)

Students wishing to prepare for the Master of Music in Sound Recording should include, in their Bachelor of Music program, the courses listed under [section 30.8.1.5: Special Prerequisite Courses for M.Mus. in Sound Recording](#).

### 30.5.1.7 Licentiate in Music (L.Mus.)

The Licentiate in Music is offered in Performance and is designed for advanced instrumentalists, singers and Jazz performers who wish to concentrate on their practical subject while limiting their theoretical studies to basic areas in Music History, Theory and Musicianship. This program normally requires three years of study. For more information, please see: [section 30.8.2.8: Licentiate in Music \(L.Mus.\) - Major Performance Piano \(95 credits\)](#); [section 30.8.2.9: Licentiate in Music \(L.Mus.\) - Major Performance \(All Instruments except Piano, Voice and Jazz\) \(95 credits\)](#); [section 30.8.2.10: Licentiate in Music \(L.Mus.\) - Major Performance Voice \(101 credits\)](#); and [section 30.8.2.11: Licentiate in Music \(L.Mus.\) - Major Performance Jazz \(100 credits\)](#).

### 30.5.1.8 Artist Diploma

The Artist Diploma is available only to advanced instrumentalists and singers who demonstrate technical and musical maturity. Admission into the program requires completion of a Bachelor of Music degree in Performance, a Licentiate in Music, or the equivalent.

### 30.5.1.9 Degree of Master of Arts (M.A.)

The Master of Arts degree (M.A.) is available as a thesis option in Music Education, Music Technology, Musicology, and Theory and as a non-thesis option in Music Education, Musicology, and Theory.

### 30.5.1.10 Degree of Master of Music (M.Mus.)

The Master of Music degree (M.Mus.) is available in Composition, Performance, and Sound Recording. Within the Performance option are offered specializations in: piano, guitar, orchestral instruments, organ, conducting, chamber music, orchestral training, piano accompaniment, vocal, opera, opera coaching, vocal pedagogy, early music, church music — organ, and jazz.

### 30.5.1.11 Degree of Doctor of Music (D.Mus.)

The Doctor of Music degree (D.Mus.) is available in Composition and Performance Studies.

### 30.5.1.12 Degree of Doctor of Philosophy (Ph.D.)

The Doctor of Philosophy degree (Ph.D.) is available in Music Education, Musicology, Music Technology, Sound Recording, and Theory.

For details of the Master's and Doctoral programs, please consult the *Graduate and Postdoctoral Studies Calendar*, available at [www.mcgill.ca/students/courses/calendars](http://www.mcgill.ca/students/courses/calendars).

## 30.5.2 Orchestral Training

Orchestral Training at McGill includes all students in the B.Mus., L.Mus., Artist Diploma, M.Mus., and D.Mus. degrees and diplomas whose major is one of the orchestral instruments. Many of its graduates are now members of professional orchestras throughout North America, Europe, and the rest of the world. Led by full-time conductors in residence and supported by a number of full-time staff as well as many members of the top professional orchestras in and around Montreal, Orchestral Training at McGill provides for regular private practical lessons as well as performance in one or more large instrumental ensembles including a full symphonic orchestra (approximately 100 players), a contemporary music ensemble, a percussion ensemble and a variety of small chamber music groups. It also includes regular coached orchestral sectionals and orchestral repertoire classes.

## 30.5.3 Scholarships and Financial Aid

General information on scholarships, including McGill Entrance Scholarships, and a detailed listing of all awards is contained in the *Undergraduate Scholarships and Awards Calendar*, available on the web ([www.mcgill.ca/students/courses/calendars](http://www.mcgill.ca/students/courses/calendars)).

Schulich Scholarships valued at \$5,000 CDN/year (renewable) are available to outstanding prospective students. About 70 Schulich Scholars are present in the School during any academic year. A limited number of Music Entrance Scholarships (valued at \$2,000 each) are also awarded to incoming Performance students on the basis of auditions held only in February. All instruments, including v4rinf1 0 0 1 350.45it.10902 Tj1 ussion ic ly Record1 0 0 oups. It also inclu16era87 1

### **30.5.4 Summer Studies**

Summer Studies offers courses starting in May, June, and July.

Students may take a maximum of 18 credits during the Summer session. Those wishing to take more than 5 credits in any one month must obtain the permission of the Senior Student Adviser.

Information concerning course offerings and application forms may be obtained from the McGill Summer Studies Office website, [www.mcgill.ca/summer](http://www.mcgill.ca/summer), or by calling 514-398-5212.

### **30.5.5 Music Credit Options for Students in Other Faculties**

The Schulich School of Music offers three groups of courses that may be taken for credit by students in other faculties.

The first group consists of music literature and theory courses especially designed for students from other faculties who may not have taken formal studies in music but who wish to take elective courses in the cultural, historical and theoretical aspects of music.

The second group is the sequence of courses in music theory and history which are part of the Schulich School of Music undergraduate curriculum. These courses may be taken by those having the necessary prerequisite studies in music.

The third group of courses consists of selected music ensembles open, by audition, to students in other faculties.

For further details on these courses, please see the *Faculty of Arts* > [section 25.10.38: Music \(MUAR\)](#). Other music courses may be taken by qualified students from other faculties providing they obtain permission from the relevant department in the Schulich School of Music and from the Associate Dean of their own faculty.

### **30.5.6 McGill Conservatory**

The McGill Conservatory, Community Program of the Schulich School of Music, offers instruction in piano, guitar, harp, most orchestral instruments and voice, as well as

### 30.6.2 Music Entrance Requirements

The minimum music entrance requirements are the equivalent of McGill Conservatory Collegial I Instrument or Voice (Performance applicants: Collegial II) and Secondary V Theory and Ear Training.

#### Approximate Equivalents to Entrance Requirements in Practical Subjects (McGill Conservatory Collegial I – Instrument/Voice)

Quebec CEGEPS	CEGEP II
Toronto Conservatory	Grade 9
Western Board	Grade 9
Mount Allison	Grade 9
Associated Board of the Royal Schools of Music	Grade 7

*The above listing is intended only as a general guide. Admissibility to any program is determined by audition and academic record. Students wishing to major in Performance should be approximately two years more advanced, and be able to demonstrate potential as performers at their audition.*

All applicants in female voice and in all jazz instruments will be required to submit screening material (CD, video, etc.) for preselection by January 15. Following a review of these recordings, selected applicants will be invited to attend a live audition. No live audition will be scheduled in female voice or in any jazz instrument until recordings have been received and reviewed. All applicants must perform an audition of approximately 15 minutes duration. The student should choose material that will represent different musical periods and reveal musicianship and technical proficiency to best advantage. Applicants for the Artist Diploma program must prepare an audition of recital material lasting approximately 60 minutes. For entrance audition requirements please refer to [www.mcgill.ca/music/prospective/undergraduate/requirements](http://www.mcgill.ca/music/prospective/undergraduate/requirements).

The entrance audition dates for September 2010 admission are February 20 to 28, 2010.

The entrance audition dates for September 2011 admission are February 19 to 27, 2011.

Recorded auditions (compact disc and/or video) are acceptable when distance prevents an applicant from attending an audition in person.

Applicants for Composition are asked to submit two or three samples of their written work.

Music Education applicants are asked to outline reasons for wishing to enter the Music Education field in their statement of intent and have a letter of reference sent from someone attesting to his or her suitability for teaching.

All screening and audition recordings, and composition samples should be submitted directly to the Schulich School of Music of McGill University: 555 Sherbrooke Street West, Montreal, Quebec, H3A 1E3.

### 30.6.3 Academic Entrance Requirements

#### 30.6.3.1 Bachelor of Music

The applicant's entrance audition and the academic record are considered when making an admission decision. As a limit is placed upon the number of students admitted to study a particular instrument, fulfilment of the minimum entrance requirements does not guarantee acceptance. TOEFL may be required of non-Canadian students whose mother tongue is not English. It is the applicant's responsibility to make the necessary arrangements with the examining board to write the test in the country of residence.

#### 30.6.3.2 CEGEP Applicants

Students are expected to obtain the Quebec Diploma of Collegial Studies (*Diplôme d'études collégiales*) in the Music Concentration or equivalent. Applicants with a DCS/DEC in a field other than Music must have the equivalent Music prerequisites. The minimum overall average required is 70%. CEGEP graduates are admitted to a three-year program.

#### 30.6.3.3 Canadian High School (excluding Quebec) Applicants

Applicants are expected to obtain a high school graduation diploma which leads to university admission in the student's home province. Ontario high school students are normally expected to have obtained a minimum of 6 preuniversity (4U, 4M) courses, at least four of the six must have been taken at the 4U level. There are no specific non-music prerequisite courses required and the minimum overall average should be 70%. Canadian high school graduates are admitted to a four-year program.

#### 30.6.3.4 U.S. High School Applicants

Applicants are expected to obtain a high school graduation diploma which meets the requirements for university/college admission in the U.S. The minimum overall average required is B+. There are no specific non-music prerequisite courses, or SAT and Achievement Test results required. Some credit will be granted for Advanced Placement Examinations in appropriate subjects. U.S. high school graduates are admitted to a four-year program.



### **30.6.3.5 International Applicants**

In general, applicants must be eligible for admission to university in their country of origin and have above-average grades. Students who have completed an International Baccalaureate, a French Baccalaureate, or a minimum of three GCE "A" (Advanced) Level examinations are considered for admission into a three-year program. Normally, applicants with five GCE "O" (Ordinary) Level results, plus one year of schooling beyond the Ordinary Level, are admitted to a four-year program. Applicants with qualifications from other systems will be considered for either a three-year or a four-year program.

### **30.6.3.6 Transfer Students**

Transfer students are considered on the basis of both their university or college work and previous studies. Normally, students are expected to complete a full year of university studies prior to applying for admission and to be in good standing as defined by the university previously attended. The minimum overall average required is a CGPA of 3.00. T

### **30.6.6 Keyboard Proficiency Test (MUSP 170)**

Students entering any of the B.Mus. or L.Mus. programs should be prepared to demonstrate, in a Keyboard Proficiency Test, keyboard skills sufficient to enable them to use the piano as a tool in their studies at McGill.

Those who are unable to do so must register continuously for Keyboard Proficiency MUSP 170 until they successfully complete the course. Majors in Jazz Performance must enrol in MUJZ 170. Students who have been admitted to a degree or diploma program with keyboard as their principal instrument are exempt from the MUSP 170 Test (but not from MUSP 171).

The requirements of the Keyboard Proficiency Test are as follows:

- 1.** Sightreading (simple two-part piece using treble, bass and alto clefs).
- 2.** Technique (scales, triads and arpeggios). Two octaves, hands together.
- 3.** Prepared piece (contrapuntal texture in two or three parts, or simple homophonic textures, level equivalent to McGill Conservatory Secondary III).
- 4.** Keyboard rudiments (recognition/playing of intervals, chords, scalar patterns, etc.).

Students will not be allowed to proceed with higher-level Musicianship or Theory studies until these requirements are met. Exact test dates are determined by the Department of Music Research.

### **30.6.7 Readmission**

Students in satisfactory standing, who have not been registered in the Schulich School of Music for one or two terms, may return to the program in which they were previously registered upon permission of the Faculty. Those who have been out for longer than two terms may be readmitted upon permission of the Faculty, subject to the student's previous record and current Faculty limitations on enrolment, but will be required to reaudition.

Students wishing to return in the Winter or Summer term must submit a request in writing to the Student Affairs Office, giving a summary of their activities during their absence. The deadline for the

Special students in the **Opera Studio** will be charged an additional \$680 per term (\$1,360 per year). Degree or diploma candidates registered in Opera Studio, as well as Special students taking practical instruction at \$785 per term, will be charged the per

MUEN 580	Early Music Ensemble
MUEN 581	Piano Ensemble Seminar 1
MUEN 582	Piano Ensemble Seminar 2
MUEN 584	Studio Accompanying
MUEN 585	Sonata Masterclass
MUEN 589	Woodwind Ensembles
MUEN 598	Percussion Ensembles

### **30.7.1.3 Additional Ensembles**

Additional ensembles chosen by students to reflect their particular interests may, with Departmental approval, be applied as Music Elective credit. Students electing an ensemble will normally be required to audition and will be placed accordingly.

### **30.7.1.4 Assignment and Auditions**

All students registered as full-time or part-time students in the Department of Performance must audition for a basic ensemble in September. A student who cannot audition for a basic ensemble at the times indicated on the website must give due notice to the Ensemble Resource Administrator in the Performance Department of their non-availability at least five days before the date of the first audition. The student must have a valid reason (i.e., illness, death in the family, career commitment, etc.). If a student misses an audition for reasons unacceptable to the Performance Department, that student will not be allowed to audition and his assignment will be left entirely to the discretion of the Performance Department. If the reason given is valid, the student will audition for whatever positions remain unassigned upon his/her arrival at the Faculty.

Assignments are posted on the Large Ensemble notice board. Reassignments may be made from time to time during a term and will also be posted. Students are reminded that auditions for major ensembles are mandatory. Students who do not take the auditions will see their assignment be left entirely to the discretion of the Performance Department.

In the case of the Jazz Ensembles, an open challenge system is used as follows:

1. At any time during a term, a student may challenge for a position in a Jazz Ensemble.
2. The challenger must speak to the band directors involved, specifying the chair being challenged.
3. The challenger will have a private audition with not less than two directors who will offer a non-binding recommendation to the student as to whether or not to proceed with the challenge.
4. Should the challenger wish to proceed, the student being challenged will be notified by the Coordinator of the Jazz Ensembles.
5. The challenge will take the form of an audition of both the regular member of the ensemble and the challenger in a full band rehearsal, following which the directors will make a decision.

### **30.7.1.5 Commitment**

Ensembles are courses. Each student who has registered for an ensemble, or who has been assigned to an ensemble, has made a commitment to the ensemble and is required to attend all rehearsals, concerts, performances, field trips, recordings and other activities which constitute the course requirements of that ensemble. Except for reasons of ill health or in the case of an e

not be reluctant to admit to injury; *it is entirely acceptable for students to be excused from ensemble rehearsal(s) for health reasons.* The Faculty does not want students to perform with pain or with injury.

- the Director of the ensemble
  - Chair of the Orchestral Training, Choral, Opera or Voice Area (where appropriate), or
2. have completed all program requirements except the final exam on his or her instrument, or
  3. have completed all musical requirements of his or her program, having only Arts and Science electives remaining, or
  4. have a significant medical reason.



**Note:**

1. Permission not to participate in a required or complementary ensemble for a term or part thereof is not an exemption and does not satisfy any credit requirements for a degree.
2. Students who are given permission not to participate in McGill Symphony Orchestra or Sinfonietta (MUEN 597) for a term or part thereof may be ineligible to hold an Orchestral Instruments Scholarship for that term and may be ineligible for consideration for an Orchestral Instruments Scholarship for the following year based on that term.

### 30.7.1.12 Substitution of an Ensemble

1. In order to be given permission to substitute another large ensemble for a required or complementary large ensemble for a term, a student must:
  - have completed the minimum number of terms in the required or complementary large ensemble and
  - have the permission as in bullet 1 under [section 30.7.1.11: Exemption from a Required Ensemble](#), with the added condition that the Director of the required or complementary large ensemble may refuse consent for the simple reason that the student is needed in that ensemble.
2. Keyboard and Guitar Performance majors in all programs may substitute up to two (2) terms of Studio Accompanying (MUEN 584) for two (2) terms of Choral Ensemble.
3. Performance majors are not permitted to substitute Basic Ensemble credits for required or complementary assigned small ensemble credits.

### 30.7.1.13 Rotation

Whenever possible and musically satisfactory, and in order to ensure equal opportunity and experience for students in the large instrumental ensembles, the seating of students in these ensembles may be rotated periodically throughout the term or year. The Director of the ensemble will determine whether or not rotation is possible and musically satisfactory.

### 30.7.1.14 Missed Classes due to Field Trips

Situations will arise where students are required to miss classes – both in the Schulich School of Music as well as in other faculties – because of field trips. Teaching staff in the Schulich School of Music are encouraged to assist students who approach them for information about course content and assignments that have been missed. Nonetheless, *the onus remains on the student who goes on a field trip to complete class work.*

### 30.7.1.15 Transfer Credits

The previous ensemble participation of students coming to McGill from other universities will be recognized if their ensemble experience was similar to that required of McGill students. In general, transfer credit is made on a term-for-term basis (not by credits) and usually does not exceed two (2) terms. Students are normally not permitted to reduce the Basic Ensemble Training requirements of their McGill program to less than the number of terms required for them to complete the rest of their program. In such cases, transfer credit may be given as Music and/or Free Elective credit.

### 30.7.1.16 Extra Basic Ensemble Training Credits

Basic Ensemble Training credits accumulated above the minimum may be applied as Music and/or Free Elective credits.

### 30.7.1.17 Performance Library

Students are responsible for the music which has been loaned to them for their use, and for its return in good condition to the Gertrude Whitley Performance Library. Students will be required to pay for the replacement of any music which has been lost, stolen or damaged and a hold on a student's Minerva account can be placed by the Performance Librarian should music or fines not be handed in to the library.includedit

**Major:** B.Mus. candidates may choose one or more of several majors as described under [section 30.8: Programs of Study](#).

**Faculty Program:** A general B.Mus. program (see [section 30.8.1.4: Bachelor of Music \(B.Mus.\) - Faculty Program Music \(125 credits\)](#)).

**L.Mus., Artist Dip.:** Diploma programs are designed for advanced instrumentalists and singers who wish to concentrate on their practical subject.

**Special:** Those who are not proceeding towards a degree or diploma.

**Visiting:** Those taking courses at McGill for credit towards a degree at another university.

#### **30.7.4 Auditing**

For information on auditing, see *University Regulations and General Information > Auditing of Courses*.

#### **30.7.5 Music/Free Electives**

Unless otherwise specified, any music course numbered at the 200 level or higher which is not a required course in the student's program can be counted as a Music and/or Free Elective in the B.Mus. or Artist Diploma programs. Under certain conditions, three credits per term of practical instruction may be applied as Music and/or Free Elective.

THE DEADLINE FOR WITHDRAWING FROM PRACTICAL LESSONS AND ENSEMBLES IS THE END OF THE SECOND WEEK OF CLASSES IN ANY TERM.

Music students who, in special circumstances such as illness or injury, are given permission to withdraw from practical instruction after the end of the Course Change Period will be charged \$65 per week for 1-hour lessons and \$97.50 per week for 1.5 hour-lessons up to a maximum equivalent to the total fees charged for the course. Full refunds for practical instruction will be given up to the end of the Course Change Period.



**Note:** Students who do not complete a course for which they remain registered will receive a grade of F or J.

For information on the REFUND POLICY, please see *University Regulations and General Information > Regulations Concerning Course Withdrawal*.

### **30.7.10 Incompletes**

At the discretion of the instructor, a mark of K (Incomplete) may be given to a student who, due to extenuating circumstances, has not finished the coursework on time. The deadline for completion and submission of the required work shall be set by the instructor b



#### **30.7.14.1 Satisfactory/Interim Satisfactory Standing**

Students in satisfactory standing may continue in their program.

- New students are admitted to satisfactory standing.
- Students with a CGPA of 2.00 or greater are in satisfactory standing.

#### **30.7.14.2 Probationary/Interim Probationary Standing**

Students in probationary standing may continue in their program, but must carry a reduced load (maximum 14 credits per term) and raise their TGPA and CGPA to return to satisfactory standing. They should see their departmental adviser to discuss their course selection.

Students in interim probationary standing may continue in their program, but should evaluate their course load and reduce it as appropriate. They are strongly advised to consult their departmental adviser, before the withdrawal deadlines, about their course selection for the Winter term.

- Students who were previously in satisfactory standing will be placed in probationary standing if their CGPA falls between 1.50 and 1.99.
- Students who were previously in probationary standing will remain in probationary standing if their CGPA falls between 1.50 and 1.99 and their TGPA is 2.50 or higher, although the TGPA requirement will not apply to the Summer term.
- Students who were previously in interim unsatisfactory standing will be placed in probationary standing if their CGPA falls between 1.50 and 1.99 and their TGPA is 2.50 or higher.
- Students who were previously in unsatisfactory standing and who were readmitted to the Faculty by the Associate Dean (Student Affairs) will be placed in probationary standing if their CGPA is less than 2.00, b

### **30.7.15 Graduation Requirements**

1. Completion of all courses and proficiency requirements specified in the candidate's program. Students registered in two programs must fulfil all requirements for both programs. A minimum grade of C (or higher, depending on the program) must be achieved in all required courses, all complementary courses specified by course number, and in those courses which are prerequisites or corequisites. A grade of D (non-continuation pass) is acceptable only in terminal elective courses or complementary courses that are not specified by course number.
2. Minimum cumulative grade point average of 2.00.
3. Completion of a minimum of credits in residence at McGill University (B.Mus.: 60 credits, L.Mus.: 48 credits, Artist Dip.: 32 credits).

For more information on applying to graduate, see [www.mcgill.ca/student-records/graduation/graduation-info](http://www.mcgill.ca/student-records/graduation/graduation-info).

### **30.7.16 Graduation Honours**

For information on the designation of Dean's Honour List awarded at graduation, see *University Regulations and General Information > Dean's Honour List*.

For information on the designation of Distinction awarded at graduation, see *University Regulations and General Information > Distinction*.

Departments may recommend to the Faculty that students be awarded Outstanding Achievement in recognition of superior performance on an instrument or in an academic discipline.

6 credits of Non-Music Electives

### Prerequisite Courses

23 credits, all of the courses below:

Note: Students who can demonstrate through auditions and placement tests that they have mastered the material in any of the courses below will be exempt from them and may proceed to more advanced courses.

MUHL 186	(3)	Western Musical Traditions
MUIN 180	(3)	BMus Practical Lessons 1
MUIN 181	(3)	BMus Practical Lessons 2
MUPD 135	(1)	Music as a Profession 1
MUPD 136	(1)	Music as a Profession 2
MUSP 140	(2)	Musicianship Training 1
MUSP 141	(2)	Musicianship Training 2
MUSP 170	(1)	Musicianship (Keyboard) 1
MUSP 171	(1)	Musicianship (Keyboard) 2
MUTH 150	(3)	Theory and Analysis 1
MUTH 151	(3)	Theory and Analysis 2

### Required Courses (60 credits)

60 credits selected as follows:

36 credits of Composition

9 credits of Theory

6 credits of Musicianship

3 credits of Music History

6 credits of Performance

#### Composition

MUCO 245D1	(2)	Composition 1
MUCO 245D2	(2)	Composition 1
MUCO 261	(2)	Orchestration 1
MUCO 340D1	(2)	Composition 2
MUCO 340D2	(2)	Composition 2
MUCO 341	(3)	Digital Studio Composition 1
MUCO 342	(3)	Digital Studio Composition 2
MUCO 360	(2)	Orchestration 2
MUCO 440D1	(2)	Composition 3
MUCO 440D2	(2)	Composition 3
MUCO 460	(2)	Orchestration 3
MUCO 462	(3)	Advanced Tonal Writing
MUCO 541	(3)	Advanced Digital Studio Composition 1
MUCO 542	(3)	Advanced Digital Studio Composition 2
MUCO 575	(3)	Topics in Composition

#### Theory

MUTH 250	(3)	Theory and Analysis 3
MUTH 251	(3)	Theory and Analysis 4
MUTH 350	(3)	Theory and Analysis 5

**Musicianship**

MUSP 240	(2)	Musicianship Training 3
MUSP 241	(2)	Musicianship Training 4
MUSP 346	(2)	Post-Tonal Musicianship

**Music History**

MUHL 286	(3)	Critical Thinking About Music
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**Performance**

MUIN 280	(3)	BMus Practical Lessons 3
MUIN 281	(3)	BMus Practical Lessons 4
MUIN 283	(0)	BMus Concentration Final Examination

**Complementary Courses (10 credits)**

10 credits selected as follows: Music Histor

### **30.8.1.2 Bachelor of Music (B.Mus.) - Major Music History (126 credits)**

The Bachelor of Music (B.Mus.) - Major Music History program requires 91 credits (plus 35 credits for the Freshman requirement for out-of-province students).

#### **Program Prerequisites - Freshman Program (35 credits)**

35 credits selected as described below, in consultation with the program adviser:

23 credits of Prerequisite courses

2 credits of Assigned Small Ensemble

4 credits of Basic Ensemble Training

6 credits of Non-Music Electives

#### **Prerequisite Courses**

23 credits, all of the courses below:

Note: Students who can demonstrate through auditions and placement tests that they have mastered the material in any of the courses below will be exempt

MUTH 426 (3) Topics in Early Music Analysis

**Group II**

MUHL 366 (3) The Era of the Fortepiano  
 MUHL 372 (3) Solo Song Outside Germany and Austria  
 MUHL 384 (3) Romantic Music  
 MUHL 385 (3) Early Twentieth-Century Music  
 MUHL 386 (3) Chamber Music Literature  
 MUHL 387 (3) Opera from Mozart to Puccini  
 MUHL 388 (3) Opera After 1900  
 MUHL 389 (3) Orchestral Literature  
 MUHL 390 (3) The German Lied  
 MUHL 391 (3) Canadian Music  
 MUHL 392 (3) Music since 1945  
 MUHL 396 (3) Era of the Modern Piano  
 MUHL 397 (3) Choral Literature after 1750  
 MUHL 398 (3) Wind Ensemble Literature after 1750

**Group III**

MUHL 220 (3) Women in Music  
 MUHL 330 (3) Music and Film  
 MUHL 342 (3) History of Electroacoustic Music  
 MUHL 362 (3) Popular Music  
 MUHL 375 (3) Introduction to Ethnomusicology  
 MUHL 393 (3) History of Jazz  
 MUHL 529 (3) Proseminar in Musicology  
 MUTH 541 (3) Topics in Popular Music Analysis

**Required Courses (19 credits)**

9 credits from Theory

4 credits from Musicianship

6 credits from Performance

**Theory**

MUTH 250 (3) Theory and Analysis 3  
 MUTH 251 (3) Theory and Analysis 4  
 MUTH 350 (3) Theory and Analysis 5

**Musicianship**

MUSP 240 (2) Musicianship Training 3  
 MUSP 241 (2) Musicianship Training 4

**Performance**

MUIN 280	(3)	BMus Practical Lessons 3
MUIN 281	(3)	BMus Practical Lessons 4
MUIN 283	(0)	BMus Concentration Final Examination

**Complementary Courses (9 credits)**

3 credits from Theory

2 credits from Musicianship

4 credits from Performance

**Theory**

3 credits of MUTH courses at the 200-level or 300-level.

**Musicianship**

2 credits from:

MUSP 324	(2)	Musicianship for Strings
MUSP 330	(2)	Musicianship for Woodwind
MUSP 335	(2)	Musicianship for Brass
MUSP 346	(2)	Post-Tonal Musicianship
MUSP 350	(2)	Musicianship for Pianists
MUSP 353	(2)	Musicianship for Voice
MUSP 354	(2)	Introduction to Improvisation and Ornamentation
MUSP 355	(2)	Musicianship for Percussion
MUSP 381	(2)	Singing Renaissance Notation

**Performance**

Basic Ensemble

4 credits from:

MUEN 563	(2)	Jazz Vocal Workshop
MUEN 572	(2)	Cappella Antica
MUEN 573	(2)	Baroque Orchestra
MUEN 587	(2)	Cappella McGill
MUEN 590	(2)	McGill Winds
MUEN 592	(2)	Chamber Jazz Ensemble
MUEN 593	(2)	Choral Ensembles
MUEN 594	(2)	Contemporary Music Ensemble
MUEN 595	(2)	Jazz Ensembles
MUEN 597	(2)	Orchestral Ensembles

**Non-Music Electives (9 credits)****Free Electives (24 credits)****30.8.1.3 Bachelor of Music (B.Mus.) - Major Theory (126 credits)**

The Bachelor of Music (B.Mus.) - Major Theory program requires 91 credits (plus 35 credits for the Freshman requirement for out-of-province students).

**Program Prerequisites - Freshman Program (35 credits)**

35 credits selected as described below, in consultation with the program adviser:

23 credits of Prerequisite courses

2 credits of





MUEN 590	(2)	McGill Winds
MUEN 592	(2)	Chamber Jazz Ensemble
MUEN 593	(2)	Choral Ensembles
MUEN 594	(2)	Contemporary Music Ensemble
MUEN 595	(2)	Jazz Ensembles
MUEN 597	(2)	Orchestral Ensembles

**Non-Music Electives (9 credits)**

**Free Electives (18 credits)**

**30.8.1.4 Bachelor of Music (B.Mus.) - Faculty Program Music (125 credits)**

The Bachelor of Music (B.Mus.) - Faculty Program Music requires 125 credits and has been designed to accommodate those students who are either undecided about the area of music in which they wish to specialize, or who are interested in a pattern of specialization not provided in the established major programs, or who are interested in combining studies in music with studies in other disciplines. Students registered in the Faculty Program may, with the approval of a staff adviser, design their own programs around specific interests or develop programs with a broader base by incorporating courses from other disciplines and faculties.

**Program Prerequisites - Freshman Program (35 credits)**

35 credits selected as described below, in consultation with the program adviser:

23 credits of Prerequisite courses

2 credits of Assigned Small Ensemble

4 credits of Basic Ensemble Training

6 credits of Non-Music Electives

**Prerequisite Courses**

23 credits, all of the courses below:

Note: Students who can demonstrate through auditions and placement tests that they have mastered the material in any of the courses below will be exempt from them and may proceed to more advanced courses.

MUHL 186	(3)	Western Musical Traditions
MUIN 180	(3)	BMus Practical Lessons 1
MUIN 181	(3)	BMus Practical Lessons 2
MUPD 135	(1)	Music as a Profession 1
MUPD 136	(1)	Music as a Profession 2
MUSP 140	(2)	Musicianship Training 1
MUSP 141	(2)	Musicianship Training 2
MUSP 170	(1)	Musicianship (Keyboard) 1
MUSP 171	(1)	Musicianship (Keyboard) 2
MUTH 150	(3)	Theory and Analysis 1
MUTH 151	(3)	Theory and Analysis 2

**Required Courses (22 credits)**

22 credits of the required courses are selected as follows:

9 credits of Theory

4 credits of Musicianship

3 credits of Music History

6 credits of Performance

**Theory**

9 credits

MUTH 250	(3)	Theory and Analysis 3
MUTH 251	(3)	Theory and Analysis 4
MUTH 350	(3)	Theory and Analysis 5

**Musicianship**

4 credits

MUSP 240	(2)	Musicianship Training 3
MUSP 241	(2)	Musicianship Training 4

**Music History**

3 credits

MUHL 286	(3)	Critical Thinking About Music
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**Performance**

6 credits

MUIN 280	(3)	BMus Practical Lessons 3
MUIN 281	(3)	BMus Practical Lessons 4
MUIN 283	(0)	BMus Concentration Final Examination

**Complementary Courses (12 credits)****Music History**

MUEN 573	(2)	Baroque Orchestra
MUEN 587	(2)	Cappella McGill
MUEN 590	(2)	McGill Winds
MUEN 592	(2)	Chamber Jazz Ensemble
MUEN 593	(2)	Choral Ensembles
MUEN 594	(2)	Contemporary Music Ensemble
MUEN 595	(2)	Jazz Ensembles
MUEN 597	(2)	Orchestral Ensembles

### Music Electives (20 credits)

### Non-Music Electives (3 credits)

### Free Electives (33 credits)

#### 30.8.1.5 Special Prerequisite Courses for M.Mus. in Sound Recording

Please note: changes are anticipated in the Special Prerequisite Courses for M.Mus. in Sound Recording. For the most up-to-date information, please consult the Sound Recording Program website: [www.music.mcgill.ca/sr/build](http://www.music.mcgill.ca/sr/build).

Students wishing to follow this package of prerequisite courses while registered in the Faculty Program or in any other B.Mus. program must notify the Sound Recording Area Chair of their intent to do so.

#### Schulich School of Music (26 credits)

MUCO 260	(2)	Instruments of the Orchestra
MUMT 202	(3)	Fundamentals of New Media
MUMT 203	(3)	Introduction to Digital Audio
MUSR 232	(3)	Introduction to Electronics
MUSR 300D1	(3)	Introduction to Music Recording
MUSR 300D2	(3)	Introduction to Music Recording
MUMT 301	(3)	Music and the Internet
MUSR 339	(3)	Introduction to Electroacoustics

One of (complementary):

MUMT 302	(3)	New Media Production 1
MUMT 306	(3)	Music and Audio Computing 1

#### Faculty of Science (6 credits)

PHYS 224	(3)	Physics and Psychophysics of Music
PHYS 225	(3)	Musical Acoustics



**Note:** Students admitted as a Special Student in the prerequisite package for Sound Recording must meet with the Sound Recording adviser prior to registering in MUMT (Music Technology) courses. In order to be considered for admission to the Master of Music in Sound Recording, students must attain a minimum grade of B in all of the above courses and must have a B.Mus. degree with a minimum CGPA of 3.00.

#### 30.8.1.6 Bachelor of Music (B.Mus.) - Minor Music History (18 credits)

The Minor Music History is available to all students (with the exception of students in the Major in Music History). This option will take the place of music electives, as well as history, literature and performance practice complementary courses.

#### History

3 credits of:

MUHL 570	(3)	Research Methods in Music
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**Complementary**

15 credits selected from Music History complementary courses chosen freely from Groups I and II.

Note: MUHL 591D1 and MUHL 591D2 are selected together.

**Group I**

(3)(3) Women in Music

Students will be selected on the basis of their previous background or experience in music technology and/or sound recording, their computer programming skills, their expressed interest in the program, and their Cumulative Grade Point Average.

Advising for the Minor is av

### 30.8.2 Department of Performance

The Department offers undergraduate and graduate degree programs leading to the B.Mus. and M.Mus., and diploma programs leading to the L.Mus. and Artist Diploma in all areas of musical performance. Programs include regular practical instruction available on all instruments and a highly developed ensemble program. The programs offer a number of major options including Orchestral Training, Solo, Jazz, and Early Music. The Orchestral Training program is the largest performance program – many of its graduates are now members of professional orchestras throughout North America and Europe. McGill ensembles perform many concerts each year, including a number in centres across North America. (Within the past several years, McGill ensembles have performed at Carnegie Hall, *Le Grand Théâtre* [Quebec], the National Arts Centre, the International Buxtehude-Scheidt Festival, Lincoln Center, Roy Thomson Hall, Salle Wilfrid Pelletier, the International Association of Jazz Educators Convention in New Orleans, in Washington and Boston, Paris, London and Cork [Ireland], and at the Holetown Festival in Barbados.) In addition, they have recorded for McGill Records. These recordings have received considerable critical acclaim and a number of awards, including a Noah Greenberg Award, three *Grand Prix du Disques*, and a Juno Award.

Performance Specialization is available in: Violin, Viola, Cello, Double Bass, Viola da Gamba, Guitar, Harp, Recorder, Flute, Oboe, Clarinet, Saxophone, Bassoon, French Horn, Trumpet, Trombone, Tuba, Percussion, Piano, Organ, Harpsichord, Voice, Baroque Instruments (Violin, Viola, Cello, Flute, Oboe, Bassoon). Performance Programs are also available in Early Music, and Jazz.

**For each program, all courses listed are REQUIRED Courses unless otherwise indicated.**

#### 30.8.2.1 Bachelor of Music (B.Mus.) - Major Performance Piano (125 credits)

The Bachelor of Music (B.Mus.) - Major Performance Piano program requires 90 credits (plus 35 credits for the Freshman requirement for out-of-province students).

125 credits are selected as follows:

35 credits - Prerequisite requirements (for out-of-province students) dance Piano p0 1 67.52 452.In1 67.0ilable 14 - PrerequiCompl(for aryance Piano p0 1 67.52 452.In1

MUSP 141	(2)	Musicianship Training 2
MUSP 170	(1)	Musicianship (Keyboard) 1
MUSP 171	(1)	Musicianship (Keyboard) 2
MUTH 150	(3)	Theory and Analysis 1
MUTH 151	(3)	Theory and Analysis 2

**Required Performance (28 credits)**

28 credits, select all the courses below:

MUIN 280	(3)	BMus Practical Lessons 3
MUIN 281	(3)	BMus Practical Lessons 4
MUIN 282	(0)	BMus Performance Examination 1
MUIN 333	(0)	Piano Techniques 2
MUIN 369	(0)	Concerto
MUIN 380	(3)	BMus Practical Lessons 5
MUIN 381	(3)	BMus Practical Lessons 6
MUIN 382	(0)	BMus Performance Examination 2
MUIN 433	(0)	Piano Techniques 3
MUIN 480	(3)	BMus Practical Lessons 7
MUIN 481	(3)	BMus Practical Lessons 8
MUIN 482	(0)	BMus Performance Examination 3
MUPG 350	(2)	Introduction to Piano Pedagogy
MUPG 356	(2)	Piano Repertoire Studies 1
MUPG 357	(2)	Piano Repertoire Studies 2
MUPG 541	(2)	Senior Piano Seminar 1
MUPG 542	(2)	Senior Piano Seminar 2

**Complementary Performance (14 credits)**

Large Ensemble during the first four terms (2cr.) x 4 semesters.

14 credits of complementary performance selected as follows:

8 credits from:

MUEN 563	(2)	Jazz Vocal Workshop
MUEN 572	(2)	Cappella Antica
MUEN 587	(2)	Cappella McGill
MUEN 590	(2)	McGill Winds
MUEN 592	(2)	Chamber Jazz Ensemble
MUEN 593	(2)	Choral Ensembles
MUEN 594	(2)	Contemporary Music Ensemble
MUEN 595	(2)	Jazz Ensembles
MUEN 597	(2)	Orchestral Ensembles

Assigned small ensemble - during every term of enrolment as a full-time or part-time student.

6 credits from:





**30.8.2.2 Bachelor of Music (B.Mus.) - Major Performance (Organ, Harpsichord, Guitar) (125 credits)**

The Bachelor of Music (B.Mus.) - Major Performance (Organ, Harpsichord, Guitar) program requires 90 credits (plus 38 credits for the Freshman requirement for out-of-province students).

125 credits are selected as follows:

35 credits - Prerequisite requirements (for out-of-province students)

18 credits - Required Performance

18 credits - Complementary Performance

16 credits - Required Courses (Theory, Musicianship and Music History)

8 credits - Complementary (Musicianship and Music History, Literature or Performance Practice)

9 credits - Music Electives

3 credits - Non-Music Electives

18 credits - Free Electives

Special Requirements:

1. Continuation in the program requires a minimum grade of B- in practical instruction/exams and ensembles.

**Program Prerequisites - Freshman Program (35 credits)**

35 credits selected as described below, in consultation with the program adviser:

23 credits of Prerequisite courses

2 credits of Assigned Small Ensemble

4 credits of Basic Ensemble Training

6 credits of Non-Music Electives

**Prerequisite Courses**

23 credits, all of the courses below:

Note: Students who can demonstrate through auditions and placement tests that they have mastered the material in any of the courses below will be exempt from them and may proceed to more advanced courses. Students who have been admitted to a degree or diploma program with keyboard as their principal instrument are exempt from MUSP 170 (but not from MUSP 171); see section on Keyboard Proficiency testing for complete information.

MUHL 186	(3)	Western Musical Traditions
MUIN 180	(3)	BMus Practical Lessons 1
MUIN 181	(3)	BMus Practical Lessons 2
MUPD 135	(1)	Music as a Profession 1
MUPD 136	(1)	Music as a Profession 2
MUSP 140	(2)	Musicianship Training 1
MUSP 141	(2)	Musicianship Training 2
MUSP 170	(1)	Musicianship (Keyboard) 1
MUSP 171	(1)	Musicianship (Keyboard) 2
MUTH 150	(3)	Theory and Analysis 1
MUTH 151	(3)	Theory and Analysis 2

**Required Performance (18 credits)**

18 credits, select all the courses below:

MUIN 280	(3)	BMus Practical Lessons 3
MUIN 281	(3)	BMus Practical Lessons 4
MUIN 282	(0)	BMus Performance Examination 1
MUIN 380	(3)	BMus Practical Lessons 5

MUIN 381	(3)	BMus Practical Lessons 6
MUIN 382	(0)	BMus Performance Examination 2
MUIN 480	(3)	BMus Practical Lessons 7
MUIN 481	(3)	BMus Practical Lessons 8
MUIN 482	(0)	BMus Performance Examination 3

### Complementary Performance (18 credits)

Large Ensemble during the first four terms (2cr.) x 4 semesters.

18 credits of complementary performance selected as follows:

12 credits from:

MUEN 563	(2)	Jazz Vocal Workshop
MUEN 572	(2)	Cappella Antica
MUEN 573	(2)	Baroque Orchestra
MUEN 587	(2)	Cappella McGill
MUEN 592	(2)	Chamber Jazz Ensemble
MUEN 593	(2)	Choral Ensembles
MUEN 594	(2)	Contemporary Music Ensemble
MUEN 595	(2)	Jazz Ensembles

Assigned small ensemble - during every term of enrolment as a full-time or part-time student.

6 credits (1 cr per term) from:

MUEN 560	(1)	Chamber Music Ensemble
MUEN 580	(1)	Early Music Ensemble

### Required Courses (16 credits)

16 credits of required courses selected as follows:

9 credits of Theory

4 credits of Musicianship

3 credits of Music History

#### Theory

9 credits

MUTH 250	(3)	Theory and Analysis 3
MUTH 251	(3)	Theory and Analysis 4
MUTH 350	(3)	Theory and Analysis 5

#### Musicianship

4 credits

MUSP 240	(2)	Musicianship Training 3
MUSP 241	(2)	Musicianship Training 4

#### Music History

3 credits

MUHL 286 (3) Critical Thinking About Music

**Complementary Courses (8 credits)**

**Musicianship**

2 credits from:

MUSP 324 (2) Musicianship for Strings  
 MUSP 354 (2) Introduction to Improvisation and Ornamentation  
 MUSP 381 (2) Singing Renaissance Notation

**Music History, Literature or Performance Practice**

6 credits

(courses with a MUHL or MUPP prefix)

**Music Electives**

Guitars: 9 credits of Music Electives

Harpichord majors must include the following:

MUPG 272D1 (2) Continuo  
 MUPG 272D2 (2) Continuo  
 MUPG 372D1 (1) Continuo  
 MUPG 372D2 (1) Continuo

Plus 3 credits of Music Electives

Organ majors must include the following:

MUPG 272D1 (2) Continuo  
 MUPG 272D2 (2) Continuo

Plus 5 credits of Music Electives

**Non-Music Electives (3 credits)**

**Free Electives (18 credits)**

(may not include courses with a MUEN prefix)

**30.8.2.3 Bachelor of Music (B.Mus.) - Major Performance Voice (125 credits)**

The Bachelor of Music (B.Mus.) - Major Performance Voice program requires 90 credits (plus 35 credits for the Freshman requirement for out-of-province students).

125 credits are selected as follows:

- 35 credits - Prerequisite requirements (for out-of-province students)
- 18 credits - Required Performance
- 21 credits - Complementary Performance
- 27 credits - Required Courses (Theory, Musicianship, Music History and Diction)
- 6 credits - Complementary History/Literature
- 3 credits - Non-Music Electives
- 15 credits - Free Electives

Special Requirements:

1. Continuation in the program requires a minimum grade of B- in practical instruction/exams, ensembles, and voice coaching.

**Program Prerequisites - Freshman Program (35 credits)**

35 credits selected as described below, in consultation with the program adviser:

23 credits of Prerequisite courses

2 credits of Assigned Small Ensemble

4 credits of Basic Ensemble Training

6 credits of Non-Music Electives

**Prerequisite Courses**

23 credits, all of the courses below:

Note: Applicants who can demonstrate through auditions and placement tests that they have mastered the material in any of the courses below will be exempt from them and may proceed to more advanced courses.

MUHL 186	(3)	Western Musical Traditions
MUIN 180	(3)	BMus Practical Lessons 1
MUIN 181	(3)	BMus Practical Lessons 2
MUPD 135	(1)	Music as a Profession 1
MUPD 136	(1)	Music as a Profession 2
MUSP 140	(2)	Musicianship Training 1
MUSP 141	(2)	Musicianship Training 2
MUSP 170	(1)	Musicianship (Keyboard) 1
MUSP 171	(1)	Musicianship (Keyboard) 2
		Theory and Analysis 1

MUEN 579	(1)	Song Interpretation 2
MUEN 580	(1)	Early Music Ensemble
MUEN 587	(2)	Cappella McGill
MUEN 593	(2)	Choral Ensembles
MUEN 594	(2)	Contemporary Music Ensemble

9 credits of complementary performance selected from:

MUEN 553	(1)	Vocal Chamber Ensemble
MUEN 554	(2)	Opera Excerpts
MUIN 300	(2)	Voice Coaching 1
MUIN 301	(2)	Voice Coaching 2
MUPG 296	(1)	Acting for Voice
MUPG 297	(1)	Movement for Voice
MUPG 309	(1)	Advanced Diction
MUPG 353	(2)	Song Repertoire Class
MUPG 380	(2)	Oratorio Class
MUPG 453	(2)	Contemporary Repertoire for Voice

**Required Courses (27 credits)**

Selected as follows:

9 credits of Theory

6 credits of Musicianship

3 credits of Music History

9 credits of Diction

**Theory**

9 credits

MUTH 250	(3)	Theory and Analysis 3
MUTH 251	(3)	Theory and Analysis 4
MUTH 350	(3)	Theory and Analysis 5

**Musicianship**

6 credits

MUSP 240	(2)	Musicianship Training 3
MUSP 241	(2)	Musicianship Training 4
MUSP 353	(2)	Musicianship for Voice

**Music History**

3 credits

MUHL 286	(3)	Critical Thinking About Music
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**Diction**

9 credits

MUPG 209	(1)	Introduction to Lyric Diction
MUPG 210	(2)	Italian Diction
MUPG 211	(2)	French Diction
MUPG 212	(2)	English Diction
MUPG 213	(2)	German Diction

**Complementary History/Literature (6 credits)**

Two of:

MUHL 372	(3)	Solo Song Outside Germany and Austria
MUHL 377	(3)	Baroque Opera
MUHL 387	(3)	Opera from Mozart to Puccini
MUHL 388	(3)	Opera After 1900
MUHL 390	(3)	The German Lied

**Electives (18 credits)**

3 credits of Non-music Electives

15 credits of Free Electives (may not include courses with a MUEN prefix)

Prior to, or concurrent with registration in the corresponding Diction courses, the Voice Major must furnish evidence of ha

Note: Applicants who can demonstrate through auditions and placement tests that they have mastered the material in any of the courses below will be exempt from them and may proceed to more advanced courses.

MUHL 186	(3)	Western Musical Traditions
MUIN 180	(3)	BMus Practical Lessons 1
MUIN 181	(3)	BMus Practical Lessons 2
MUPD 135	(1)	Music as a Profession 1
MUPD 136	(1)	Music as a Profession 2
MUSP 140	(2)	Musicianship Training 1
MUSP 141	(2)	Musicianship Training 2
MUSP 170	(1)	Musicianship (Keyboard) 1
MUSP 171	(1)	Musicianship (Keyboard) 2
MUTH 150	(3)	Theory and Analysis 1
MUTH 151	(3)	Theory and Analysis 2

**Required Performance (18 credits)**

18 credits, select all the courses below:

MUIN 280	(3)	BMus Practical Lessons 3
MUIN 281	(3)	BMus Practical Lessons 4
MUIN 282	(0)	BMus Performance Examination 1
MUIN 380	(3)	BMus Practical Lessons 5
MUIN 381	(3)	BMus Practical Lessons 6
MUIN 382	(0)	BMus Performance Examination 2
MUIN 480	(3)	BMus Practical Lessons 7
MUIN 481	(3)	BMus Practical Lessons 8
MUIN 482	(0)	BMus Performance Examination 3

**Complementary Performance (27 credits)**

Large Ensemble during the first four terms (2cr.) x 4 semesters.

27 credits of complementary performance selected as follows:

12 credits from:

MUEN 563	(2)	Jazz Vocal Workshop
MUEN 572	(2)	Cappella Antica
MUEN 573	(2)	Baroque Orchestra
MUEN 587	(2)	Cappella McGill
MUEN 590	(2)	McGill Winds
MUEN 592	(2)	Chamber Jazz Ensemble
MUEN 593	(2)	Choral Ensembles
MUEN 594	(2)	Contemporary Music Ensemble
MUEN 595	(2)	Jazz Ensembles
MUEN 597	(2)	Orchestral Ensembles

Assigned small ensemble - during every term of enrolment as a full-time or part-time student.



6 credits (1 cr. per term) from:

MUEN 560	(1)	Chamber Music Ensemble
MUEN 580	(1)	Early Music Ensemble
MUEN 585	(1)	Sonata Masterclass
MUEN 589	(1)	Woodwind Ensembles
MUEN 598	(1)	Percussion Ensembles

9 credits from:

MUEN courses at the 400 or 500-level (maximum of 4 credits)

MUIN 269	(1)	Classical Concerto Exam
MUPG 224	(2)	Orchestral Excerpts Strings 1
MUPG 229	(1)	Traditional Drumming 1: Rudiments
MUPG 230	(2)	Orchestral Excerpts Woodwind 1
MUPG 235	(2)	Orchestral Excerpts Brass 1
MUPG 324	(2)	Orchestral Excerpts Strings 2
MUPG 325	(2)	Improvisation for String Players
MUPG 326	(2)	Introduction to String Pedagogy
MUPG 329	(1)	Traditional Drumming 2: Hand Drumming
MUPG 330	(2)	Orchestral Excerpts Woodwind 2
MUPG 331	(2)	Introduction to Woodwind Pedagogy
MUPG 335	(2)	Orchestral Excerpts Brass 2
MUPG 336	(2)	Introduction to Brass Pedagogy
MUPG 424	(2)	Orchestral Excerpts Strings 3
MUPG 425	(2)	Extended Techniques - Strings
MUPG 429	(2)	Percussion Seminar
MUPG 430	(2)	Orchestral Excerpts Woodwind 3
MUPG 431	(2)	Extended Techniques - Woodwinds
MUPG 435	(2)	Extended Techniques - Brass
MUPG 473	(1)	Special Project in Performance
MUPG 474	(2)	Special Project in Performance
MUPG 475	(3)	Special Project in Performance

### Required Courses (16 credits)

16 credits of required courses selected as follows:

9 credits of Theory

4 credits of Musicianship

3 credits of Music History

#### Theory

9 credits

MUTH 250	(3)	Theory and Analysis 3
MUTH 251	(3)	Theory and Analysis 4
MUTH 350	(3)	Theory and Analysis 5

**Musicianship**

4 credits

MUSP 240	(2)	Musicianship Training 3
MUSP 241	(2)	Musicianship Training 4

**Music History**

3 credits

MUHL 286	(3)	Critical Thinking About Music
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**Complementary Courses (8 credits)**

**Musicianship**

2 credits from:

MUSP 324	(2)	Musicianship for Strings
MUSP 330	(2)	Musicianship for Woodwind
MUSP 335	(2)	Musicianship for Brass
MUSP 355	(2)	Musicianship for Percussion

**Music History, Literature or Performance Practice**

6 credits

(courses with a MUHL or MUPP prefix)

Percussionists must include:

MUHL 392	(3)	Music since 1945
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**Non-Music Electives (3 credits)**

**Free Electives (18 credits)**

(may not include courses with a MUEN prefix)

**30.8.2.5 Bachelor of Music (B.Mus.) - Major Early Music Performance (Baroque Violin, Viola, Cello, Viola da Gamba, Flute, Recorder, Oboe, Organ, Harpsichord and Early Brass Instruments) (125 credits)**

This program requires 90 credits (plus 35 credits for the Freshman requirement for out-of-province students).

125 credits selected as follows:

35 credits - Prerequisite requirements (for out-of-province students)

18 credits - Required Performance

24 credits - Complementary Performance

22 credits - Required Courses (Theory, Musicianship and Music History, Literature or Performance Practice)

5 credits - Complementary

3 credits - Non-Music Electives

18 credits - Free Electives

Special Requirements:

Continuation in the program requires a minimum grade of B- in practical instruction/exams and ensembles.

**Program Prerequisites - Freshman Program (35 credits)**

35 credits selected as described below, in consultation with the program adviser:

23 credits of Prerequisite courses

2 credits of Assigned Small Ensemble

4 credits of Basic Ensemble Training

6 credits of Non-Music Electives

**Prerequisite Courses**

23 credits, all of the courses below:

Note: Students who can demonstrate through auditions .173ble

MUEN 595	(2)	Jazz Ensembles
MUEN 597	(2)	Orchestral Ensembles

Assigned small ensemble - during every term of enrolment as a full-time or part-time student.

6 credits (1 cr. x 6 semesters) of:

MUEN 580	(1)	Early Music Ensemble
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6 credits from:

**Baroque**

MUEN prefix - maximum 4 credits

MUPG 473	(1)	Special Project in Performance
MUPG 474	(2)	Special Project in Performance
MUPG 475	(3)	Special Project in Performance

**Harpichord**

MUPG 272D1	(2)	Continuo
MUPG 272D2	(2)	Continuo
MUPG 372D1	(1)	Continuo
MUPG 372D2	(1)	Continuo

**Organ**

MUEN prefix - maximum 2 credits

MUPG 272D1	(2)	Continuo
MUPG 272D2	(2)	Continuo
MUPG 473	(1)	Special Project in Performance
MUPG 474	(2)	Special Project in Performance
MUPG 475	(3)	Special Project in Performance

**Required Courses (22 credits)**

22 credits are selected as follows:

12 credits - Theory

4 credits - Musicianship

6 credits - Music History, Literature or Performance Practice

**Theory**

12 credits

MUTH 250	(3)	Theory and Analysis 3
MUTH 251	(3)	Theory and Analysis 4
MUTH 350	(3)	Theory and Analysis 5
MUTH 426	(3)	Topics in Early Music Analysis

**Musicianship**

4 credits

MUSP 240 (2) Musicianship Training 3

MUSP 241 (2) Musicianship Training 4

**Music History, Literature or Performance Practice**

6 credits

MUHL 286 (3) Critical Thinking About Music

MUPP 381 (3) Topics: Performance Practice before 1800

**Complementary Courses (5 credits)**

**Musicianship**

2 credits from:

MUSP 354 Introduction to Impro (2) Introduction to Improvisation and Ornamentation



MUEN 572	(2)	Cappella Antica
MUEN 578	(1)	Song Interpretation 1
MUEN 579	(1)	Song Interpretation 2
MUEN 580	(1)	Early Music Ensemble
MUEN 587	(2)	Cappella McGill
MUEN 593	(2)	Choral Ensembles
MUEN 594	(2)	Contemporary Music Ensemble

MUSP 353	(2)	Musicianship for Voice
MUSP 354	(2)	Introduction to Improvisation and Ornamentation
MUSP 381	(2)	Singing Renaissance Notation

**Music History**

3 credits from:

MUHL 377	(3)	Baroque Opera
MUHL 380	(3)	Medieval Music
MUHL 381	(3)	Renaissance Music
MUHL 382	(3)	Baroque Music
MUHL 383	(3)	Classical Music
MUHL 395	(3)	Keyboard Literature before 1750
MUHL 570	(3)	Research Methods in Music
MUHL 591D1	(1.5)	Paleography
MUHL 591D2	(1.5)	Paleography

**Non-Music Electives\* (3 credits)**

**Free Electives\* (18 credits)**

(may not include courses with a MUEN prefix)

\* Prior to, or concurrent with registration in the corresponding Diction courses, the Voice Major must furnish evidence of having completed ESLN 400 or ESLN 401, ITAL 205D1/ITAL 205D, GERM 202, and FRSL 207, or their equivalent. This language requirement may be fulfilled by appropriate high school or CEGEP courses, or as part of the non-music elective requirements above, or by extra university courses.

**30.8.2.7 Bachelor of Music (B.Mus.) - Major Performance Jazz (Saxophone, Trumpet, Trombone, Drums, Piano, Guitar, Bass, Voice) (126 credits)**

The Bachelor of Music (B.Mus.) - Major Jazz Performance (Saxophone, Trumpet, Trombone, Drums, Piano, Guitar, Bass, Voice) program requires 91 credits (plus 35 credits for the Freshman requirement for out-of-province students).

126 credits are selected as follows:

35 credits - Prerequisite requirements (for out-of-province students)

18 credits - Required Performance

18 credits - Complementary Performance

30 credits - Required Courses (Jazz improvisation, Theory and History)

4 credits - Complementary Music

3 credits - Non-Music Electives

18 credits - Free Electives

Special Requirements:

1. Students majoring in Jazz Performance must achieve a minimum grade of B- in all Jazz courses and Practical Instruction/Exams, including Jazz Combo and Ensembles, excluding MUJZ 100-level courses.
2. Non-Quebec jazz students must take four credits of non-jazz Basic Ensemble in the prerequisite year.

**Program Prerequisites - Freshman Program (35 credits)**

35 credits selected as described below, in consultation with the program adviser:

25 credits of Prerequisite courses

4 credits of Basic Ensemble Training

6 credits of Non-Music Electives

**Prerequisite Courses**





MUEN 594	(2)	Contemporary Music Ensemble
MUEN 595	(2)	Jazz Ensembles
MUEN 597	(2)	Orchestral Ensembles

6 credits, select MUEN 570 (1 cr. x 6 semesters):

MUEN 570	(1)	Jazz Combo
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**Required Courses (30 credits)**

(may not include courses with a MUEN prefix)

### 30.8.2.8 Licentiate in Music (L.Mus.) - Major Performance Piano (95 credits)

The Licentiate in Music (L.Mus.) Major Performance Piano is a 95-credit program.

Note: Special Requirements:

1. Continuation in the program requires a minimum grade of A- in practical instruction/exams and ensembles.
2. Candidates must take the L.Mus. Performance 1 Examination at the end of their first year of study and the L.Mus. Performance 2 and 3 Examinations in each of the next two years if they hope to complete the program in the normal length of time.

#### Required Performance (52 credits)

52 credits selected as follows:

MUIN 250	(8)	L.Mus. Practical Instruction 1
MUIN 251	(8)	L.Mus. Practical Instruction 2
MUIN 252	(0)	L.Mus. Performance 1 Examination
MUIN 333	(0)	Piano Techniques 2
MUIN 350	(8)	L.Mus. Practical Instruction 3
MUIN 351	(8)	LMus Practical Instruction 4
MUIN 352	(0)	L.Mus. Performance 2 Examination
MUIN 369	(0)	Concerto
MUIN 433	(0)	Piano Techniques 3
MUIN 450	(8)	L.Mus. Practical Instruction 5
MUIN 451	(8)	LMus Practical Instruction 6
MUIN 452	(0)	L.Mus. Performance 3 Examination
MUPG 541	(2)	Senior Piano Seminar 1
MUPG 542	(2)	Senior Piano Seminar 2

#### Complementary Performance (14 credits)

Large Ensemble during the first four terms (2 cr.) x 4 semesters.

14 credits selected as follows:

8 credits from:

MUEN 563	(2)	Jazz Vocal Workshop
MUEN 572	(2)	Cappella Antica
MUEN 587	(2)	Cappella McGill
MUEN 590	(2)	McGill Winds
MUEN 592	(2)	Chamber Jazz Ensemble
MUEN 593	(2)	Choral Ensembles
MUEN 594	(2)	Contemporary Music Ensemble
MUEN 595	(2)	Jazz Ensembles
MUEN 597	(2)	Orchestral Ensembles

6 credits from:

MUEN 556	(1)	Introduction to Collaborative Piano 1
MUEN 560	(1)	Chamber Music Ensemble

MUEN 578	(1)	Song Interpretation 1
MUEN 579	(1)	Song Interpretation 2
MUEN 581	(1)	Piano Ensemble Seminar 1
MUEN 582	(1)	Piano Ensemble Seminar 2
MUEN 584	(1)	Studio Accompanying
MUEN 585	(1)	Sonata Masterclass

**Required Courses (29 credits)**

29 credits of required courses selected as follows:

12 credits of Theory

11 credits of Musicianship

6 credits of History

**Theory**

MUTH 110	(3)	Melody and Counterpoint
MUTH 111	(3)	Elementary Harmony and Analysis
MUTH 210	(3)	Tonal Theory and Analysis 1
MUTH 211	(3)	Tonal Theory and Analysis 2

**Musicianship**

MUSP 129	(2)	Musicianship 1
MUSP 131	(2)	Musicianship 2
MUSP 170	(1)	Musicianship (Keyboard) 1
MUSP 171	(1)	Musicianship (Keyboard) 2
MUSP 172	(1)	Keyboard Lab 2
MUSP 229	(2)	Musicianship 3
MUSP 231	(2)	Musicianship 4

**History**

MUHL 184	(3)	History Survey Before 1750
MUHL 185	(3)	History Survey After 1750

**30.8.2.9 Licentiate in Music (L.Mus.) - Major Performance (All Instruments except Piano, Voice and Jazz) (95 credits)**

The Licentiate in Music (L.Mus.) Major Performance in All Instruments except Piano, Voice, and Jazz is a 95-credit program.

Ensemble Requirements:

1. Students majoring in violin, viola, or cello must commence their assigned ensembles with four terms of string quartets.
2. Violin Majors will be required to complete two terms of ensemble playing on viola.

Special Requirements:

1. Continuation in the program requires a minimum grade of A- in practical instruction/exams and ensembles.
2. Students must take the L.Mus. Performance 1 Examination at the end of their first year of study and the L.Mus. Performance 2 and 3 Examinations in each of the next two years if they hope to complete the program in the normal length of time.

**Required Performance (48 credits)**

48 credits selected as follows:



MUTH 111	(3)	Elementary Harmony and Analysis
MUTH 210	(3)	Tonal Theory and Analysis 1
MUTH 211	(3)	Tonal Theory and Analysis 2

### **Musicianship**

MUSP 129	(2)	Musicianship 1
MUSP 131	(2)	Musicianship 2
MUSP 170	(1)	Musicianship (Keyboard) 1
MUSP 171	(1)	Musicianship (Keyboard) 2
MUSP 172	(1)	Keyboard Lab 2
MUSP 229	(2)	Musicianship 3
MUSP 231	(2)	Musicianship 4

### **History**

MUHL 184	(3)	History Survey Before 1750
MUHL 185	(3)	History Survey After 1750

**Licentiate in Music (L.Mus.) - Major Performance Voice (101 credits)**

MUEN 579	(1)	Song Interpretation 2
MUEN 580	(1)	Early Music Ensemble
MUEN 587	(2)	Cappella McGill
MUEN 593	(2)	Choral Ensembles
MUEN 594	(2)	Contemporary Music Ensemble

**Diction (8 credits)**

MUPG 210	(2)	Italian Diction
MUPG 211	(2)	French Diction
MUPG 212	(2)	English Diction

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MUIN 350	(8)	L.Mus. Practical Instruction 3
MUIN 351	(8)	LMus Practical Instruction 4
MUIN 352	(0)	L.Mus. Performance 2 Examination
MUIN 450	(8)	L.Mus. Practical Instruction 5
MUIN 451	(8)	LMus Practical Instruction 6
MUIN 452	(0)	L.Mus. Performance 3 Examination

### Complementary Performance (18 credits)

Large Ensemble Training during every term of enrolment as a full-time or part-time student.

18 credits selected as follows:

12 credits from:

MUEN 563	(2)	Jazz Vocal Workshop
MUEN 572	(2)	Cappella Antica
MUEN 587	(2)	Cappella McGill
MUEN 590	(2)	McGill Winds
MUEN 592	(2)	Chamber Jazz Ensemble
MUEN 593	(2)	Choral Ensembles
MUEN 594	(2)	Contemporary Music Ensemble
MUEN 595	(2)	Jazz Ensembles
MUEN 597	(2)	Orchestral Ensembles

6 credits, select Jazz Combo Training - during every term of enrolment as a full-time or part-time student. MUEN 570 Jazz Combo (1 cr. x 6 semesters).

MUEN 570	(1)	Jazz Combo
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### Required Courses (30 credits)

30 credits selected as follows:

12 credits of Theory

12 credits of Improvisation/Musicianship

6 credits of History

#### Theory

MUJZ 260	(3)	Jazz Arranging 1
MUJZ 261	(3)	Jazz Arranging 2
MUJZ 340	(3)	Jazz Composition 1
MUJZ 341	(3)	Jazz Composition 2

#### Improvisation/Musicianship

MUJZ 223	(3)	Jazz Improvisation/Musicianship 1
MUJZ 224	(3)	Jazz Improvisation/Musicianship 2
MUJZ 423	(3)	Jazz Improvisation/Musicianship 3
MUJZ 424	(3)	Jazz Improvisation/Musicianship 4



## History

MUHL 393	(3)	History of Jazz
MUJZ 493	(3)	Jazz Performance Practice

## Complementary Courses

4 credits from the following:

Note: Students select EITHER MUJZ 440D1 and MUJZ 440D2 OR MUJZ 461D1 and MUJZ 461D2.

MUJZ 440D1	(2)	Advanced Jazz Composition
MUJZ 440D2	(2)	Advanced Jazz Composition
MUJZ 461D1	(2)	Advanced Jazz Arranging
MUJZ 461D2	(2)	Advanced Jazz Arranging

### 30.8.2.12 Artist Diploma - Major Performance Voice (65 credits)

The Artist Diploma Major Performance Voice is a 65-credit program.

Special Requirements:

1. Continuation in the program requires a minimum grade of A- in practical instruction/exams, ensembles, and voice coaching.
2. Candidates who have not taken the courses in Italian, French, English and German Diction as specified in the L.Mus. program must add them to the above requirements.
3. A leading operatic or oratorio role may substitute for one recital.

Note:

Courses taken as credit towards a B.Mus. or L.Mus. may not be applied to the Artist Diploma requirements except for the required courses in Theory and Musicianship.

### Required Performance (41 credits)

41 credits, select all the courses below:

MUIN 460	(8)	Artist Diploma Practical Instruction 1
MUIN 461	(8)	Artist Diploma Practical Instruction 2
MUIN 462	(0)	Artist Diploma Recital 1
MUIN 469	(1)	Artist Diploma Concerto 1
MUIN 560	(8)	Artist Diploma Practical Instruction 3
MUIN 561	(8)	Artist Diploma Practical Instruction 4
MUIN 562	(0)	Artist Diploma Recital 2
MUIN 569	(1)	Artist Diploma Concerto 2
MUIN 600	(2)	Vocal Repertoire Coaching 1
MUIN 601	(2)	Vocal Repertoire Coaching 2
	(3)	Vocal Styles and Conventions

MUEN 578	(1)	Song Interpretation 1
MUEN 579	(1)	Song Interpretation 2
MUEN 580	(1)	Early Music Ensemble
MUEN 587	(2)	Cappella McGill
MUEN 593	(2)	Choral Ensembles
MUEN 594	(2)	Contemporary Music Ensemble

**Required Courses (10 credits)**

10 credits selected as follows:

6 credits of Theory

4 credits of Musicianship

**Theory**

MUTH 310	(3)	Mid and Late 19th-Century Theory and Analysis
MUTH 311	(3)	20th-Century Theory and Analysis

**Musicianship**

MUSP 329	(2)	Musicianship 5
MUSP 331	(2)	Musicianship 6

**Complementary Music History or Performance Practice (6 credits)**

6 credits selected from courses with a MUHL or MUPP prefix.

**Complementary Performance (12 credits)**

Large Ensemble Training - during every term of enrolment as a full-time or part-time student.

8 credits from:

MUEN 563	(2)	Jazz Vocal Workshop
MUEN 572	(2)	Cappella Antica
MUEN 573	(2)	Baroque Orchestra
MUEN 587	(2)	Cappella McGill
MUEN 590	(2)	McGill Winds
MUEN 592	(2)	Chamber Jazz Ensemble
MUEN 593	(2)	Choral Ensembles
MUEN 594	(2)	Contemporary Music Ensemble
MUEN 595	(2)	Jazz Ensembles
MUEN 597	(2)	Orchestral Ensembles

Assigned small ensemble during every term of enrolment as a full-time or part-time student.

4 credits from:

MUEN 560	(1)	Chamber Music Ensemble
MUEN 578	(1)	Song Interpretation 1
MUEN 579	(1)	Song Interpretation 2
MUEN 580	(1)	Early Music Ensemble
MUEN 585	(1)	Sonata Masterclass
MUEN 589	(1)	Woodwind Ensembles
MUEN 591	(1)	Brass Consort
MUEN 598	(1)	Percussion Ensembles

**Non-Orchestral Instruments (8 credits)**

Complementary ensembles, to be approved by the Department (minimum of two 1-credit ensembles per term for 4 terms).

**Required Courses (10 credits)**

10 credits of required courses are selected as follows:

6 credits of Theory

4 credits of Musicianship

**Theory**

6 credits, select the courses below:

MUTH 310	(3)	Mid and Late 19th-Century Theory and Analysis
MUTH 311	(3)	20th-Century Theory and Analysis

**Musicianship**

4 credits, select all courses below:

MUSP 329	(2)	Musicianship 5
MUSP 331	(2)	Musicianship 6

**Complementary Music History, Literature or Performance Practice (6 credits)**

6 credits, select courses with a MUHL or MUPP prefix, may include MUHL 362 or MUHL 393 but not both.

**Non-Orchestral Instruments: Music Electives (4 credits)**

**30.8.2.14 Special Prerequisite Courses for M.Mus. in Performance**

**Piano Accompaniment (7 credits)**

(Major: Piano)

One of:

- |          |     |                                       |
|----------|-----|---------------------------------------|
| MUHL 372 | (3) | Solo Song Outside Germany and Austria |
| MUHL 390 | (3) | The German Lied                       |

Two of:

- |          |     |                                 |
|----------|-----|---------------------------------|
| MUPG 210 | (2) | Italian Diction (or equivalent) |
| MUPG 211 | (2) | French Diction (or equivalent)  |
| MUPG 212 | (2) | English Diction (or equivalent) |
| MUPG 213 | (2) | German Diction (or equivalent)  |

**Orchestral Conducting (27 credits)**

- |            |     |   |
|------------|-----|---|
| MUCO 260   | (2) | Instruments of the Orchestra                          |
| MUCO 261   | (2) | Elementary Orchestration                              |
| MUCO 460D1 | (2) | Advanced Orchestration                                |
| MUCO 460D2 | (2) | Advanced Orchestration                                |
| MUHL 389   | (3) | Orchestral Literature                                 |
| MUIT 201   | (3) | String Techniques                                     |
| MUIT 202   | (3) | Woodwind Techniques                                   |
| MUIT 203   | (3) | Brass Techniques                                      |
| MUIT 204   | (3) | Percussion Techniques                                 |
| MUPG 315D1 | (2) | Introduction to Orchestral Conducting (or equivalent) |
| MUPG 315D2 | (2) | Introduction to Orchestral Conducting (or equivalent) |

**Choral Conducting (20 credits)**

- |            |     |                                     |
|------------|-----|-------------------------------------|
| GERM 202D1 | (3) | German Language, Beginners          |
| GERM 202D2 | (3) | German Language, Beginners          |
| MUCO 260   | (2) | Instruments of the Orchestra        |
| MUCO 261   | (2) | Elementary Orchestration            |
| MUHL 397   | (3) | Choral Literature after 1750        |
| MUCT 415   | (3) | Choral Conducting 2 (or equivalent) |
| MUIN 120   | (2) | Practical Instruction               |
| MUIN 121   | (2) | Practical Instruction               |

**Wind Band Conducting (19 credits)**

(An undergraduate major in Wind or Percussion instruments.)

- |          |     |                                     |
|----------|-----|-------------------------------------|
| MUCO 260 | (2) | Instruments of the Orchestra        |
| MUCO 261 | (2) | Elementary Orchestration            |
| MUHL 398 | (3) | Wind Ensemble Literature after 1750 |

### Wind Band Conducting (19 credits)

MUIT 202	(3)	Woodwind Techniques
MUIT 203	(3)	Brass Techniques
MUIT 204	(3)	Percussion Techniques
MUIT 415	(3)	Advanced Instrumental Conducting (or equivalent)

### Jazz Performance (14 credits)

MUHL 393	(3)	History of Jazz
MUJZ 440D1	(2)	Advanced Jazz Composition
MUJZ 440D2	(2)	Advanced Jazz Composition
MUJZ 461D1	(2)	Advanced Jazz Arranging
MUJZ 461D2	(2)	Advanced Jazz Arranging
MUJZ 493	(3)	Jazz Performance Practice

### 30.8.3 B.Mus./B.Ed. Bachelor of Music and Bachelor of Education Concurrent Program

The Bachelor of Education in Music is an integrated four-year 120/121-credit program of initial teacher training that leads to certification as a teacher in the Province of Quebec. When offered concurrently with the Bachelor of Music (Major in Music Education), the program offers students the opportunity to obtain a Bachelor of Education degree and a Bachelor of Music degree after the completion of 137 credits, normally five years (172 credits or six years for out-of-province students). The concurrent program combines academic studies in music, professional studies and Field Experience. The two degrees are awarded during the same convocation period.

The components of the 137-credit Bachelor of Education in Music/Bachelor of Music (Music Education) are as follows:

55 professional credits
70 music academic credits
12 elective credits (which must include 3 credits of non-music electives)

Students in the Concurrent B.Mus./B.Ed. who receive an F or J in any Field Experience course are placed in Unsatisfactory standing. Although they may complete their term, they are required to withdraw from the Concurrent Program; however, they may apply to transfer to the B.Mus. Faculty Program.

#### 30.8.3.1 Concurrent Bachelor of Music (B.Mus.) - Major Music Education and Bachelor of Education (B.Ed.) - Music Elementary and Secondary (137 credits)

The Bachelor of Music (B.Mus.) - Major Music Education, when offered concurrently with the The Bachelor of Education - Major Music Elementary and Secondary, provides students with the opportunity to obtain a Bachelor of Music degree and a Bachelor of Education degree after the completion of 137 credits, normally five years (172 credits or six years for out-of-province students\*). The concurrent program combines academic studies in music, professional studies and field experience. The two degrees are awarded during the same convocation period.

\*Out-of-province students or those who have not completed Quebec CEGEP, French Baccalaureate, International Baccalaureate, or at least one year of university studies prior to commencing the Concurrent Program.

To be admitted to the Concurrent Program, students must satisfy the regular admission requirements of the Schulich School of Music and Faculty of Education. Normally, students will be admitted to both components of the Concurrent Program simultaneously. Applicants who already hold a Bachelor of Music degree should apply to the Faculty of Education. Students who have completed 30 or more credits in a Bachelor of Music program, exclusive of the Freshman Year for out-of-province students, should apply for admission to the Concurrent Program.

All applications for the Concurrent Program are to be made to the Admissions Office of the Schulich School of Music.

The B.Mus. Major Music Education program in the Schulich School of Music focuses on the development of the prospective music educator as a musician. This is achieved not only through core music history, theory, musicianship, and performance courses but also through different instrumental, v



MUGT 401	(3)	Issues in Music Education
MUIT 202	(3)	Woodwind Techniques
MUIT 203	(3)	Brass Techniques
MUIT 204	(3)	Percussion Techniques
MUIT 356	(3)	Jazz Instruction: Philosophy and Techniques

### **Theory**

11 credits:

MUTH 250	(3)	Theory and Analysis 3
MUTH 251	(3)	Theory and Analysis 4
MUTH 350	(3)	Theory and Analysis 5
MUTH 461	(2)	Choral and Keyboard Arranging

### **Musicianship**

4 credits:

MUSP 240	(2)	Musicianship Training 3
MUSP 241	(2)	Musicianship Training 4

### **Music History**

3 credits:

MUHL 286	(3)	Critical Thinking About Music
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### **Performance**

6 credits:

MUIN 280	(3)	BMus Practical Lessons 3
MUIN 281	(3)	BMus Practical Lessons 4
MUIN 283	(0)	BMus Concentration Final Examination

### **Complementary Music Components (21 credits)**

21 credits of complementary Music courses distributed as follows:

9 credits of Music Education

2 credits of Musicianship

6 credits of Music History

4 credits of Performance





EDEC 247	(3)	Policy Issues in Quebec Education
EDEE 355*	(3)	Classroom-based Evaluation
EDES 350	(3)	Classroom Practices (Secondary)
EDFE 205	(2)	First Field Experience (Music)
EDFE 208	(3)	Second Field Experience (Music)
EDFE 308	(8)	Third Field Experience (Music)
EDFE 407	(7)	Fourth Field Experience (Music)
	(3)	Educational Psychology



### **BMus Concentration Final Examination (MUIN 283)**

*Purpose:* To determine that the student is sufficiently accomplished to qualify for the degree of Bachelor of Music. In the event that the student is inadequately prepared, the panel may recommend to the Department in which the student is registered that: a) the student be asked to withdraw from the program; or, b) the student be permitted to redo the examination.

*Panel:* A minimum of two staff members (not including the teacher), one of whom must be from the area. The panel is appointed by the Chair of the Department of Performance. At the discretion of the Departmental Chair, the teacher may be included on panels of three or more examiners.

*Distribution of Marks:* For students registered in practical lessons through the Schulich School of Music, the teacher submits a term mark which is included as 50% of the final mark. In instances where the student's teacher is on the panel, the teacher's global evaluation will nevertheless be equal to 50% of the final mark. This grade will also be entered in the student's current or most recent term of practical instruction. When a student is not registered for lessons through the Schulich School of Music, the final mark will be the average of the marks submitted by the examination panel and will also be entered in the most recent term of practical instruction.

#### **30.9.2.2 Major Study**

A student majoring in Performance (B.Mus. or L.Mus.) must show talent for this field before being admitted to the program. The practical requirement for these programs comprises examinations and recitals at /rises examination2Ai0.9.2.2





**Artist Diploma Recital 3 (MUIIN 563)**

*Purpose:* Recital programs are intended to demonstrate that the student is qualified to engage in professional performance activities, and has attained the high level of performing ability required for the Artist Diploma.

*Panel:* The panel consists of the Chair of the Department of Performance or delegate, as well as two staff members from the area concerned.

*Distribution of Marks:* Examiners judge the recital independently and submit their evaluation without consulting the other examiners. All of the examiners must judge the recital to be satisfactory for the candidate to pass.

**Artist Diploma Concerto 1 (MUIIN 469)**

*Purpose:* The Artist Diploma program in orchestral instruments, piano and voice requires the candidate to present concertos which are normally examined only by a jury. The concerto examinations may be planned for any time during the academic session subject to the availability of examiners and facilities.

*Panel:* A minimum of three staff members, one of whom may be the student's teacher. The panel is appointed by the Chair of the Department of Performance.

*Distribution of Marks:* Examiners judge the concerto independently and submit their evaluation without consulting the other examiners. All the examiners must judge the concerto to be satisfactory for the candidate to pass.

**Artist Diploma Concerto 2 (MUIIN 569)**

*Purpose:* The Artist Diploma program in orchestral instruments, piano and voice requires the candidate to present concertos which are normally examined only by a jury. The concerto examinations may be planned for any time during the academic session subject to the availability of examiners and facilities.

*Panel:* A minimum of three staff members, one of whom may be the student's teacher. The panel is appointed by the Chair of the Department of Performance.

*Distribution of Marks:* Examiners judge the concerto independently and submit their evaluation without consulting the other examiners. All the examiners must judge the concerto to be satisfactory for the candidate to pass.

**30.9.2.5 Elective Study**

Students may elect to pursue further practical study in addition to their curricular requirements. The student is not expected to follow a specific program. Additional fees apply.

**30.10 Practical Examinations**

Details of specific examination requirements for each area (Brass, Early Music, Guitar, Harp, Jazz, Organ, Percussion, Piano, Strings, Voice, Woodwinds) may be obtained from the Department of Performance Office.

**30.10.1 Application for Examination**

Examinations and recitals must be presented in one of the examination periods. When a student and his/her teacher agree to present a required practical examination, **the student must make an application by the deadline specified below.** Permission to withdraw from, or postpone a practical examination will normally be granted only in the case of illness. A medical certificate must be submitted to the Department of Performance Office within seven days after the withdrawal request has been received. Withdrawal from a practical examination on other than medical grounds must be authorized by the Chair of the Department of Performance.

Application for the above examinations must be made on the appropriate form available at the Performance Office. Applicants must obtain their teacher's approval on this form and submit it according to the following schedule.

<b>Examination Period</b>	<b>Application Deadline*</b>	<b>Withdrawal Deadlines</b>
September 7-10, 2010**	June 1***	August 2
December 6-21, 2010	October 15	November 12
April 11-28, 2011	February 1	March 1

\* All students must apply by this deadline. Applications may be withdrawn without penalty any time up to the withdrawal deadline given above.

\*\* The September examination period is available only for Summer graduands. No supplemental or deferred examinations will be given at this time.

\*\*\* It is recommended that students planning to take an examination in September submit the program for approval before the end of May otherwise the program may not be seen by the Area Committee until September.

Applications received after these deadlines will only be accepted with special permission from the Chair of the Department of Performance, and on payment of a \$50 late application fee.



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## 31.5 Numata Visiting Professor in Buddhist Studies

In recognition of the strong Buddhist Studies program in the Faculty of Religious Studies, the Numata Foundation has given a 20-year grant to the Faculty to bring a visiting scholar in Buddhist Studies to McGill each year.

The visiting professor teaches one course at the 500 level, gives a public lecture and is available to students for conferences and consultation. The first Numata Professor, in 1999-2000, was Dr. Mahinda Deegalle (Ph.D., Chicago), a Theravada Buddhist Sri Lankan monk. Subsequent visiting professors have included Dr. John Pettit, Professor Robert Morrison, Dr. Thupten Jinpa, Dr. Kate Crosby, Ven. Yifa, Dr. Robert Kritzer, Dr. Andrew Skilton, Dr. Joel Tatelman, Dr. Miriam Levering and Dr. Hiroko Kawanami. Dr. Dorji Wangchuk will be the visiting professor for 2010-2011.

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## 31.6 About the Faculty of Religious Studies (Undergraduate)

Cultivating a thorough understanding of the world's religions and the roles of religion throughout history and in contemporary society is at the heart of the Faculty of Religious Studies' teaching at the undergraduate level. The Faculty takes a multi-disciplinary approach to scholarship on a plurality of religions and incorporates a broad range of perspectives and methods. In studying the world's religious traditions, we emphasize the ways in which religious expression and practices are embedded in culture, politics, aesthetics, and social change. Texts and traditions, languages and literatures, philosophy and ethics are all integral to our undergraduate programs.

The Faculty's undergraduate teaching supports two degrees, the B.A. and the B.Th. The Bachelor of Theology (B.Th.) offers an intensive study of Christianity primarily for students preparing for the ordained ministry and for other professional careers in pastoral settings such as hospitals and schools. The B.Th. contributes to the professional degree (M.Div.) offered through the Montreal School of Theology with which the Faculty is affiliated.

The B.A. programs in Religious Studies are offered in conjunction with the Faculty of Arts. These programs explore the many cultural, historical and political issues related to both Eastern and Western religions and to religion in comparative perspective. Majors and Minors in World Religions are available, as well as Honours and Joint Honours programs in Religious Studies. In addition, a distinctive strength of the Faculty's offerings is the Major in Scriptures and Interpretations which allows for a concentration on a particular scriptural tradition (Jewish, Christian, or Hindu and Buddhist scriptures); the Minor in Scriptural Languages supports all these concentrations by providing intensive study of either Indo-Tibetan languages or Biblical Languages. Students frequently combine Majors and Minors in World Religions with a wide range of other B.A. concentrations, highlighting the importance of the rigorous study of religion to many other areas of inquiry.

### 31.6.1 Location

William and Henry Birks Building  
3520 University Street  
Montreal, Quebec H3A 2A7  
Canada

Telephone: 514-398-4121

Website: [www.mcgill.ca/religiousstudies](http://www.mcgill.ca/religiousstudies)

### 31.6.2 Administrative Officers

#### Administrative Officers

Ellen B. Aitken; A.B.(Harv.), M.Div.(University of the South), Th.D.(Harv.) **Dean**

Luvana Di Francesco

**Administrative Officer**

Bruna Salhany

**Administrative Affairs/Dean's Assistant**

### 31.6.3 Academic Staff

#### Emeritus Professors

Gregory B. Baum; B.A.(McM.), M.A.(Ohio St.), D.Th.(Fribourg)

Robert C. Culley; B.D.(Knox, Tor.), M.A., Ph.D.(Tor.)

Douglas J. Hall; B.A.(W. Ont.), M.Div., S.T.M., Th.D.(UTS, NY), L.903p(U Tm(Th.D.(UTS, 0Tj1 0 0 1 174.007 128.903 Tmu183 r1 0 0 1 70.e91 r1 0 0 1 70.e9Uni)T



## Professors

Maurice Boutin; B.A., B.A., B.A.(Montr.), D.Th.(Munich) (*J.W. McConnell Professor of Philosophy of Religion*)

Douglas B. Farrow; B.R.E.(Providence), M.Div.(Grace), M.Th.(Regent), Ph.D.(Lond.) (*Christian Thought*)

W.J. Torrance Kirby; B.A.(KCNS), M.A., D.Phil.(Oxf.) (*Ecclesiastical History*)

G.S. Oegema; B.A., Th.D.(Vrije, Amsterdam), M.A., Ph.D.(Free Univ., Berlin), Dr. Theol. Habil(Tübingen) (*Biblical Studies*)

Arvind Sharma; B.A.(Allahabad), M.A.(Syr.), M.T.S., Ph.D.(Harv.) (*Henry Birks Professor of Comparative Religion*)

Katherine K. Young; B.A.(Vermont), M.A.(Chic.), Ph.D.(McG.) (*James McGill Professor of Hinduism/Comparative Religion*)

## Associate Professors

Ellen B. Aitken; A.A., M.A., Ph.D.(McG.) (James McGill Professor of Hinduism/Comparative Religion), M.Div.(Harv.), M.A., Ph.D.(Oxf.) (T

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## 31.7 Overview of Degrees Offered

### Degrees Offered by the Faculty

*section 31.7.1: Bachelor of Arts in Religious Studies*

*section 31.7.3: Bachelor of Theology*

*section 31.7.2*

1. to offer the academic instruction in the disciplines of theology within a university setting;
2. to contribute to preparation for ministry in the contemporary world by giving special attention to the Canadian and North American contexts, the Quebec context, and religious pluralism.

The Bachelor of Theology (B.Th.) may be taken as a first or second baccalaureate degree.

As a first degree (90 or 120 credits) it offers a more intensive study of Christianity than is available within the Bachelor of Arts (B.A.) programs, while also permitting the student to combine this specialization with other academic or professional interests, whether in Religious Studies or in other faculties and schools of the University.

As a second bachelor's degree (60 credits) the Bachelor of Theology (B.Th.) program is designed primarily for those who intend to qualify for the ordained ministry in a Christian denomination, although here too some students pursue the de

#### 31.7.3.4.1 Required Documents

- Two letters of reference, at least one of which should be from an instructor in an academic institution previously attended.
- A personal statement, according to the directions in the application.
- Official transcript(s) of all previous post-secondary academic work.

**A complete set of these required documents must be sent to the Faculty of Religious Studies (see address below).**

If you are applying for admission to one of the Theological Colleges, another complete set of these required documents must also be sent to the College concerned.

Please note that your file will not be considered by the Admissions Committee until all the required documents have been received.

#### Mailing Address

Bachelor of Theology Program  
 McGill University  
 Enrolment Services Documentation Centre  
 688 Sherbrooke Street West, Suite 760  
 Montreal, Quebec H3A 3R1  
 Canada

#### 31.7.3.5 Application Deadlines

Applicants to the B.Th. Program may be accepted into either the Fall, Winter, or Summer term. The online application deadline is **June 15 (May 1 for International students) for September admissions; November 1 for January admissions and March 1 for May admissions**. Please note that all required documents listed above must be received by the Faculty of Religious Studies prior to these deadlines in order for the applicant to be considered by the Admissions Committee.

#### 31.7.3.6 Tuition Fees and Funding

Information concerning current tuition fees can be found at: [www.mcgill.ca/student-accounts](http://www.mcgill.ca/student-accounts). Applicants for admission to one of the affiliated Colleges should contact the institution concerned for information regarding College-related fees.

#### 31.7.3.7 Admissions Review Procedure

An unsuccessful applicant, or a Faculty of Religious Studies Council member acting on behalf of an unsuccessful applicant, who believes that not all factors having a bearing on the application have been fully considered may submit a request for a review of the decision.

The request must be made in writing and directed to the Chair of the B.Th. Admissions and Awards Committee. A \$40 certified cheque or money-order made payable to McGill University must accompany the request.

The request for review must include information in support of reconsideration, such as: a description of significant change in the applicant's circumstances since the initial consideration, correction of any missing or erroneous information in the application, or information that the applicant believes may have been overlooked when the original decision was made.

Requests for reconsideration must be received at McGill no more than 2 weeks after notification of refusal.

The review procedure will be carried out by the B.Th. Admissions and Awards Committee. Please note that the original admission decision will stand unless the Committee is persuaded that admissions standards have been misapplied or that an applicant's academic record has been misapprehended.

Decisions on Special, Visiting, and Exchange applications are final; requests for reconsideration will not be considered.

#### 31.7.3.8 Registration Procedures

Students register online at [www.mcgill.ca/minerva](http://www.mcgill.ca/minerva).

Minerva provides web access to registration, class schedules, course descriptions, and address changes.

- Returning students must register via Minerva between April 7 and the first day of classes. After this period, a late registration fee will be applied.
- New students accepted from CEGEP should register via Minerva between June 9 and September 14, 2010. All other new students should register via Minerva between July 27 and September 14, 2010. After September 1, a late registration fee will be applied.
- All B.Th. students should consult their adviser before registration.

#### 31.7.3.9 Withdrawal Procedures

Withdrawal from and adding courses prior to the deadline listed in this publication (see [section 31.7.3.8: Registration Procedures](#)) must be done via Minerva. The permission of the adviser is required for all such changes in the initial registration. In case of withdrawal from the University prior to the published course withdrawal deadline, you must withdraw from all courses via Minerva. In addition, you must contact the Chair of the Bachelor of Theology (B.Th.) Committee and complete the necessary withdrawal form.

### **31.7.3.10 Graduation Requirements**

- 1.** The B.Th. is either a 120-credit program (if you were admitted from outside Quebec and without a prior Bachelor's degree), a 90-credit program (if you were admitted on the basis of a Quebec D.C.S. or equivalent), or a 60-credit program (if you were admitted on the basis of a recognized Bachelor's degree).

#### **31.7.3.14 Evaluation**

Competence in a course may be determined by examinations and/or essays, or by other means chosen by the instructor and approved by the Dean.

#### **31.7.3.15 Bachelor of Theology (B.Th.) - Religious Studies (120 credits)**

The Bachelor of Theology (B.Th.) degree requires 120 credits. Many students enter the program with advanced standing, and their credit requirement for the degree is adjusted accordingly.

All students should discuss their course selection with their program adviser

RELG 280D1	(3)	Elementary New Testament Greek
RELG 280D2	(3)	Elementary New Testament Greek

**Year 3 (U3) - Required Courses (12 credits)**

\*Note: RELG 420 may be replaced with another course if recommended by the program adviser.

RELG 420	(3)	Canadian Church History
RELG 434	(3)	Principles of Christian Theology 2
RELG 470	(3)	Theological Ethics
RELG 479	(3)	Christianity in Global Perspective

**Year 3 (U3) - Complementary Courses (18 credits)**

18 credits selected as follows:

### **31.7.3.16 Bachelor of Theology (B.Th.) - Honours Religious Studies (120 credits)**

Students who have achieved a CGPA of 3.30 at the end of B.Th. Year 2 (U2) may apply to the B.Th. Committee for permission to enter the Honours program. They will be required to complete the normal requirements for the B.Th. degree and the honours courses RELG 494 and RELG 495 in the B.Th. Year 3 (U3) with a grade of B or better.

#### **Year 3 (U3) - Required Courses - Honours (6 credits)**

RELG 494	(3)	B.Th. Honours Seminar 1
RELG 495	(3)	B.Th. Honours Seminar 2

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## **32 Faculty of Science**

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### **32.1 About the Faculty of Science**

The Faculty of Science aims to be a leader in fi



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### 32.3 Programs and Teaching in Science

The Faculty of Science is committed to providing outstanding teaching and research facilities. The Faculty draws on its involvement in cutting-edge research to ensure teaching excellence at the undergraduate level. Professors who spearhead projects that change people's understanding of the world teach regularly at the undergraduate level. Also, research-based independent study courses offer you the opportunity to contribute to your professors' work, rather than just learn about it.

In an effort to supplement classroom learning with real life experience, the Faculty of Science has increased opportunities for undergraduate students to participate in fieldwork. All B.Sc. programs can include an internship component. This is on top of the many undergraduate students the Faculty hires for Work Study projects and other research programs. As a McGill Science student, you have an opportunity to get involved in the structuring of your own education.

The Faculty of Science offers programs leading to the degree of Bachelor of Science (B.Sc.). Admission is selective; fulfilment of the minimum requirements does not guarantee acceptance. Admission criteria are described in the *Undergraduate Admissions Guide*, found at [www.mcgill.ca/applying/undergrad](http://www.mcgill.ca/applying/undergrad).

There are also two Diploma programs offered in Science. The *Diploma in Environment*, under *McGill School of Environment > Diploma in Environment (30 credits)*, is a 30-credit program available to holders of a B.Sc. or B.A. or equivalent. The *Diploma in Meteorology*, is a one-year program available to holders of a degree in Mathematics, Engineering, Physics and other appropriate disciplines who wish to qualify for a professional career in Meteorology; see *Atmospheric and Oceanic Sciences (ATOC) > Diploma in Meteorology (30 credits)*. All credits for these diplomas must be completed at McGill.

The Concurrent B.Sc. and B.Ed. program is designed to provide you with the opportunity to obtain both a B.Sc. and a B.Ed. after a minimum of 135 credits of study. For more information, see [section 32.13.34: Science or Mathematics for Teachers](#) and the *Faculty of Education*.

In addition to the Major Program in Software Engineering offered in the Faculty of Science, there is also a Bachelor of Software Engineering program offered jointly with the Faculty of Engineering (refer to *Faculty of Engineering > Department of Electrical and Computer Engineering*).

Finally, the Faculties of Arts and Science jointly offer the Bachelor of Arts and Science (B.A. & Sc.), which is described under *Bachelor of Arts & Science*.

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### 32.4 About the Faculty of Science (Undergraduate)

- McGill's second-largest faculty: 14 schools and departments, including the Redpath Museum, Canada's oldest museum of natural history focusing on teaching, research and outreach; 20 research centres and institutes.
- Students: 3,908 undergraduate, 862 graduate, and 111 postdoctoral researchers, for a total of 4,881 students.
- Average entering grade is 89%, highest at McGill.
- 265 faculty members including tenured and tenure-track professors.
- Has produced sev

853 Sherbrooke Street West  
Montreal, Quebec H3A 2T6  
Canada

Telephone: 514-398-4210

Faculty website: [www.mcgill.ca/science](http://www.mcgill.ca/science)

Science Office for Undergraduate Student Advising (SOUSA): [www.mcgill.ca/science/sousa](http://www.mcgill.ca/science/sousa)

The Science Office for Undergraduate Advising (SOUSA) and the Office of the Director of Advising Services of the Faculty of Science are located in Dawson Hall, on the ground floor. The SOUSA Office serves students in the B.Sc. and B.A. & Sc. degrees.

### 32.4.2 Administrative Officers

Martin Grant; B.Sc.(PEI), M.Sc., Ph.D.(Tor.)	<b>Dean</b>
Laurie Hendren; B.Sc., M.Sc.(Qu.), Ph.D.(C'nell) ( <i>on sabbatical leave 2010-2011</i> )	<b>Associate Dean (Academic)</b>
Nick de Takacsy; B.Sc., M.Sc.(Montr), Ph.D.(McG.) 2010-2011	<b>Special Adviser, Faculty of Science</b>
Nicole Allard; B.A.(W. Ont.), M.A.(Guelph), M.Ed.(McG.)	<b>Director of Advising Services</b>
Peter Grütter; Ph.D.(Basel) ( <i>James McGill Professor</i> )	<b>Associate Dean (Research and Graduate Education)</b>
Pete Barry; B.Sc.(C'dia), M.Sc.(McG.)	<b>Chief Academic Adviser</b>
Josie D'Amico	<b>Assistant to the Dean</b>

### 32.4.3 Science Office for Undergraduate Student Advising (SOUSA)

The Science Office for Undergraduate Student Advising (SOUSA) provides ongoing advice and guidance on academic issues related to programs, degree requirements, registration, course change, withdrawal, deferred exams, supplemental exams, academic standing, interSOUSA) 1 447.405 415.825 5m3981 TforNjeH95

## Faculty and program requirements

[section 32.6.1: Minimum Credit Requirement](#)

[section 32.6.2: Residency Requirement](#)

[University Regulations > Grading and Grade Point Averages \(GPA\)](#)

[section 32.6.3: Time and Credit Limit for the Completion of the Degree](#)

[section 32.6.4: About Program Requirements](#)

[section 32.6.5: Course Requirements](#)

### 32.6.1 Minimum Credit Requirement

The minimum credit requirement for your degree is determined at the time of acceptance and is specified in your letter of admission.

Students are normally admitted to a four-year degree requiring the completion of 120 credits.

#### 32.6.1.1 Advanced Standing

Advanced standing of up to 30 credits may be granted to students who obtain satisfactory results in International Baccalaureate, French Baccalaureate, Advanced Levels, Advanced Placement tests, or the Diploma of Collegial Studies (DCS). Quebec students with a DCS in Science are granted 30 credits advanced standing and will have normally completed the equivalent of, and are therefore exempt from, the basic science courses in biology, chemistry, mathematics and physics. Students with satisfactory results in International Baccalaureate, French Baccalaureate, Advanced Levels, and Advanced Placement tests may be exempt from some or all of the basic science courses. You will not be given additional credit towards your degree for any McGill course where the content overlaps substantially with any other course for which you have already received credit, such as for advanced standings results.

AP Examination results with a score of 4 or 5 must be declared by you at the time of initial registration at the university.

For more information about advanced standing, consult: [www.mcgill.ca/student-records/transferecredits](http://www.mcgill.ca/student-records/transferecredits).

#### 32.6.1.2 Equivalencies for Non-Basic Science Courses

Note that equivalencies for some non-basic science courses, such as CHEM 212 and 222 and PSYC 204, are granted on a per-CEGEP basis. In some cases, a grade greater than the minimum passing grade may be required. For more information about equivalencies for non-basic Science courses, please consult: [www.mcgill.ca/student-records/transferecredits/cegep](http://www.mcgill.ca/student-records/transferecredits/cegep).

If the CEGEP and/or course is not listed on this website, you should refer to the SOUSA website and follow the instructions for advanced standing for students admitted to McGill from CEGEP: [www.mcgill.ca/science/sousa](http://www.mcgill.ca/science/sousa).

#### 32.6.1.3 Readmission after Interruption of Studies for a Period of Five Consecutive Years or More

If you are readmitted after interrupting your studies for a period of five consecutive years or more, you may be required to complete a minimum of 60 credits and satisfy the requirements of a program. In this case, a new CGPA will be calculated. The Director of Advising Services, in consultation with the appropriate department, may approve a lower minimum for students who had completed 60 credits or more before interrupting their studies.

If you are readmitted after a period of absence, you are subject to the program and degree requirements in effect at the time of readmission. The Director of Advising Services, in consultation with the department, may approve exemption from any new requirements. **Readmission after 5 years requires a new application and a minimum of 60 credits.**

normally be granted only for valid academic reasons, such as a change of program (subject to departmental approv

#### **32.6.4.6 McGill School of Environment**

The Faculty of Science is one of the four faculties in partnership with the McGill School of Environment. For more information, see the *McGill School of*

- Credit for courses in Education and Continuing Education requires the permission of the Director of Advising Services, Science.
- Credit for computer and statistics courses offered by faculties other than Arts and Science requires the permission of the Director of Advising Services and will be granted only under exceptional circumstances.
- If you use Minerva to register for a course, and it exceeds the specified limitations or it's not approved, the course will be flagged for no credit after the course change period.
- Credit will not be given for any “how to” courses offered by other faculties that are intended to provide you with only practical or professional training in specific applied areas. Examples include courses that teach the use of certain computer packages (databases, spreadsheets, etc.) or computer languages (SQL, COBOL, FORTRAN, etc.), machine shop or electronic shop courses, technical drawing courses, and professional practice courses.
- As a student in the McGill School of Environment, you may exceed the 18-credit limit for courses outside the Faculties of Arts and of Science, provided that all such courses are necessary to complete your program of study.
- As a student in the Major in Software Engineering, you may take as many courses outside the Faculties of Arts and of Science as are necessary to complete your program of study. You may also tak

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## 32.7 Advising

If you need 96 or fewer credits to complete your degree requirements, you must consult an academic adviser in your proposed department of study to obtain advice and approval of your course selection. Quebec students with a Diploma of Collegial Studies in Science have normally taken the equivalent of, and are therefore exempt from, the 100-level basic science courses in Biology, Chemistry, Mathematics, and Physics. Such students may also be exempt from some 200-level courses. If you are a student with satisfactory results in International Baccalaureate, French Baccalaureate, Advanced Levels, and Advanced Placement tests, you may also be exempt from some or all of the Science Freshman courses. To facilitate program planning, you must present your transcript(s) and letter of admission. For a detailed description of advising and registration procedures, you should refer to *University Regulations and Information > Registration* and to *University Regulations and Information > Undergraduate Advising; Welcome to McGill*, which you will receive upon acceptance from Enrolment Services; as well as information posted on the SOUSA website, [www.mcgill.ca/science/sousa](http://www.mcgill.ca/science/sousa) and the departmental websites.

If you need 97-120 credits to complete your degree requirements, you will normally be registered in a Freshman Program until you complete your first year. You must consult a SOUSA adviser in the Science Office for Undergraduate Student Advising to obtain advice and approval of your course selection. For a detailed description of advising and registration procedures, as a freshman student, you should refer to *Welcome to McGill*, which you will receive upon acceptance from Enrolment Services, as well as the information on the SOUSA website, [www.mcgill.ca/science/sousa](http://www.mcgill.ca/science/sousa).

Advising for all returning students takes place in March for the upcoming academic year. For more information, you should refer to the information on the SOUSA website, [www.mcgill.ca/science/sousa](http://www.mcgill.ca/science/sousa).

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## 32.8 Freshman Interest Groups

Freshman Interest Groups (FIGs) are groups of approximately 15 U0 students and U1 in their first semester, in the B.Sc. or B.A. & Sc., led by a professor in the Faculty of Science or Faculty of Medicine and an upper-year undergraduate student. They meet once every two weeks in the Fall semester to discuss a wide range of topics, such as science in the news, program choices, undergraduate research opportunities, or just aspects of life in Montreal. The purpose of a FIG is to ease the transition to McGill and Montreal and to provide you an opportunity to interact with a professor and with other U0 students in a small group. FIGs carry no credit and there is no charge. For more information and to see how to register, refer to [www.mcgill.ca/science/student/fig](http://www.mcgill.ca/science/student/fig).

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## 32.9 Examinations

Students should refer to *University Regulations and Information > Examinations: General Information* in this publication for information about final examinations and deferred examinations. Note that for the Faculty of Science, *Final Examinations: University Regulations Concerning Final Examinations* under *University Regulations and Information*, applies to courses up to and including the 500 level.

The exam schedules are posted on the McGill website, [www.mcgill.ca/students](http://www.mcgill.ca/students), normally one month after the start of classes for the Tentative Exam Schedule, and two months after the start of classes for the Final Examination Schedule.

Students are warned not to me Of





**32.10.1.22 Major Program**

- Microbiology and Immunology - application required, see departmental section for information, [section 32.13.22.5: Bachelor of Science \(B.Sc.\) - Major](#)

- Environment (Ecological Determinants of Health domain - Population) - see *McGill School of Environment > Bachelor of Science (Agricultural and Environmental Sciences) or Bachelor of Science - Major Environment - Ecological Determinants of Health - Population (63 credits)*
- Environment (Environmetrics domain) - see *McGill School of Environment > Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) or Bachelor of Science (B.Sc.) - Major Environment - Environmetrics (63 credits)*
- Environment (Food Production and Environment domain) - see *McGill School of Environment > Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) or Bachelor of Science (B.Sc.) - Major Environment - Food Production and Environment (63 credits)*
- Environment (Land Surface Processes and Environmental Change domain) - see *McGill School of Environment > Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) or Bachelor of Science (B.Sc.)-Major Environment - Land Surface Processes and Environmental Change (63 credits)*
- Environment (Renewable Resource Management domain) - see *McGill School of Environment > Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) or Bachelor of Science (B.Sc.) - Major Environment - Renewable Resource Management (63 credits)*
- Environment (Water Environments and Ecosystems domain - Biological) - see *McGill School of Environment > Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) or Bachelor of Science (B.Sc.) - Major Environment -Water Environments and Ecosystems - Biological (60 credits)*
- Environment (Water Environments and Ecosystems domain - Physical) - see *McGill School of Environment > Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) or Bachelor of Science (B.Sc.) - Major Environment - Water Environments and Ecosystems - Physical (63 credits)*
- Geography, *section 32.13.16.8: Bachelor of Science (B.Sc.) - Major Geography (58 credits)*
- Mathematics, *section 32.13.21.9: Bachelor of Science (B.Sc.) - Major Mathematics (54 credits)*
- Physics, *section 32.13.29.9: Bachelor of Science (B.Sc.) - Major Physics (60 credits)*
- Software Engineering, *section 32.13.9.14: Bachelor of Science (B.Sc.) - Major Software Engineering (63 credits)*

#### **32.10.1.4.3 Joint Major Programs**

- Atmospheric Science and Physics, *section 32.13.3.8: Bachelor of Science (B.Sc.) - Major Atmospheric Science and Physics (67 credits)*
- Computer Science and Biology, *section 32.13.9.12: Bachelor of Science (B.Sc.) - Major Computer Science and Biology (73 credits)*
- Mathematics and Computer Science - see Mathematics and Statistics, *section 32.13.21.10: Bachelor of Science (B.Sc.) - Major Mathematics and Computer Science (72 credits)*
- Physics and Computer Science - see Physics *section 32.13.29.11: Bachelor of Science (B.Sc.) - Major Physics and Computer Science (66 credits)*
- Physics and Geophysics, *section 32.13.29.10: Bachelor of Science (B.Sc.) - Major Physics and Geophysics (69 credits)*
- Statistics and Computer Science, *section 32.13.21.11: Bachelor of Science (B.Sc.) - Major Statistics and Computer Science (72 credits)*

#### **32.10.1.4.4 Honours Programs**

- Applied Mathematics, *section 32.13.21.13: Bachelor of Science (B.Sc.) - Honours Applied Mathematics (60 credits)*
- Atmospheric Science, *section 32.13.3.9: Bachelor of Science (B.Sc.) - Honours Atmospheric Science (70 credits)*
- Atmospheric Science (Atmospheric Chemistry option), *section 32.13.3.10: Bachelor of Science (B.Sc.) - Honours Atmospheric Science - Atmospheric Chemistry (70 credits)*
- Chemistry, *section 32.13.7.14: Bachelor of Science (B.Sc.) - Honours Chemistry (71 credits)*
- Chemistry (Bio-organic option), *section 32.13.7.15: Bachelor of Science (B.Sc.) - Honours Chemistry - Bio-organic (75 credits)*
- Chemistry (Atmosphere and Environment option), *section 32.13.7.16: Bachelor of Science (B.Sc.) - Honours Chemistry - Atmosphere and Environment (75 credits)*
- Chemistry (Materials), *section 32.13.7.17: Bachelor of Science (B.Sc.) - Honours Chemistry - Materials (74 credits)*
- Computer Science, *section 32.13.9.15: Bachelor of Science (B.Sc.) - Honours Computer Science (75 credits)*
- Earth Sciences, *section 32.13.10.8: Bachelor of Science (B.Sc.) - Honours Earth Sciences (75 credits)*
- Environment, *section 33.12.2: Bachelor of Science (B.Sc.) - Honours Envir 0 0 1 431(B.Sc.) - Honour*

## 32.10.2 Minor Programs

- Atmospheric Science**, [section 32.13.3.4: Bachelor of Science \(B.Sc.\) - Minor Atmospheric Science \(18 credits\)](#)
- Biology**, [section 32.13.5.6: Bachelor of Science \(B.Sc.\) - Minor Biology \(25 credits\)](#)
- Biotechnology**, [section 32.13.6.5: Bachelor of Science \(B.Sc.\) - Minor Biotechnology \(for Science Students\) \(24 credits\)](#)
- Chemical Engineering**, [section 32.13.7.6: Bachelor of Science \(B.Sc.\) - Minor Chemical Engineering \(24 credits\)](#)
- Chemistry**, [section 32.13.7.5: Bachelor of Science \(B.Sc.\) - Minor Chemistry \(18 credits\)](#)
- Cognitive Science**, [section 32.13.8.2: Bachelor of Science \(B.Sc.\) - Minor Cognitive Science \(27 credits\)](#)
- Computational Molecular Biology**, [section 32.13.9.8: Bachelor of Science \(B.Sc.\) - Minor Computational Molecular Biology \(24 credits\)](#)
- Computer Science**, [section 32.13.9.7: Bachelor of Science \(B.Sc.\) - Minor Computer Science \(24 credits\)](#)
- Education for Science Students**, [section 32.13.34.4: Bachelor of Science \(B.Sc.\) - Minor Education for Science Students \(18 credits\)](#)
- Electrical Engineering**, [section 32.13.29.7: Bachelor of Science \(B.Sc.\) - Minor Electrical Engineering \(24 credits\)](#)
- Environment** – see [McGill School of Environment > Bachelor of Science \(Agricultural and Environmental Sciences\) \(B.Sc.\(Ag.Env.Sc.\)\) or Bachelor of Science \(B.Sc.\) - Minor Environment \(18 credits\)](#)
- Field Study** – see [Field Studies and Study Abroad > Field Studies - Minor Field Studies \(18 credits\)](#)
- Finance for Non-Management Students** – see [Desautels Faculty of Management > Minor Finance \(For Non-Management Students\) \(18 credits\)](#)
- General Science**, [section 32.13.15.3: Bachelor of Science \(B.Sc.\) - Minor General Science \(18 credits\)](#)
- Geochemistry**, [section 32.13.10.5: Bachelor of Science \(B.Sc.\) - Minor Geochemistry \(18 credits\)](#)
- Geography**, [section 32.13.16.5: Bachelor of Science \(B.Sc.\) - Minor Geography \(18 credits\)](#)
- Geographic Information Systems**, [section 32.13.16.6: Bachelor of Science \(B.Sc.\) - Minor Geographic Information Systems \(18 credits\)](#)
- Geology**, [section 32.13.10.4: Bachelor of Science \(B.Sc.\) - Minor Geology \(18 credits\)](#) (previously named *Earth and Planetary Sciences*)
- Human Nutrition** – see [Faculty of Agricultural and Environmental Sciences > School of Dietetics and Human Nutrition > Minor Human Nutrition \(24 credits\)](#)
- Interdisciplinary Life Sciences**, [section 32.13.18.3: Bachelor of Science \(B.Sc.\) - Minor Interdisciplinary Life Sciences \(24 credits\)](#)
- Kinesiology**, [section 32.13.19.3: Bachelor of Science \(B.Sc.\) - Minor Kinesiology \(24 credits\)](#)
- Management for Non-Management Students** – see [Desautels Faculty of Management > Minor Management \(For Non-Management Students\) \(18 credits\)](#)
- Marketing for Non-Management Students** – see [Desautels Faculty of Management > Minor Marketing \(For Non-Management Students\) \(18 credits\)](#)
- Mathematics**, [section 32.13.21.5: Bachelor of Science \(B.Sc.\) - Minor Mathematics \(24 credits\)](#)
- Musical Applications of Technology** – see [Schulich School of Music > Bachelor of Music \(B.Mus.\) - Minor Musical Applications of Technology \(18 credits\)](#)
- Musical Science and Technology** – see [Schulich School of Music > Bachelor of Music \(B.Mus.\) - Minor Musical Science and Technology \(18 credits\)](#)
- Natural History** – see [section 32.13.33.4: Bachelor of Science \(B.Sc.\) - Minor Natural History \(24 credits\)](#)
- Neuroscience**, [section 32.13.25.3: Bachelor of Science \(B.Sc.\) - Minor Neuroscience \(24 credits\)](#)
- Operations Management for Non-Management Students** – see [Desautels Faculty of Management > Minor Operations Management \(For Non-Management Students\) \(18 credits\)](#)
- Pharmacology**, [section 32.13.28.4: Bachelor of Science \(B.Sc.\) - Minor Pharmacology \(24 credits\)](#)
- Physics**, [section 32.13.29.6: Bachelor of Science \(B.Sc.\) - Minor Physics \(18 credits\)](#)
- Psychology**, [section 32.13.32.5: Bachelor of Science \(B.Sc.\) - Minor Psychology \(24 credits\)](#)
- Statistics**, [section 32.13.21.6: Bachelor of Science \(B.Sc.\) - Minor Statistics \(24 credits\)](#)
- Technological Entrepreneurship for Science Students** – application required, see [program listing: section 32.13.35.3: Bachelor of Science \(B.Sc.\) - Minor Technological Entrepreneurship for Science Students \(18 credits\)](#) (Please note that this Minor is currently under review.)



### Notes:

1. The Minor in Chemical Engineering is only available to students in Chemistry.
2. The Minor in Electrical Engineering is only available to students in the Major program in Physics.

3. The Minor in General Science is only available to students in B.Sc. Liberal programs.

### 32.10.3 Concurrent B.Sc. and B.Ed. Program (Science or Mathematics for Teachers)

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**Major in Mathematics for Teachers** – see Science or Mathematics for Teachers, [section 27.9.18: Concurrent Bachelor of Science \(B.Sc.\) and Bachelor of Education \(B.Ed.\) - Major Mathematics for Teachers \(135 credits\)](#)



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**Comparative Politics** - see Political Science, *section 25.10.42.8: Bachelor of Arts (B.A.) - Minor Concentration Comparative Politics (18 credits)*

**East Asian Language and Literatur**

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**Political Theory** - see Political Science, [section 25.10.42.10: Bachelor of Arts \(B.A.\) - Minor Concentration Political Theory \(18 credits\)](#)

**Politics, Law and Society** - see Political Science, [section 25.10.42.12: Bachelor of Arts \(B.A.\) - Minor Concentration Politics, Law and Society \(18 credits\)](#)

**Québec Studies**, [section 25.10.44.5: Bachelor of Arts \(B.A.\) - Minor Concentration Quebec Studies / La concentration Mineur en Études sur le Québec \(18 credits\)](#)

**Russian** - see Russian and Slavic Studies, [section 25.10.46.4: Bachelor of Arts \(B.A.\) - Minor Concentration Russian \(18 credits\)](#)

**Russian Culture** - see Russian and Slavic Studies, [section 25.10.46.5: Bachelor of Arts \(B.A.\) - Minor Concentration Russian Culture \(18 credits\)](#)

**Scriptural Languages** - see Religious Studies, [section 25.10.45.6: Bachelor of Arts \(B.A.\) - Minor Concentration Scriptural Languages \(18 credits\)](#)

**Sexual Diversity Studies**, [section 25.10.48.4: Bachelor of Arts \(B.A.\) - Minor Concentration Sexual Diversity Studies \(18 credits\)](#)

**Social Studies of Medicine**,

### **32.11.2 NSERC Undergraduate Student Research Awards**

The Natural Sciences and Engineering Research Council of Canada Undergraduate Student Research Awards (NSERC USRA) in Universities program: this award supports 16 consecutive weeks of paid full-time research under the supervision of a professor who holds an NSERC grant. It is an excellent way to prepare for graduate studies or a future career in science. This program is offered at other universities across Canada, and a travel allowance from NSERC is available.

To apply, students must first identify a proposed supervisor who holds an NSERC grant. Students should apply at the univ



- Your CGPA must be 2.7 or higher.
- International students are eligible to apply to all IYS positions (unless otherwise indicated in the job posting) and to summer IPs (provided the student has an off-campus work permit).

For more information on IP and IYS, please see [section 32.6.4.5: Internship Year in Science \(IYS\)](#) and [www.mcgill.ca/science/internships-field/internships](http://www.mcgill.ca/science/internships-field/internships).

### 32.12.2 Field study and study abroad

McGill's Field Study Semester programs (in Africa, Barbados, and Panama) are research-based, as are many shorter field courses offered by the Departments of Biology, Earth & Planetary Sciences, and Geography. See *Field Studies and Study Abroad* and [www.mcgill.ca/science/internships-field/field](http://www.mcgill.ca/science/internships-field/field) for more information about these programs and courses.

## 32.13 Academic Programs (Faculty of Science)

### What is a Major Program?

A major is a versatile, comprehensive primary area of study. Most major programs require about two-thirds of your total credits. With the remaining credits, you can choose electives, or you may want to use those additional credits to take a minor which can be chosen from a wide variety of areas both within and outside of Science.

### What is an Honours Program?

Honours programs typically involve an even higher degree of specialization than majors, include supervised research, and require students to maintain a high academic standard. An honours program provides solid preparation for graduate school. With an honours program, you will have fewer elective credits.

### What is a B.Sc. Liberal Program?

This is a flexible and modular program. You combine a core science component (CSC) in a Science discipline with a breadth component which may be a minor from a wide variety of areas, a major concentration from the Faculty of Arts, or a second CSC from Science. Consider the Liberal program if you do not want to overly specialize - plus, you will still have room left over for elective courses.

### What about Joint Programs?

The Faculty of Science also has quite a few Joint Programs. These programs combine two different disciplines, which allow you to gain expertise in two fields.

### What about Interdisciplinary Programs?

There are many ways to create interdisciplinary programs in the Faculty of Science. You can add a Minor to a Major or Honours program, you can take a Liberal Program which contains both a core science component and a breadth component, or you can select an explicit interdisciplinary major. The Faculty of Science offers three such interdisciplinary programs: Earth System Science, Environment, and Neuroscience.

### 32.13.1 B.Sc. Freshman Program

If you need 97-120 credits (four years) to complete your degree requirements, you must register in the Science Freshman Program, which is designed to provide the basic science foundation for your subsequent three-year Liberal, Major, or Honours program. For a detailed description of the Science Freshman Program, you should consult [section 32.13.1.1: Bachelor of Science \(B.Sc.\) - Freshman Program \(30 credits\)](#) and the Science Freshman Student information available on the SOUSA website, [www.mcgill.ca/science/sousa](http://www.mcgill.ca/science/sousa).

If you have completed the Diploma of Collegial Studies, Advanced Placement exams, Advanced Levels, the International Baccalaureate, the French Baccalaureate, or McGill placement examinations, you may receive exemption and/or credit for all or part of the basic science courses in biology, chemistry, mathematics and physics. Similarly, if you have completed courses at other universities or colleges, you may receive exemptions and/or credits. You should consult [www.mcgill.ca/student-records/transferecredits](http://www.mcgill.ca/student-records/transferecredits) for more information.

**Bac**

## **Science Complementary**

The seventh course is chosen from the list of Approved Freshman Science Courses.

Notes:

1. Students who have not studied all of Biology, Chemistry and Physics at the grade 12 level or equivalent are strongly advised to include at least one course in the missing discipline in their freshman program.
2. Many students will complete more than 7 courses from the Approved Freshman Science Courses list, particularly those who wish to leave several options open for their choice of major.

**Electives**

Students wishing to take elective courses may choose them from introductory courses offered by departments in the Faculties of Science or of Arts. A list of recommended courses is found at <http://www.mcgill.ca/science/sousa/bsc/freshman/approved>. Certain courses offered by other faculties may also be taken, but some restrictions apply. Consult the SOUSA website at <http://www.mcgill.ca/science/sousa/bsc/course/outside> for more information about taking courses from other faculties.

**Anatom**

## Professors

Nathalie Lamarche-Vane; B.Sc., Ph.D.(Montr.)

Marc D. McKee; B.Sc., M.Sc., Ph.D.(McG.) (*joint appoint. with Dentistry*)

Peter McPherson; B.Sc.(Manit.), Ph.D.(Iowa) (*joint appoint. with Neurology and Neurosurgery*)

Sandra C. Miller; B.Sc.(Sir G. Wms.), M.Sc., Ph.D.(McG.)

Carlos R. Morales; DVM.(U.N., Argentina), Ph.D.(McG.)

Barry I. Posner; M.D.(Manit.), F.R.C.P.(C) (*joint appoint. with Medicine*)

Alfredo Ribeiro-da-Silva; M.D., Ph.D.(Oporto) (*joint appoint. with Pharmacology and Therapeutics*)

W

### Associate Members

David Y. Thomas (*Biochemistry*)

Jackie Vogel (*Biology*)

Xiang-Jiao Yang (*Medicine*)

### Adjunct Professors

Michel Cayouette; Ph.D.(Laval)

F. Charron; B.Sc.(Montr.), Ph.D.(McG.)

E. Chevet; Ph.D.(Paris)

Mirosław Cygler; M.Sc., Ph.D.(Lodz, Poland)

Daniel Cyr; B.Sc., M.Sc.(C'odia), Ph.D.(Manit.)

Michel Desjardins; M.Sc., Ph.D.(Montr.)

Jacques Drouin; B.Sc., D.Sc.(Laval)

David Hipfner; B.Sc., Ph.D.(Qu.)

Marko Horb; Ph.D.(SUNY)

Artur Kania; Ph.D.(Baylor)

Bartha Knoppers; Ph.D.(France)

André Nantel; B.Sc., M.Sc.(Laval), Ph.D.(Chapel Hill)

Maureen O'Conner-McCourt; Ph.D.(Alta.)

Alexei Pshezhetsky; Ph.D.(Russia)

Joseph Schrag; M.Sc., Ph.D.(Ill.)

Atilla Sik; M.Sc., Ph.D.(Hungary)

Pierre Thibault; Ph.D.(Montr.)

### Faculty Lecturer

Ayman Behiery; M.B., Ch.B.(Cairo)

#### 32.13.2.4 Bachelor of Science (B.Sc.) - Liberal Program - Core Science Component Anatomy and Cell Biology (48 credits)

Students may complete this program with a minimum of 47 credits or a maximum of 48 credits depending on their choice of complementary courses.

#### Required Courses (32 credits)

\* Students who have taken the equivalent of CHEM 212 and/or MATH 203 in CEGEP (as defined at <http://www.mcgill.ca/students/courses/plan/transfer/>) are exempt and must replace these credits with elective course credits to satisfy the total credit requirement for their degree.

ANAT 212	(3)	Molecular Mechanisms of Cell Function
ANAT 214	(3)	Systemic Human Anatomy
ANAT 261	(4)	Introduction to Dynamic Histology
ANAT 262	(3)	Introductory Molecular and Cell Biology
BIOL 200	(3)	Molecular Biology
BIOL 202	(3)	Basic Genetics
CHEM 212*	(4)	Introductory Organic Chemistry 1
PHGY 209	(3)	Mammalian Physiology 1
PHGY 210	(3)	Mammalian Physiology 2

MATH 203	(3)	Principles of Statistics 1
PSYC 204	(3)	Introduction to Psychological Statistics

**Complementary Courses (16 credits)**

Students complete a minimum of 15 or a maximum of 16 complementary course credits selected as follows:

**List A**

9 credits selected from:

ANAT 321	(3)	Circuitry of the Human Brain
ANAT 322	(3)	Neuroendocrinology
ANAT 365	(3)	Cellular Trafficking
ANAT 381	(3)	Basis of Embryology
NEUR 310	(3)	Cellular Neurobiology

**List B**

6-7 credits selected from:

ANAT 321	(3)	Circuitry of the Human Brain
ANAT 322	(3)	Neuroendocrinology
ANAT 365	(3)	Cellular Trafficking
ANAT 381	(3)	Basis of Embryology
BIOL 300	(3)	Molecular Biology of the Gene
BIOL 301	(4)	Cell and Molecular Laboratory
BIOL 303	(3)	Developmental Biology
BIOL 306	(3)	Neural Basis of Behaviour
BIOL 314	(3)	Molecular Biology of Oncogenes
EXMD 504	(3)	Biology of Cancer
MIMM 314	(3)	Immunology
NEUR 310	(3)	Cellular Neurobiology
PATH 300	(3)	Human Disease
PHAR 300	(3)	Drug Action
PHAR 301	(3)	Drugs and Disease

**32.13.2.5 Bachelor of Science (B.Sc.) - Major Anatomy and Cell Biology (67 credits)**

**Required Courses (43 credits)**

Note: ANAT 261 must be taken in U1.

\* Students who have taken the equivalent of CHEM 212, CHEM 222, and/or MATH 203 in CEGEP (as defined at <http://www.mcgill.ca/students/courses/plan/transfer/>) are exempt and must replace these credits with elective course credits to satisfy the total credit requirement for their degree.

ANAT 212	(3)	Molecular Mechanisms of Cell Function
ANAT 214	(3)	Systemic Human Anatomy
ANAT 261	(4)	Introduction to Dynamic Histology
ANAT 262	(3)	Introductory Molecular and Cell Biology
BIOL 200	(3)	Molecular Biology



BIOL 301	(4)	Cell and Molecular Laboratory
BIOL 303	(3)	Developmental Biology
BIOL 306	(3)	Neural Basis of Behaviour
BIOL 313	(3)	Eukaryotic Cell Biology
BIOL 314	(3)	Molecular Biology of Oncogenes
BIOL 370	(3)	Human Genetics Applied
BIOL 389	(3)	Laboratory in Neurobiology
BIOL 468	(6)	Independent Research Project 3
BIOL 514	(3)	Neurobiology Learning and Memory
BIOL 518	(3)	Advanced Topics in Cell Biology
BIOL 520	(3)	Gene Activity in Development
BIOL 524	(3)	Topics in Molecular Biology
BIOL 530	(3)	Advances in Neuroethology
BIOL 532	(3)	Developmental Neurobiology Seminar
BIOL 544	(3)	Genetic Basis of Life Span
BIOL 551	(3)	Molecular Biology: Cell Cycle
BIOL 572	(3)	Molecular Evolution
BIOL 575	(3)	Human Biochemical Genetics
BIOL 588	(3)	Advances in Molecular/Cellular Neurobiology
BIOT 505	(3)	Selected Topics in Biotechnology
EXMD 401	(3)	Physiology and Biochemistry Endocrine Systems
EXMD 502	(3)	Advanced Endocrinology 01
EXMD 503	(3)	Advanced Endocrinology 02
EXMD 504	(3)	Biology of Cancer
	(3)	Advanced Applied Cardiovascular Physiology



PATH 300	(3)	Human Disease
PHAR 300	(3)	Drug Action
PHAR 301	(3)	Drugs and Disease
PHAR 303	(3)	Principles of Toxicology
PHAR 562	(3)	General Pharmacology 1
PHAR 563	(3)	General Pharmacology 2
PHGY 311	(3)	Channels, Synapses & Hormones
PHGY 312	(3)	Respiratory, Renal, & Cardiovascular Physiology
PHGY 313	(3)	Blood, Gastrointestinal, & Immune Systems Physiology
PHGY 314	(3)	Integrative Neuroscience
	(3)	Advanced Neurophysiology

(3)

(3) cienm(InrRenmOrPh)Tj1 0 0 28809.841 70.84 TmgPh

PHGY 209	(3)	Mammalian Physiology 1
PHGY 210	(3)	Mammalian Physiology 2

One of the following statistics courses:

BIOL 373	(3)	Biometry
MATH 203*	(3)	Principles of Statistics 1
PSYC 204	(3)	Introduction to Psychological Statistics

**Complementary Courses (21 credits)**

Complementary courses are selected as follows with a minimum of 6 credits at the 400-level or higher:

18 credits selected from:

ANAT 321	(3)	Circuitry of the Human Brain
ANAT 322	(3)	Neuroendocrinology
ANAT 365	(3)	Cellular Trafficking
ANAT 381	(3)	Basis of Embryology
ANAT 416	(3)	Development, Disease and Regeneration
ANAT 458	(3)	Membranes and Cellular Signaling

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BIOL 370	(3)	Human Genetics Applied
BIOL 389	(3)	Laboratory in Neurobiology
BIOL 468	(6)	Independent Research Project 3
BIOL 514	(3)	Neurobiology Learning and Memory
BIOL 518	(3)	Advanced Topics in Cell Biology
BIOL 520	(3)	Gene Activity in Development
BIOL 524	(3)	Topics in Molecular Biology
BIOL 530	(3)	Advances in Neuroethology
BIOL 532	(3)	Developmental Neurobiology Seminar
BIOL 544	(3)	Genetic Basis of Life Span
BIOL 551	(3)	Molecular Biology: Cell Cycle
BIOL 572	(3)	Molecular Evolution
BIOL 575	(3)	Human Biochemical Genetics
BIOL 588	(3)	Advances in Molecular/Cellular Neurobiology
BIOT 505	(3)	Selected Topics in Biotechnology
EXMD 401	(3)	Physiology and Biochemistry Endocrine Systems
EXMD 502	(3)	Advanced Endocrinology 01
EXMD 503	(3)	Advanced Endocrinology 02
EXMD 504	(3)	Biology of Cancer
EXMD 506	(3)	Advanced Applied Cardiovascular Physiology
EXMD 507	(3)	Advanced Applied Respiratory Physiology
EXMD 508	(3)	Advanced Topics in Respiration
EXMD 509	(3)	Gastrointestinal Physiology and Pathology
EXMD 510	(3)	Bioanalytical Separation Methods
EXMD 512D1	(3)	Recent Progress in AIDS Research
EXMD 512D2	(3)	Recent Progress in AIDS Research
MIMM 314	(3)	Immunology
MIMM 323	(3)	Microbial Physiology
MIMM 324	(3)	Fundamental Virology
MIMM 386D1	(3)	Laboratory in Microbiology and Immunology
MIMM 386D2	(3)	Laboratory in Microbiology and Immunology
MIMM 387	(3)	Applied Microbiology and Immunology
MIMM 413	(3)	Parasitology
MIMM 414	(3)	Advanced Immunology
MIMM 465	(3)	Bacterial Pathogenesis
MIMM 466	(3)	Viral Pathogenesis
MIMM 509	(3)	Inflammatory Processes
NEUR 310	(3)	Cellular Neurobiology
NUTR 307	(3)	Human Nutrition
PATH 300	(3)	Human Disease
PHAR 300	(3)	Drug Action
PHAR 301	(3)	Drugs and Disease
PHAR 303	(3)	Principles of Toxicology

PHAR 562	(3)	General Pharmacology 1
PHAR 563	(3)	General Pharmacology 2
PHGY 311	(3)	Channels, Synapses & Hormones
PHGY 312	(3)	Respiratory, Renal, & Cardiovascular Physiology
PHGY 313	(3)	Blood, Gastrointestinal, & Immune Systems Physiology
PHGY 314	(3)	Integrative Neuroscience
PHGY 451	(3)	Advanced Neurophysiology
PHGY 502	(3)	Exercise Physiology
PHGY 508	(3)	Advanced Renal Physiology
PHGY 513	(3)	Cellular Immunology
PHGY 515	(3)	Physiology of Blood 1
PHGY 516	(3)	Physiology of Blood 2
PHGY 517	(3)	Artificial Internal Organs
PHGY 518	(3)	Artificial Cells
PHGY 552	(3)	Cellular and Molecular Physiology
PHGY 556	(3)	Topics in Systems Neuroscience
PSYT 500	(3)	Advances: Neurobiology of Mental Disorders

A degree in Atmospheric Science can lead to a professional career in government service or pri

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**32.13.3.6 Bachelor of Science (B.Sc.) - Major Atmospheric Science (61 credits)**

**Required Courses (46 credits)**

ATOC 214	(3)	Introduction: Physics of the Atmosphere
ATOC 215	(3)	Oceans, Weather and Climate
ATOC 309	(3)	Weather Radars and Satellites
ATOC 315	(3)	Water in the Atmosphere
ATOC 412	(3)	Atmospheric Dynamics
ATOC 540	(3)	Synoptic Meteorology 1
ATOC 541	(3)	Synoptic Meteorology 2
ATOC 546	(1)	Current Weather Discussion
COMP 208	(3)	Computers in Engineering
MATH 222	(3)	Calculus 3
MATH 223	(3)	Linear Algebra
MATH 314	(3)	Advanced Calculus
MATH 315	(3)	Ordinary Differential Equations
		Dynamics of Simple Systems

MATH 423	(3)	Regression and Analysis of Variance
MATH 555**	(4)	Fluid Dynamics
PHYS 241	(3)	Signal Processing
PHYS 331	(3)	Topics in Classical Mechanics
PHYS 332**	(3)	Physics of Fluids
PHYS 340	(3)	Majors Electricity and Magnetism
PHYS 342	(3)	Majors Electromagnetic Waves

**Bachelor of Science (B.Sc.) - Major Atmospheric Science - Atmospheric Chemistry (61 credits)**





### Complementary Course (3 credits)

Students select one of the following courses:

PHYS 434	(3)	Optics
PHYS 439	(3)	Majors Laboratory in Modern Physics

### 32.13.3.9 Bachelor of Science (B.Sc.) - Honours Atmospheric Science (70 credits)

Students can be admitted to the Honours program after completion of the U1 year of the Major in Atmospheric Science program with a minimum GPA of 3.30. Students having completed a U1 year in a different program with high standing may be admitted to the Honours program on the recommendation of that Department.

A minimum GPA of 3.30 in the Honours Program courses (taken as a whole) is required to remain in the program. A CGPA of 3.30 on the total program is also required to graduate with honours.

### Required Courses (52 credits)

ATOC 214	(3)	Introduction: Physics of the Atmosphere
ATOC 215	(3)	Oceans, Weather and Climate
ATOC 309	(3)	Weather Radars and Satellites
ATOC 315	(3)	Water in the Atmosphere
ATOC 480	(3)	Honours Research Project
ATOC 512	(3)	Atmospheric and Oceanic Dynamics
ATOC 531	(3)	Dynamics of Current Climates
ATOC 540	(3)	Synoptic Meteorology 1
ATOC 546	(1)	Current Weather Discussion
COMP 208	(3)	Computers in Engineering
MATH 222	(3)	Calculus 3
MATH 223	(3)	Linear Algebra
MATH 314	(3)	Advanced Calculus
MATH 315	(3)	Ordinary Differential Equations
MATH 319	(3)	Introduction to Partial Differential Equations
PHYS 230	(3)	Dynamics of Simple Systems
PHYS 232	(3)	Heat and Waves
PHYS 257	(3)	Experimental Methods 1

### Complementary Courses (18 credits)

3-6 credits to satisfy a statistics requirement.

Students usually take MATH 203 or MATH 323 and MATH 324.

MATH 203	(3)	Principles of Statistics 1
MATH 323	(3)	Probability
MATH 324	(3)	Statistics

3 credits selected from:

PHYS 333	(3)	Thermal and Statistical Physics
PHYS 340	(3)	Majors Electricity and Magnetism

3-6 credits ordinarily selected from the courses below:

\* Students may take either ATOC 419 or CHEM 419

\*\* Students may take either PHYS 332 or MATH 555

ATOC 419*	(3)	Advances in Chemistry of Atmosphere
ATOC 515	(3)	Turbulence in Atmosphere and Oceans
CHEM 419*	(3)	Advances in Chemistry of Atmosphere
GEOG 322	(3)	Environmental Hydrology
GEOG 372	(3)	Running Water Environments
MATH 317	(3)	Numerical Analysis
MATH 423	(3)	Regression and Analysis of Variance
MATH 555**	(4)	Fluid Dynamics
PHYS 241	(3)	Signal Processing
PHYS 331	(3)	Topics in Classical Mechanics
PHYS 332**	(3)	Physics of Fluids
PHYS 340	(3)	Majors Electricity and Magnetism
PHYS 342	(3)	Majors Electromagnetic Waves

6 credits selected from:

ATOC 513	(3)	Waves and Stability
ATOC 530	(3)	Paleoclimate Dynamics
ATOC 541	(3)	Synoptic Meteorology 2

**Bachelor of Science (B.Sc.) - Honours Atmospheric Science - Atmospheric Chemistry (70 credits)**

MATH 222	(3)	Calculus 3
MATH 223	(3)	Linear Algebra
MATH 314	(3)	Advanced Calculus
MATH 315	(3)	Ordinary Differential Equations

ATOC 512	(3)	Atmospheric and Oceanic Dynamics
ATOC 513	(3)	Waves and Stability
ATOC 531	(3)	Dynamics of Current Climates
ATOC 540	(3)	Synoptic Meteorology 1
ATOC 541	(3)	Synoptic Meteorology 2

**Complementary Courses (12 credits)**

6 credits selected from the courses below.

\* Students take either ATOC 419 or CHEM 419.

ATOC 309	(3)	Weather Radars and Satellites
ATOC 315	(3)	Water in the Atmosphere
ATOC 419*	(3)	Advances in Chemistry of Atmosphere
CHEM 419*	(3)	Advances in Chemistry of Atmosphere

9 credits ordinarily selected from:

\* Students tak

## **32.13.4 Biochemistry (BIOC)**

### **32.13.4.1 Location**

Irving Ludmer Research and Training Building, Rooms 208-209  
1033 Pine Avenue West  
Montreal, Quebec H3A 1A1

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## Professors

Nicole Beauchemin; B.Sc., M.Sc., Ph.D.(Montr.) (*joint appoint. with Oncology*)

Albert Berghuis; B.Sc., M.Sc.(Rijks Univ. Groningen, the Netherlands), Ph.D.(Br. Col.)

Philip E. Branton; B.Sc., M.Sc., Ph.D.(Tor.) (*Gilman Cheney Professor of Biochemistry*)

PetersURnghuis; B.Sc., M..D.(Br

### Associate Members

Maya Saleh (*Medicine*)

Erwin Schurr (*Exp. Medicine, RVH*)

Charles Scriver (*Pediatrics, MCH*)

Peter Siegel (*Medicine*)

Bernard Turcotte (*Exp. Medicine, RVH*)

Simon Wing (*Medicine*)

Xiang-Jiao Yang (*Molecular Oncology, RVH*)

### Adjunct Professors

Prabhat Arya (*NRC, Ottawa*)

Mirek Cygler (*B.R.I.*)

Jacques Drouin (*IRCM*)

Anny Fortin (*Dafra Pharma*)

Tarik Möröy (*IRCM*)

Donald Nicholson (*Merck*)

Maureen D. O'Connor-McCourt (*B.R.I.*)

Enrico Purisima (*B.R.I.*)

Martine Raymond (*I.R.I.C. Montr.*)

René Roy (*UQAM*)

Alex Therien (*Merck*)

### 32.13.4.5 Bachelor of Science (B.Sc.) - Liberal Program - Core Science Component Biochemistry (47 credits)

#### U1 Required Courses (20 credits)

\* Students with CEGEP-level credit for CHEM 212 and/or CHEM 222 should replace these courses with elective courses.

BIOC 212	(3)	Molecular Mechanisms of Cell Function
BIOL 200	(3)	Molecular Biology
BIOL 202	(3)	Basic Genetics
CHEM 204	(3)	Physical Chemistry/Biological Sciences 1 Introductory Org



BIOC 300D2	(3)	Laboratory in Biochemistry
BIOC 311	(3)	Metabolic Biochemistry
BIOC 312	(3)	Biochemistry of Macromolecules
CHEM 302	(3)	Introductory Organic Chemistry 3

### U2 Complementary Courses\*\* (3 credits)

\*\* Complementary courses listed for U1 and U2 may be taken in later years if necessary to accommodate courses that must be taken in U1 or U2 as part of the breadth component of the program.

3 credits selected from:

BIOL 373	(3)	Biometry
COMP 202	(3)	Introduction to Computing 1
MATH 203	(3)	Principles of Statistics 1
MATH 222	(3)	Calculus 3
PSYC 204	(3)	Introduction to Psychological Statistics

### U3 Complementary Courses (3 credits)

3 credits selected from:

BIOC 450	(3)	Protein Structure and Function
BIOC 454	(3)	Nucleic Acids

### 32.13.4.6 Bachelor of Science (B.Sc.) - Major Biochemistry (67 credits)

Students may transfer into the Major program at any time, provided they have met all course requirements.

### U1 Required Courses (23 credits)

\* Note: Students with CEGEP-level credit for the equivalents of CHEM 212 and/or CHEM 222 (see <http://www.mcgill.ca/students/courses/plan/transfer/> for accepted equivalents), may transfer into the program. A student must be accepted into the program before transferring credit.

**U2 Required Courses (23 credits)**

ANAT 262 (3) Introductory Molecular and Cell Biology  
(3) Laboratory ioaoULBemistrgy

(3) Laboratory ioaoULBemistrgy

(3)

(3)

(3) IntroductoryOur

CHEM 572	(3)	Synthetic Organic Chemistry
EXMD 502	(3)	Advanced Endocrinology 01
MIMM 314	(3)	Immunology
MIMM 324	(3)	Fundamental Virology
PHAR 300	(3)	Drug Action
PHGY 311	(3)	Channels, Synapses & Hormones

### 32.13.4.7 Bachelor of Science (B.Sc.) - Honours Biochemistry (76 credits)

Admission to the Honours program will not be granted until U2. Students who wish to enter the Honours program in U2 should follow the U1 Major program. Those who satisfactorily complete the U1 Major program with a GPA of at least 3.20 and a mark of B- or better in every required course are eligible for admission to the Honours program.

Students seeking admission to the Honours program must obtain permission from the Departmental Student Affairs Officer during the Add/Drop period in September of their second year.

Promotion to U3 year is based on satisfactory completion of U2 courses with a GPA of at least 3.20 and a mark of B or better in every required course. In borderline cases, the marks received in BIOC 311 and BIOC 312 will be of particular importance for continuation in the U3 Honours year.

For graduation in the Honours program, students must complete a minimum of 90 credits, pass all required courses with no grade less than B, and achieve a CGPA of at least 3.20.

#### U1 Required Courses (23 credits)

\* Note: Students with CEGEP-level credit for the equivalents of CHEM 212 and/or CHEM 222 (see <http://www.mcgill.ca/students/courses/plan/transfer/> for accepted equivalents) may not take these courses at McGill and should replace them with elective courses to satisfy the total credit requirement for their degree.

BIOC 212	(3)	Molecular Mechanisms of Cell Function
BIOL 200	(3)	Molecular Biology
BIOL 202	(3)	Basic Genetics
CHEM 204	(3)	Physical Chemistry/Biological Sciences 1
CHEM 212*	(4)	Introductory Organic Chemistry 1
CHEM 222*	(4)	Introductory Organic Chemistry 2
CHEM 287	(2)	Introductory Analytical Chemistry
CHEM 297	(1)	Introductory Analytical Chemistry Laboratory

#### U1 Complementary Courses (6 credits)

6 credits selected from:

BIOL 205	(3)	Biology of Organisms
MIMM 211	(3)	Introductory Microbiology
PHGY 209	(3)	Mammalian Physiology 1
PHGY 210	(3)	Mammalian Physiology 2

#### U2 Required Courses (23 credits)

ANAT 262	(3)	Introductory Molecular and Cell Biology
BIOC 300D1	(3)	Laboratory in Biochemistry
BIOC 300D2	(3)	Laboratory in Biochemistry
BIOC 311	(3)	Metabolic Biochemistry
BIOC 312	(3)	Biochemistry of Macromolecules
CHEM 214	(3)	Physical Chemistry/Biological Sciences 2





### 32.13.5.3 Preprogram Requirements

Requirements for the Major and Honours programs in Biology are 2 courses in elementary Biology, 2 courses in general Chemistry, 2 courses in Calculus and 2 courses in Physics (Mechanics and Electromagnetism). Students entering into the B.A. & Sc., the Liberal Program and the Biology Science Minor have the same Biology, Chemistry and Mathematics requirements. The Physics requirements will vary according to their future direction.

### 32.13.5.4 Biology Concentrations



**Note:** The concentrations set out below are only guidelines for specialized training. *They do not constitute sets of requirements.*

Students interested in advanced studies in any biological discipline are strongly advised to develop their skills in computing as appropriate. As an aid to students wishing to specialize, key and suggested courses are listed by discipline.

#### 32.13.5.4.1 Animal Behaviour Concentration

Understanding the diverse ways in which animals feed, mate, care for their offspring, avoid predators, select their habitats, communicate, and process information constitute the subject matter of behaviour. Several approaches are used to study these questions. Some focus on ecological consequences and determinants, some on physiological, genetic and developmental mechanisms, others on evolutionary origins.

Key courses: BIOL 304, BIOL 305, BIOL 306, BIOL 307, BIOL 331 or BIOL 334D1/BIOL 334D2 or another field course with a significant behavioural component, BIOL 373, BIOL 507.

Other suggested courses: BIOL 377, BIOL 466, BIOL 467, BIOL 468D1/BIOL 468D2, BIOL 469D1/BIOL 469D2.

Most courses from the fields of behaviour, ecology, and evolutionary biology, most courses from these fields will be relevant for this concentration. Some courses that focus on a particular taxonomic group such as birds (Natural Resource Sciences WILD 420), amphibians and reptiles (BIOL 427) and marine mammals (BIOL 335) include a significant amount of behaviour.

#### 32.13.5.4.2 Biological Diversity and Systematics

The study of biological diversity deals with the maintenance, emergence and history of the inexhaustible variety of different kinds of organisms. It is deeply concerned with the particular characteristics of different organisms and therefore emphasizes the detailed study of particular groups and forms the basis of comparative biology. Our knowledge of diversity is organized through the study of systematics, which seeks to understand the history of life and the phylogenetic and genetic relationships of living things. Appreciation and knowledge of diversity and systematics are essential in ecology and evolutionary biology and underlie all work in resource utilization and conservation biology.

Key courses: BIOL 304, BIOL 305, BIOL 373.

Other suggested courses: BIOL 240, BIOL 310, BIOL 324, BIOL 331 or BIOL 334D1/BIOL 334D2, BIOL 335, BIOL 350/ENTO 350, BIOL 352, BIOL 355, BIOL 377, BIOL 427, BIOL 428, BIOL 429, BIOL 465, BIOL 466 or BIOL 467, BIOL 468D1/BIOL 468D2, BIOL 469D1/BIOL 469D2, BIOL 540, BIOL 555D1/BIOL 555D2, BIOL 569, BIOL 571, BIOL 573, BIOL 594, REDM 400.

Macdonald Campus: AEBI 212, ENTO 440, ENVB 313, PLNT 358,

Key courses: BIOL 305, BIOL 308, BIOL 331 or BIOL 334D1/334D2, BIOL 350/ENTO 350, BIOL 373; COMP 202, COMP 273.

Other suggested courses: BIOL 307, BIOL 324, BIOL 342, BIOL 377, BIOL 427, BIOL 428, BIOL 429, BIOL 432, BIOL 434, BIOL 441, BIOL 465, BIOL 466, BIOL 467, BIOL 468D1/BIOL 468D2, BIOL 469D1/BIOL 469D2, BIOL 510, BIOL 540, BIOL 571, BIOL 590, BIOL 594; GEOG 302.

Macdonald Campus: PLNT 460.

#### **32.135.442 Aquatic Ecology Concentration**

This concentration is designed to introduce the principles of ecology as they pertain to aquatic ecosystems and aquatic biota. Since it is essential to know how knowledge is obtained, as well as what has been learned, one of the courses (Limnology) involves field work, and one of the courses (Biological Oceanography) a laboratory component, that stress the techniques used to study aquatic ecology. In addition, the concentration includes a field course in ecology. There is also a variety of courses in aquatic disciplines offered in other departments that complement the aquatic ecology courses offered in Biology.

Key courses: BIOL 305, BIOL 308, BIOL 331 or another field course, BIOL 342, BIOL 373, BIOL 432 (or ENVB 315), BIOL 441, BIOL 465; COMP 202, COMP 273.

Other suggested courses: BIOL 307, BIOL 429, BIOL 434, BIOL 466, BIOL 467, BIOL 468D1/BIOL 468D2, BIOL 469D1/BIOL 469D2, BIOL 540, BIOL 590, GEOG 305, GEOG 306, GEOG 308, GEOG 322.

#### **32.135.443 Marine Biology Concentration**

This concentration is designed to offer students a broad introduction to marine biology and marine ecology, which will form the basis for graduate studies in the fields, or for employment in aquatic biology and oceanography.

Key courses: BIOL 305, BIOL 308, BIOL 335, BIOL 342, BIOL 373, BIOL 441.

Other suggested courses: ATOC 512, ATOC 550; BIOL 331, BIOL 334D1/BIOL 334D2, BIOL 429, BIOL 432, BIOL 434, BIOL 465, BIOL 515, BIOL 540, BIOL 590; EPSC 542.

For students intending to proceed to graduate work, one independent studies course (BIOL 466 or BIOL 467, BIOL 468D1/BIOL 468D2, BIOL 469D1/BIOL 469D2) is recommended. Because of the importance of numerical analyses in all fields of ecology, courses in Biometry (e.g. BIOL 373) and Computer Science (COMP 202 or COMP 273) are recommended.

#### **32.135.45 Evolutionary Biology Concentration**

Evolutionary Biology is the study of processes that change organisms and their characteristics through time. Evolutionary biologists are concerned with adaptations of organisms and the process of natural selection.

Key courses: BIOL 304, BIOL 305, BIOL 307, BIOL 324, BIOL 331, BIOL 352, BIOL 373, BIOL 377, BIOL 435, BIOL 463, BIOL 466 or BIOL 467, BIOL 468D1/BIOL 468D2, BIOL 469D1/BIOL 469D2, BIOL 555 D1/BIOL 555 D2, BIOL 569, BIOL 570, BIOL 571, BIOL 572, BIOL 573, BIOL 585, BIOL 594.

Other suggested courses in Organismal Biology: BIOL 240, BIOL 335, BIOL 350/ENTO 350, BIOL 355, BIOL 427, BIOL 428.

Macdonald Campus: PLNT 358, WILD 420.

Genetics and Development: BIOL 300, BIOL 303.

Ecology and Behaviour: BIOL 309, BIOL 429, BIOL 434, BIOL 507, BIOL 515, BIOL 590.

#### **32.135.46 Human Genetics Concentration**

The courses recommended for students interested in Human Genetics are designed to offer a broad perspective in this rapidly advancing area of biology. Genetics is covered at all levels of organization (the gene, the chromosome, the cell, the organism and the population), using pertinent examples from all species, but with special emphasis on humans.

Key courses: BIOL 301, BIOL 370, BIOL 373, BIOL 416, BIOL 520, BIOL 568, BIOL 575.

Other suggested courses: BIOC 311; BIOL 314, BIOL 466, BIOL 467 BIOL 468D1/BIOL 468D2, BIOL 469D1/BIOL 469D2; CHEM 203 or CHEM 204 and CHEM 214, MIMM 314.

#### **32.135.47 Molecular Genetics and Development Concentration**

from the molecular to the organismal. As a result of exposure to a wide range of experimental and intellectual approaches, students receive a sound, broadly based education in biology.

Key courses: BIOL 306, BIOL 373, BIOL 389, BIOL 507, BIOL 514, BIOL 530, BIOL 532, BIOL 588.

Other suggested courses: ANAT 321, ANAT 322; BIOC 455; BIOL 300, BIOL 303, BIOL 466, BIOL 467, BIOL 468D1/BIOL 468D2, BIOL 469D1/BIOL 469D2, NEUR 310, NSCI 200, NSCI 201, PHAR 562, PHGY 311, PHGY 314, PHGY 425, PHGY 451, PHGY 556, PSYC 311, PSYC 318, PSYC 342, PSYC 410, PSYC 470, PSYT 500.

### **32.13.5.5 Biology (BIOL) Faculty**

#### **Chair**

Paul F. Lasko

#### **Emeritus Professors**

A. Howard Bussey; B.Sc., Ph.D.(Brist.), F.R.S.C.

Robert L. Carroll; B.S.(Mich.), M.A., Ph.D.(Harv.), F.R.S.C.

Ronald Chase; A.B.(Stan.), Ph.D.(MIT)

Jacob Kalf; M.S.A.(Tor.), Ph.D.(Ind.)

Donald L. Kramer; B.Sc.(Boston Coll.), Ph.D.(Br. Col.)

John B. Lewis; B.Sc., M.Sc., Ph.D.(McG.)

#### **Professors**

Graham A.C. Bell; B.A., D.Phil.(Oxf.), F.R.S.C. (*James McGill Professor*)

Gregory G. Brown; B.Sc.(Notre Dame), Ph.D.(CUNY)

MIT)



**Associate Professors**

Jacalyn Vogel; M.Sc.(E.Ill.), Ph.D.(Kansas) (*Canadian Pacific Chair in Biotechnology*)

Tamara Western; B.Sc.(Dal.), Ph.D.(Br. Col.) (*on sabbatical July -December*)

Monique Zetka; B.Sc., Ph.D.(Br. Col.)

### **32.13.5.6 Bachelor of Science (B.Sc.) - Minor Biology (25 credits)**

The Minor Biology may be taken in conjunction with any primary program in the Faculty of Science (other than programs offered by the Department of Biology). Students are advised to consult the Undergraduate Adviser in Biology as early as possible (preferably during their first year), in order to plan their course selection.

Six credits of overlap are allowed between the Minor and the primary program.

#### **Required Courses (15 credits)**

BIOL 200	(3)	Molecular Biology
BIOL 201	(3)	Cell Biology and Metabolism
BIOL 202	(3)	Basic Genetics
BIOL 205	(3)	Biology of Organisms
BIOL 215	(3)	Introduction to Ecology and Evolution

#### **Complementary Courses (10 credits)**

Students complete a minimum of 9 or a maximum of 10 complementary course credits depending on their choice of complementary courses.

Students select the course below, plus an additional two courses from the Biology Department's course offerings, at the 300-level or above.

\* Students who have already taken CHEM 212 or its equivalent will choose another appropriate course, to be approved by the adviser.

D5.j1 0 ysentar Introductory Organic Chemistry 1

Students in the Major Program are permitted to take a maximum of 9 credits of research courses.

**U1 Required Courses (18 credits)**

BIOL 200	(3)	Molecular Biology
BIOL 201	(3)	Cell Biology and Metabolism
BIOL 202	(3)	Basic Genetics
BIOL 205	(3)	Biology of Organisms
BIOL 206	(3)	Methods in Biology of Organisms
BIOL 215	(3)	Introduction to Ecology and Evolution

**U2 or U3 Required Courses (4 credits)**

BIOL 301	(4)	Cell and Molecular Laboratory
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**Complementary Courses (37 credits)**

Students complete a minimum of 36 credits or maximum of 37 credits selected as follows:

**U1 Complementary Course**

\* Students who have already taken CHEM 212 or its equivalent will choose another appropriate complementary course, to be approved by the adviser.

CHEM 212*	(4)	Introductory Organic Chemistry I
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**U2 or U3 Complementary Courses**

12 credits selected from:

BIOL 300	(3)	Molecular Biology of the Gene
	3o3)	Developmental Biology

MATH 140	(3)	Calculus 1
MATH 141	(4)	Calculus 2
PHYS 101	(4)	Introductory Physics - Mechanics
PHYS 102*	(4)	Introductory Physics - Electromagnetism

### Required Courses (37 credits)

\* If a student has already taken CHEM 212 or its equivalent, the credits can be made up with a complementary course in consultation with the program coordinator.

\*\* Students who have sufficient knowledge in a programming language should take COMP 250 (3) Introduction to Computer Science rather than COMP 202.

\*\*\* Students may take either MATH 223 or MATH 247.

BIOL 200	(3)	Molecular Biology
BIOL 201	(3)	Cell Biology and Metabolism
BIOL 215	(3)	Introduction to Ecology and Evolution
BIOL 308	(3)	Ecological Dynamics
CHEM 212*	(4)	Introductory Organic Chemistry 1
COMP 202**	(3)	Introduction to Computing 1
MATH 222	(3)	Calculus 3
MATH 223***	(3)	Linear Algebra
MATH 242	(3)	Analysis 1
MATH 243	(3)	Analysis 2
MATH 247***	(3)	Honours Applied Linear Algebra
MATH 315	(3)	Ordinary Differential Equations
MATH 323	(3)	Probability

### Complementary Courses (39 credits)

For the 39 credits, students complete 21 credits of BINF, BIOL, NEUR, PHGY, PSYC courses including one of three Streams (Ecology and Evolutionary Ecology, Molecular Evolution, Neurosciences) and 18 credits of MATH courses.

### Math or Biology Research Course

Note: Students selecting a BIOL course count this toward their 21 credits of BINF, BIOL, NEUR, PHGY, PSYC courses while students selecting a MATH course count this toward their 18 credits of MATH courses.

3 credits from the following Math or Biology Research courses:

BIOL 466	(3)	Independent Research Project 1
BIOL 467	(3)	Independent Research Project 2
MATH 410	(3)	Majors Project

### Math Courses

15 - 18 credits of MATH courses chosen from Sequence 1 or 2 and from "Remaining Math Courses" as follows:

#### Sequence 1

12 credits from the following courses:

\* Students may take either MATH 317 or MATH 327

\*\* Students may take either MATH 326 or MATH 437

MATH 314	(3)	Advanced Calculus
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MATH 317*	(3)	Numerical Analysis
MATH 319	(3)	Introduction to Partial Differential Equations
MATH 326**	(3)	Nonlinear Dynamics and Chaos
MATH 327*	(3)	Matrix Numerical Analysis
MATH 437**	(3)	Mathematical Methods in Biology

### Sequence 2

9 credits from the following:

MATH 324	(3)	Statistics
MATH 423	(3)	Regression and Analysis of Variance
MATH 447	(3)	Stochastic Processes

### Remaining Math Courses

Remaining 3 to 9 credits of MATH courses may be chosen from any of the two preceding sequences and/or from the following list:

MATH 204	(3)	Principles of Statistics 2
MATH 340	(3)	Discrete Structures 2
MATH 523	(4)	Generalized Linear Models
MATH 524	(4)	Nonparametric Statistics
MATH 525	(4)	Sampling Theory and Applications

### BIOL, NEUR, PHGY, PHYS, PSYC courses

18 to 21 credits of BIOL, NEUR, PHGY, PHYS, PSYC courses including one of three Streams.

Note: Some courses in the Streams may have prerequisites.

### Ecology and Evolutionary Ecology Stream

At least 15 credits selected as follows:

#### Stream Required Course

BIOL 206	(3)	Methods in Biology of Organisms
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#### Stream Complementary Courses

3 credits from the following

BIOL 434	(3)	Theoretical Ecology
BIOL 585	(3)	Game Theory and Evolutionary Dynamics
BIOL 590	(3)	Linking Community and Ecosystem Ecology
BIOL 594	(3)	Advanced Evolutionary Ecology

**Molecular Ev**

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### U1 Required Courses (18 credits)

BIOL 200	(3)	Molecular Biology
BIOL 201	(3)	Cell Biology and Metabolism
BIOL 202	(3)	Basic Genetics
BIOL 205	(3)	Biology of Organisms
BIOL 206	(3)	Methods in Biology of Organisms
BIOL 215	(3)	Introduction to Ecology and Evolution

### U1 Complementary Course

\* Students who have already taken CHEM 212 or its equivalent will choose another appropriate complementary course, to be approved by the adviser.

CHEM 212*	(4)	Introductory Organic Chemistry 1
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### U2 or U3 Required Courses (7 credits)

BIOL 301	(4)	Cell and Molecular Laboratory
BIOL 373	(3)	Biometry

### U2 and U3 Complementary Courses (33 credits)

Students who take CHEM 212 in U1 complete 30 credits and those exempted from CHEM 212 complete 33 credits selected as follows:

12 credits selected from:

BIOL 300	(3)	Molecular Biology of the Gene
BIOL 303	(3)	Developmental Biology
BIOL 304	(3)	Evolution
BIOL 306	(3)	Neural Basis of Behaviour
BIOL 308	(3)	Ecological Dynamics

18 - 21 credits in Biology at the 300-level or higher.

### U3 Required Courses (4 credits)

BIOL 499D1	(2)	Honours Seminar in Biology
BIOL 499D2	(2)	Honours Seminar in Biology

### U3 Complementary Courses (12 credits)

9 - 12 credits selected from:

BIOL 479D1	(4.5)	Honours Research Project 1
BIOL 479D2	(4.5)	Honours Research Project 1
BIOL 480D1	(6)	Honours Research Project 2
BIOL 480D2	(6)	Honours Research Project 2

### 32.13.5.11 Biology (BIOL) Related Programs and Study Semesters

#### 32.13.5.11.1 Joint Major in Computer Science and Biology

For more information, see [section 32.13.9.12: Bachelor of Science \(B.Sc.\) - Major Computer Science and Biology \(73 credits\)](#)





BIOL 200	(3)	Molecular Biology
BIOL 201*	(3)	Cell Biology and Metabolism
BIOL 202	(3)	Basic Genetics
BIOT 505	(3)	Selected Topics in Biotechnology
MIMM 211	(3)	Introductory Microbiology

**Complementary Courses (9 credits)**

9 credits selected from courses outside the department of the student's main program. Alternatively, or in addition, courses may be taken from the lists below

**Microbiology**

MIMM 323	(3)	Microbial Physiology
MIMM 324	(3)	Fundamental Virology
MIMM 413	(3)	Parasitology
MIMM 465	(3)	Bacterial Pathogenesis
MIMM 466	(3)	Viral Pathogenesis

**Molecular Biology (Biology)**

BIOL 300	(3)	Molecular Biology of the Gene
BIOL 314	(3)	Molecular Biology of Oncogenes
BIOL 520	(3)	Gene Activity in Development
BIOL 524	(3)	Topics in Molecular Biology
BIOL 551	(3)	Molecular Biology: Cell Cycle

**Molecular Biology (Biochemistry)**

BIOC 311	(3)	Metabolic Biochemistry
BIOC 312	(3)	Biochemistry of Macromolecules
BIOC 450	(3)	Protein Structure and Function
BIOC 454	(3)	Nucleic Acids
BIOC 455	(3)	Neurochemistry

**Physiology**

EXMD 401	(3)	Physiology and Biochemistry Endocrine Systems
EXMD 502	(3)	Advanced Endocrinology 01
EXMD 503	(3)	Advanced Endocrinology 02
PHAR 562	(3)	General Pharmacology 1
PHAR 563	(3)	General Pharmacology 2
PHGY 517	(3)	Artificial Internal Organs
PHGY 518	(3)	Artificial Cells

**Pollution**

CHEE 593	(3)	Industrial Water Pollution Control
CIVE 225	(4)	Environmental Engineering
CIVE 430	(3)	Water Treatment and Pollution Control
CIVE 553	(3)	Stream Pollution and Control

**32.13.6.6 Biotechnology (BIOT) Related Programs**
**32.13.6.6.1 Program for Students in the Faculty of Engineering**

See *Faculty of Engineering > Biotechnology Minor* for details.

### 32.13.7 Chemistry (CHEM)

#### 32.13.7.1 Location

Otto Maass Chemistry Building  
801 Sherbrooke Street West  
Montreal, Quebec H3A 2K6

Website: [www.chemistry.mcgill.ca](http://www.chemistry.mcgill.ca)

Departmental Office: Room 322  
Telephone: 514-398-6999

Student Advisory Office: Room 314  
Website: [www.chemistry.mcgill.ca/advising/index.htm](http://www.chemistry.mcgill.ca/advising/index.htm)

#### 32.13.7.2 Office for Science and Society

The Office for Science and Society is dedicated to the promotion of critical thinking and the presentation of practical scientific information to the public, educators and students in an accurate and responsible fashion. The Office answers queries from the public as well as from the media, with a view towards establishing scientific accuracy. The Office also offers a variety of educational and interesting presentations on scientific topics and its members contribute to a number of courses under the umbrella of "The World of Chemistry".

##### Director

Joseph A. Schwarcz; B.Sc., Ph.D.(McG.)

##### Members

Ariel Fenster; L.Sc., D.E.A.(Paris), Ph.D.(McG.)

David N. Harpp; A.B.(Middlebury), M.A.(Wesl.), Ph.D.(N. Carolina), F.C.I.C. (*William C. Macdonald Professor of Chemistry*)

#### 32.13.7.3 About Chemistry

Chemistry is both a pure science, offering a challenging intellectual pursuit, and an applied science whose technology is of fundamental importance to the economy and society. Modern chemists seek an understanding of the structure and properties of atoms and molecules to predict and interpret the properties and transformations of matter and the energy changes that accompany those transformations. Many of the concepts of physics and mathematics are basic to chemistry, while chemistry is of fundamental importance to many other disciplines such as the biological and medical sciences, geology, metallurgy, etc.

A degree in chemistry leads to a wide variety of professional vocations. The large science-based industries (petroleum refining, plastics, pharmaceuticals, etc.) all employ chemists in research, development and quality control. Many federal and provincial departments and agencies employ chemists in research and testing laboratories. Such positions are expected to increase with the currently growing concern for the environment and for consumer protection. A background in chemistry is also useful as a basis for advanced study in other related fields, such as medicine and the biological sciences. For a business career, a B.Sc. in Chemistry can profitably be combined with a Master's degree in Business Administration, or a study of law for work as a patent lawyer or forensic scientist.

Chemistry courses at the university level are traditionally divided into four areas of specialization: 1) organic chemistry, dealing with the compounds of carbon; 2) inorganic chemistry, concerned with the chemistry and compounds of elements other than carbon; 3) analytical chemistry, which deals with the identification of substances and the quantitative measurement of their compositions; and 4) physical chemistry, which treats the physical laws, kinetics, and energetics governing chemical reactions, behavior of materials, and molecular structure. Naturally, there is a great deal of overlap between these different areas, and the boundaries are becoming increasingly blurred. After a general course at the introductory level, courses in organic, inorganic, analytical and physical chemistry are offered throughout the university years. Since chemistry is an experimental science, laboratory classes accompany most undergraduate courses. In addition, courses are offered in polymer, theoretical, green, nano and biological chemistry to upper-year undergraduates.

There are two main programs in the Department of Chemistry: Honours and Major. The Honours program is intended primarily for students wishing to pursue graduate studies in chemistry. While the Major program is somewhat less specialized, it is still recognized as sufficient training for a career in chemistry. It can also lead to graduate studies although an additional qualifying year may be necessary. There are also a number of B.Sc. Liberal and other programs available. Interested students may inquire about these at the Student Advisory Office, Room 314, Otto Mass Chemistry Building, or see [www.chemistry.mcgill.ca/advising/index.htm](http://www.chemistry.mcgill.ca/advising/index.htm).

#### 32.13.7.4 Chemistry (CHEM) Faculty

##### Chair

R. Bruce Lennox

## Emeritus Professors

Tak-Hang Chan; B.Sc.(Tor.), M.A., Ph.D.(Prin.), F.C.I.C., F.R.S.C. (*Tomlinson Emeritus Professor of Chemistry*)

Adi Eisenberg; B.S.(Worcester Polytech.), M.A., Ph.D.(Prin.), F.C.I.C. (*Otto Maass Professor of Chemistry*)

Byung Chan Eu; B.Sc.(Seoul), Ph.D.(Brown)

Denis F.R. Gilson; B.Sc.(U. Coll. Lond.), M.Sc., Ph.D.(Br. Col.), F.C.I.C., F.R.S.C. (UK)

John F. Harrod; B.Sc., Ph.D.(Birm.) (*Tomlinson Emeritus Professor of Chemistry*)

Alan S. Hay; B.Sc., M.Sc.(Alta.), Ph.D.(Ill.), D.Sc.(Alta.), F.R.S., F.N.Y., Acad.Sci. (*Tomlinson Emeritus Professor of Chemistry*)

Robert H. Marchessault; B.Sc.(Loyola), Ph.D.(McG.), D.Sc.(C'dia), F.R.S.C. (*E.B. Eddy Professor of Industrial Chemistry*)

Mario Onyszczuk; B.Sc.(McG.), M.Sc.(W. Ont.), Ph.D.(McG.), Ph.D.(Cant.)

Donald Patterson; M.Sc.(McG.), Doc.(St-Etienne) (*Otto Maass Emeritus Professor of Chemistry*)

Arthur S. Perlin; M.Sc., Ph.D.(McG.), F.R.S.C. (*E.B. Eddy Emeritus Professor of Industrial Chemistry*)

William C. Purdy; B.A.(Amh.), Ph.D.(MIT), F.C.I.C. (*William C. Macdonald Emeritus Professor of Chemistry*)

Leon E. St-Pierre; B.Sc.(Alta.), Ph.D.(Notre Dame), F.C.I.C.

Michael A. Whitehead; B.Sc., Ph.D., D.Sc.(Lond.), F.C.I.C.

## Professors

D. Scott Bohle; B.A.(Reed College), M.Phil., Ph.D.(Auck.) (*CRC Tier I Chair*)

David H. Burns; B.Sc.(Puget Sound), Ph.D.(Wash.)

Ian S. Butler; B.Sc., Ph.D.(Brist.), F.C.I.C., C.Sci., C.Chem., F.R.S.C.(U.K.)

Masad J. Damha; B.Sc., Ph.D.(McG.) (*James McGill Professor*)

Derek G. Gray; B.Sc.(Belf.), M.Sc., Ph.D.(Manit.), F.C.I.C. (*NSERC Paprican Chair*)

David N. Harpp; A.B.(Middlebury), M.A.(Wesl.), Ph.D.(N. Carolina), F.C.I.C. (*William C. Macdonald Professor of Chemistry*)

R. Bruce Lennox; B.Sc., M.Sc., Ph.D.(Tor.) (*Tomlinson Professor of Chemistry*)

C.J. Li; B.Sc.(Zhengzhou), M.Sc.(C.A.S.), Ph.D.(McG.) (*CRC Tier I Chair*)

David Ronis; B.Sc.(McG.), Ph.D.(MIT)

Eric D. Salin; B.Sc.(Calif.), Ph.D.(Oreg.St.)

Bryan C. Sanctuary; B.Sc., Ph.D.(Br. Col.)

Theo G.M. van de Ven; Kand. Doc.(Utrecht), Ph.D.(McG.) (*NSERC Paprican Chair*)

## Associate Professors

Mark P. Andrews; B.Sc., M.Sc., Ph.D.(Tor.)

Parisa Ariya; B.Sc., Ph.D.(York (Can.)) (*William Dawson Scholar*) (*joint appoint. with Atmospheric & Oceanic Sciences*)

Bruce Arndtsen; B.A.(Car. College), Ph.D.(Stan.) (*William Dawson Scholar*)

Karine Auclair; B.Sc.(UQAC), Ph.D.(Alta.)

Christopher J. Barrett; B.Sc., M.Sc., Ph.D.(Qu.)

William C. Galley; B.Sc.(McG.), Ph.D.(Calif.)

James Gleason; B.Sc.(McG.), Ph.D.(Virg.)

Ashok K. Kakkar; B.Sc.(Punjab), M.Sc.(H.P.U.), Ph.D.(Wat.)

Patanjali Kambhampati; B.A.(Car. Coll.), Ph.D.(Texas)

Nicolas Moitessier; B.Sc., M.Sc., Ph.D.(Nancy)

Joan F. Power; B.Sc., Ph.D.(C'dia)

Linda Reven; B.A.(Car. Coll.), Ph.D.(Ill.)

Hanadi Sleiman; B.Sc.(A.U.B.), Ph.D.(Stan.) (*William Dawson Scholar*)

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### **Associate Professors**

Youla Tsantrizos; B.Sc., M.Sc., Ph.D.(McG.)

Paul Wiseman; B.Sc.(St. FX), Ph.D.(W. Ont.) (*joint appoint. with Physics*)

### **Assistant Professors**

Amy S. Blum; B.S.(Prin.), M.S., Ph.D.(Wash.)

Michel Bourqui; B.Sc.(EPF Lausanne), Ph.D.(ETH Zürich) (*joint appoint. with Atmospheric & Oceanic Sciences*)

**Required Courses (7 credits)**

CHEE 200	(4)	Introduction to Chemical Engineering
CHEE 204	(3)	Chemical Manufacturing Processes

**Complementary Courses (17 credits)**

at least one of:

CHEE 220	(3)	Chemical Engineering Thermodynamics
CHEE 314	(4)	Fluid Mechanics

with the remainder chosen from the following:

\* Students select CHEE 392 and CHEE 393

\*\* Students select either CHEE 494 or CHEE 495

CHEE 230	(3)	Environmental Aspects of Technology
CHEE 315	(4)	Heat and Mass Transfer
CHEE 351	(3)	Separation Processes
CHEE 370	(3)	Elements of Biotechnology
CHEE 380	(3)	Materials Science
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A computer science course, either COMP 202 or COMP 208, is strongly recommended during U1 for students who have no previous introduction to computer programming. Students should contact their adviser on this matter. Completion of Mathematics MATH 222 during U1 is strongly recommended.

\* denotes courses with CEGEP equivalents.

\*\* Students who have successfully completed MATH 150 and MATH 151 are not required to take MATH 222.

CHEM 212*	(4)	Introductory Organic Chemistry 1
CHEM 222*	(4)	Introductory Organic Chemistry 2
CHEM 223	(2)	Introductory Physical Chemistry 1
CHEM 243	(2)	Introductory Physical Chemistry 2
CHEM 253	(1)	Introductory Physical Chemistry 1 Laboratory
CHEM 263	(1)	Introductory Physical Chemistry 2 Laboratory
CHEM 281	(3)	Inorganic Chemistry 1
CHEM 287	(2)	Introductory Analytical Chemistry
CHEM 297	(1)	Introductory Analytical Chemistry Laboratory
CHEM 3c Chemistry 2	(3)	Inorganic Chemistry 2







Introductory

CHEM 345	(3)	Molecular Properties and Structure 1
CHEM 355	(3)	Molecular Properties and Structure 2
CHEM 365	(2)	Statistical Thermodynamics
CHEM 367	(3)	Instrumental Analysis 1
CHEM 377	(3)	Instrumental Analysis 2
CHEM 381	(3)	Inorganic Chemistry 2
CHEM 392	(3)	Integrated Inorganic/Organic Laboratory
CHEM 393	(2)	Physical Chemistry Laboratory 2
MATH 222**	(3)	Calculus 3
MATH 315	(3)	Ordinary Differential Equations

### Complementary Courses (9 credits)

3 credits, one of:

CHEM 419	(3)	Advances in Chemistry of Atmosphere
CHEM 462	(3)	Green Chemistry

3 credits, one of:

ATOC 214	(3)	Introduction: Physics of the Atmosphere
CHEM 307	(3)	Analytical Chemistry of Pollutants
CHEM 352	(3)	Structural Organic Chemistry
MATH 317	(3)	Numerical Analysis

3 credits, one of:

ATOC 315	(3)	Water in the Atmosphere
ATOC 412	(3)	Atmospheric Dynamics
CHEM 567	(3)	Chemometrics: Data Analysis
CHEM 575	(3)	Chemical Kinetics
CHEM 597	(3)	Analytical Spectroscopy
EPSC 542	(3)	Chemical Oceanography

### 32.13.7.12 Bachelor of Science (B.Sc.) - Major Chemistry - Bio-organic (63 credits)

#### Program Prerequisites

#### PRE-PROGRAM REQUIREMENTS:

Students entering from the Freshman program must have included CHEM 110 and CHEM 120 or CHEM 115, BIOL 111 or BIOL 112, MATH 133, MATH 140/MATH 141 or MATH 150/MATH 151, PHYS 131/PHYS 142, or their equivalents in their Freshman year. Quebec students must have completed the

A computer science course, either COMP 202 or COMP 208, is strongly recommended during U1 for students who have no previous introduction to computer programming. Students should contact their adviser on this matter. Completion of Mathematics MATH 222 and MATH 315 during U1 is also strongly recommended.

\* denotes courses with CEGEP equivalents.

\*\* Students who have successfully completed MATH 150 and MATH 151 are not required to take MATH 222.

BIOL 200	(3)	Molecular Biology
BIOL 201	(3)	Cell Biology and Metabolism
CHEM 212*	(4)	Introductory Organic Chemistry 1
	(4)	Introductory Organic Chemistry 2

DEC with appropriate science and mathematics courses. Note that students who have successfully completed MATH 150 and MATH 151 do not have to take MATH 222.

### Required Courses (59 credits)

The required courses in this program consist of 59 credits in chemistry, physics and mathematics, listed below. The courses marked with an asterisk (\*) are omitted from the program of students who have successfully completed them at the CEGEP level but the Chemistry courses must be replaced by courses in that discipline if students wish to be eligible for admission to the Ordre des chimistes du Québec. Students from outside Quebec or transfer students should consult the academic adviser.

See <http://www.chemistry.mcgill.ca/advising/inside/advisors.php>.

A computer science course, either COMP 202 or COMP 208, is strongly recommended during U1 for students who have no previous introduction to computer programming. Students should contact their adviser on this matter. Completion of Mathematics MATH 222 and MATH 315 during U1 is also strongly recommended. Physics PHYS 242 should be completed during U2.

\* denotes courses with CEGEP equivalents.

\*\* Students who have successfully completed MATH 150 and MATH 151 are not required to take MATH 222.

CHEM 212*	(4)	Introductory Organic Chemistry 1
CHEM 222*	(4)	Introductory Organic Chemistry 2
CHEM 223	(2)	Introductory Physical Chemistry 1
CHEM 243	(2)	Introductory Physical Chemistry 2
CHEM 253	(1)	Introductory Physical Chemistry 1 Laboratory
CHEM 263	(1)	Introductory Physical Chemistry 2 Laboratory
CHEM 281	(3)	Inorganic Chemistry 1
CHEM 287	(2)	Introductory Analytical Chemistry
CHEM 297	(1)	Introductory Analytical Chemistry Laboratory
CHEM 302	(3)	Introductory Organic Chemistry 3
CHEM 334	(3)	Advanced Materials
CHEM 345	(3)	Molecular Properties and Structure 1
CHEM 355	(3)	Molecular Properties and Structure 2
CHEM 365	(2)	Statistical Thermodynamics
CHEM 367	(3)	Instrumental Analysis 1
CHEM 377	(3)	Instrumental Analysis 2
CHEM 381	(3)	Inorganic Chemistry 2
CHEM 392	(3)	Integrated Inorganic/Organic Laboratory
CHEM 393	(2)	Physical Chemistry Laboratory 2
CHEM 574	(3)	Introductory Polymer Chemistry
MATH 222**	(3)	Calculus 3
MATH 315	(3)	Ordinary Differential Equations
PHYS 242	(2)	Electricity and Magnetism

### Complementary Course (3 credits)

CHEM 531	(3)	Chemistry of Inorganic Materials
CHEM 534	(3)	Nanoscience and Nanotechnology
CHEM 543	(3)	Chemistry of Pulp and Paper
CHEM 571	(3)	Polymer Synthesis
CHEM 585	(3)	Colloid Chemistry

### **32.13.7.14 Bachelor of Science (B.Sc.) - Honours Chemistry (71 credits)**

Note: Attainment of the Honours degree requires a CGPA of at least 3.00.

#### **Program Prerequisites**

##### **PRE-PROGRAM REQUIREMENTS:**

Students entering from the Freshman program must have included CHEM 110 and CHEM 120 or CHEM 115, BIOL 111 or BIOL 112, MATH 133, MATH 140/MATH 141 or MATH 150/MATH 151, PHYS 131/PHYS 142, or their equivalents in their Freshman year. Quebec students must have completed the DEC with appropriate science and mathematics courses. Note that students who have successfully completed MATH 150 and MATH 151 do not have to take MATH 222.

#### **Required Courses (53 credits)**

The required courses in this program consist of 53 credits in chemistry, physics and mathematics, listed below. The courses marked with an asterisk (\*) are omitted from the program of students who have successfully completed them at the CEGEP level but the Chemistry courses must be replaced by courses in that discipline if students wish to be eligible for admission to the Ordre des chimistes du Québec. Students from outside Quebec or transfer students should consult the academic adviser.

See <http://www.chemistry.mcgill.ca/advising/inside/advisors.php>.

A computer science course, either COMP 202 or COMP 208, is strongly recommended during U1 for students who have no previous introduction to computer programming. Students should contact their adviser on this matter. Completion of Mathematics MA

CHEM 470	(6)	Research Project 1
CHEM 480	(3)	Research Project 2
CHEM 490D1	(1.5)	Research Project 3
CHEM 490D2	(1.5)	Research Project 3

12 credits of additional Chemistry courses as follows:

6 credits of which must be at the 300-level or higher, and

6 credits of which must be at the 400-level or higher

**32.13.7.15 Bachelor of Science (B.Sc.) - Honours Chemistry - Bio-organic (75 credits)**

Note: Attainment of the Honours degree requires a CGPA of at least 3.00.

**Program Prerequisites**

PRE-PROGRAM REQUIREMENTS:

CHEM 381	(3)	Inorganic Chemistry 2
CHEM 392	(3)	Integrated Inorganic/Organic Laboratory
CHEM 393	(2)	Physical Chemistry Laboratory 2
MATH 222**	(3)	Calculus 3
MATH 315	(3)	Ordinary Differential Equations

### Complementary Courses (18 credits)

18 credits selected as follows:

6 credits of research\*:

\* Students may take up to 12 Research Project credits but only 6 of these may be used to fulfil the program requirement.

CHEM 470	(6)	Research Project 1
CHEM 480	(3)	Research Project 2
CHEM 490D1	(1.5)	Research Project 3
CHEM 490D2	(1.5)	Research Project 3

6 credits, two of the following courses:

BIOL 202	(3)	Basic Genetics
BIOL 301	(4)	Cell and Molecular Laboratory
CHEM 502	(3)	Advanced Bio-Organic Chemistry
MIMM 211	(3)	Introductory Microbiology
MIMM 314	(3)	Immunology
MIMM 323	(3)	Microbial Physiology
PHGY 201	(3)	Human Physiology: Control Systems
PHGY 202	(3)	Human Physiology: Body Functions
PHGY 209	(3)	Mammalian Physiology 1
PHGY 210	(3)	Mammalian Physiology 2

and 6 credits of additional Chemistry courses at the 400-level or higher.

### 32.13.7.16 Bachelor of Science (B.Sc.) - Honours Chemistry - Atmosphere and Environment (75 credits)

Note: Attainment of the Honours degree requires a CGPA of at least 3.00.

#### Program Prerequisites

PRE-PROGRAM REQUIREMENTS:

Students entering from the Freshman program must have included CHEM 110 and CHEM 120 or CHEM 115, BIOL 111 or BIOL 112, MATH 133, MATH 140/MATH 141 or MATH 150/MATH 151, PHYS 131/PHYS 142, or their equivalents in their Freshman year. Quebec students must have completed the DEC with appropriate science and mathematics courses. Note that students who have successfully completed MATH 150 and MATH 151 do not have to take MATH 222.

#### Required Courses (60 credits)

The required courses in this program consist of 60 credits in chemistry and mathematics, listed below. The courses marked with an asterisk (\*) are omitted from the program of students who have successfully completed them at the CEGEP level but the Chemistry courses must be replaced by courses in that discipline if students wish to be eligible for admission to the Ordre des chimistes du Québec. Students from outside Quebec or transfer students should consult the academic adviser.

See <http://www.chemistry.mcgill.ca/advising/inside/advisors.php>.







CHEM 381	(3)	Inorganic Chemistry 2
CHEM 392	(3)	Integrated Inorganic/Organic Laboratory
CHEM 393	(2)	Physical Chemistry Laboratory 2
CHEM 470***	(6)	Research Project 1
CHEM 574	(3)	Introductory Polymer Chemistry
MA	(3)	Calculus 3

**Computer Science**

COMP 424	(3)	Artificial Intelligence
COMP 527	(3)	Logic and Computation
COMP 558	(3)	Fundamentals of Computer Vision

**Educational Psychology**

EDPE 555	(3)	Applied Cognitive Science
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**Linguistics**

LING 331	(3)	Phonology 1
LING 355	(3)	Language Acquisition 1
LING 360	(3)	Introduction to Semantics
LING 371	(3)	Syntax 1
LING 419	(3)	Linguistic Theory and its Foundations
LING 440	(3)	Morphology
LING 531	(3)	Phonology 2
LING 555	(3)	Language Acquisition 2
LING 571	(3)	Syntax 2
LING 590	(3)	Language Acquisition and Breakdown

**Mathematics**

MATH 318	(3)	Mathematical Logic
MATH 328	(3)	Computability and Mathematical Linguistics

**Philosophy**

PHIL 210	(3)	Introduction to Deductive Logic 1
PHIL 304	(3)	Chomsky
PHIL 306	(3)	Philosophy of Mind
PHIL 310	(3)	Intermediate Logic
PHIL 410	(3)	Advanced Topics in Logic 1
PHIL 415	(3)	Philosophy of Language
PHIL 419	(3)	Epistemology
PHIL 506	(3)	Seminar: Philosophy of Mind
PHIL 507	(3)	Seminar: Cognitive Science

**Psychology**

NSCI 201	(3)	Introduction to Neuroscience 2
PSYC 211	(3)	Introductory Behavioural Neuroscience
PSYC 212	(3)	Perception
PSYC 213	(3)	Cognition
PSYC 301	(3)	Animal Learning & Theory

PSYC 311	(3)	Human Cognition and the Brain
PSYC 353	(3)	Laboratory in Human Perception
PSYC 410	(3)	Special Topics in Neuropsychology
PSYC 413	(3)	Cognitive Development
PSYC 470	(3)	Memory and Brain

## 32.13.9 Computer Science (COMP)

### 32.13.9.1 Location

McConnell Engineering Building, Room 318  
 3480 University Street  
 Montreal, Quebec, H3A 2A7  
 Telephone: 514-398-7071  
 Fax: 514-398-3883

Undergraduate Student Affairs Office  
 Lorne Trotter Building, Room 2060  
 3630 University Street  
 Montreal, Quebec, H3A 2B2  
 Telephone: 514-398-7071 ext. 00739  
 Fax: 514-398-4653

Email: [ugrad-sec@cs.mcgill.ca](mailto:ugrad-sec@cs.mcgill.ca)  
 Website: [www.cs.mcgill.ca](http://www.cs.mcgill.ca)

### 32.13.9.2 About Computer Science

Computer Science covers the theory and practice behind the design and implementation of computer and information systems. Fundamental to computer science are questions about how to describe, process, manage, and analyze information and computation. A fundamental building block is the study of algorithms. An algorithm presents a detailed sequence of actions solving a particular task. A computer program is the implementation of an algorithm in a specific programming language so that a computer can execute the algorithm. Software generally refers to a computer program or a set of related computer programs.

Based on the building blocks of algorithms and programs, computer science is split into many different areas such as the study of algorithms and data structures, programming languages and methodology, theory of computation, software engineering (the design of large software systems), computer architecture (the structure of the hardware), communication between computers, operating systems (the software that shields users from the underlying hardware), database systems (software that handles large amounts of data efficiently), artificial intelligence (algorithms that imitate human information processing), computer vision (algorithms that let computers see and recognize their environment), computer graphics, robotics (algorithms that control robots), and computational biology (algorithms and methods that address problems inspired by biology). Computer science also plays an important role in many other fields, including Biology, Physics, Engineering, Business, Music, and Neuroscience, where it is necessary to process and reason about large amounts of data. Computer Science is strongly related to mathematics, linguistics and engineering.

A degree in Computer Science offers excellent job prospects. As the use of computers and specialized software plays a crucial role in business, science and our personal life, computer graduates are in high demand. Computer scientists find jobs in software development in many areas of computer science, in consulting, and in project management. As computer scientists often develop the software for a specific application domain (e.g., business, engineering, medicine), they must be prepared and willing to get to know their application area.

The School of Computer Science offers a wide range of programs. Most programs start with the same set of basic courses allowing students to decide on their exact program once they get a basic understanding of the discipline. Within the Faculty of Science, there are a major, an honours, a liberal and a minor program in Computer Science, a major and a liberal program in Software Engineering, a major in Computer Science: Computer Games Option, a minor in Computational Biology, a joint major and a joint honours program in Mathematics and Computer Science (see [section 32.13.21: Mathematics and Statistics \(MATH\)](#)), a joint major and a joint honours program in Statistics and Computer Science (see [section 32.13.21: Mathematics and Statistics \(MATH\)](#)), a joint major in Physics and Computer Science (see



**Associate Professors**

Patrick Hayden; B.Sc.(McG.), Ph.D.(Oxf.) (*Canada Research Chair*) (*on sabbatical 2010-2011*)

Bettina Kemme; B.Sc., M.Sc.(Erlangen-Nuremberg, Germany), Ph.D.(ETH, Zurich)

Jörg Kienzle; Eng.Dip., Ph.D.(Swiss Fed. IT)

Michael Langer; B.Sc.(McG.), M.Sc.(Tor.), Ph.D.(McG.)

Brigitte Pientka; B.Sc., M.Sc.(Darmstadt), Ph.D.(Carn. Mell)

Doina Precup; B.Sc.(Cluj-Napoca), M.Sc., Ph.D.(Mass.)

Martin Robillard; B.Eng.(École Poly., Montr.), M.Sc., Ph.D.(Br. Col.) (*on sabbatical 2011*)

Carl Tropper; B.Sc.(McG.), Ph.D.(Brooklyn Poly.)

Hans Vangheluwe; B.Sc., M.Sc., D.Sc.(Ghent, Belgium) (*on leave 2010-2011*)

Clark Verbrugge; B.A.(Qu.), Ph.D.(McG.)

Adrian Vetta; B.Sc., M.Sc.(LSE), Ph.D.(MIT)

**Assistant Professors**

Hamed Hatami; B.Sc.(Sharif Univ. of Technology), M.Sc., Ph.D.(Tor.)

Paul Kry; B.Sc.(Wat.), M.Sc., Ph.D.(Br. Col.)

Xue Liu; B.Sc., M.Sc.(Tsinghua), Ph.D.(Ill.) (*on leave 2010*)

Muthucumar Maheswaran; B.Sc.(Peradeniya), M.Sc., Ph.D.(Purd.) (*on sabbatical 2010-2011*)

Joëlle Pineau; B.Sc.(Wat.), M.Sc., Ph.D.(Carn. Mell)

Derek Ruths; B.Sc., M.Sc., Ph.D.(Rice)

Mohit Singh; B.Tech.(Indian IT), Ph.D.(Carn. Mell)

Jérôme Waldspühl; B.Sc.(Nice and Sophia-Antipolis (France)), M.Sc.(Paris VII), Ph.D.(École Poly., France)

**Faculty Lecturer**

Joseph Vybihal; B.Sc., M.Sc.(McG.)

**Associate Members**

Daniel J. Levitin (*Psychology*)

Dirk Schlimm (*Philosophy*)

Raja Sengupta (*Geography*)

F. Bruce Shepherd (*Mathematics*)

Thomas Richard Shultz (*Psychology*)

Renée Sieber (*Geography*)

**Adjunct Professors**

Stefan Brands

Renato De Mori

Ted Perkins

Ioannis Rekleitis

Ger Otto Sabidussi

Pascal Tesson

**32.13.9.7 Bachelor of Science (B.Sc.) - Minor Computer Science (24 credits)**

This Minor is designed for students who want to g



**32.13.9.9 Bachelor of Science (B.Sc.) - Liberal Program - Core Science Component Computer Science (45 credits)**

This program provides an introduction to the principles of computer science and offers opportunity to get insight into some of its sub-areas. Having only 45 credits, it allows students to combine it with minor or major concentrations in other disciplines.

**Required Courses (21 credits)**

\* Students who have sufficient knowledge in a programming language do not need to take COMP 202, but it must be replaced with an additional computer science complementary course.

COMP 202*	(3)	Introduction to Computing 1
COMP 206	(3)	Introduction to Software Systems
COMP 250	(3)	Introduction to Computer Science
COMP 251	(3)	Data Structures and Algorithms
COMP 273	(3)	Introduction to Computer Systems
MATH 222	(3)	Calculus 3
MATH 240	(3)	Discrete Structures 1

**Complementary Courses (24 credits)**

3 - 6 credits from:

MATH 223	(3)	Linear Algebra
MATH 318	(3)	Mathematical Logic
MATH 323	(3)	Probability
MATH 324	(3)	Statistics
MATH 340	(3)	Discrete Structures 2

At least 3 credits from:

COMP 330	(3)	Theoretical Aspects: Computer Science
COMP 350	(3)	Numerical Computing
COMP 360	(3)	Algorithm Design Techniques

At least 3 credits from:

COMP 302	(3)	Programming Languages and Paradigms
COMP 303	(3)	Software Development

The remaining complementary courses should be selected from any COMP courses at the 300-level or above except COMP 364, COMP 396, COMP 400 and COMP 431.

Note: Advanced COMP courses have more prerequisites than the required courses for this program. Students have to make sure that they have the appropriate prerequisites when choosing upper-level courses.

**32.13.9.10 Bachelor of Science (B.Sc.) - Liberal Program - Core Science Component Software Engineering (49 credits)**

This program covers a core of programming and software engineering courses and allows students to select courses that aim at practical aspects of software development.

Students may complete this program with a minimum of 48 credits or a maximum of 49 credits depending on their choice of complementary courses.

**Required Courses (36 credits)**

\* Students who have sufficient knowledge in a programming language do not need to take COMP 202 and can replace it with additional computer science complementary course credits.

COMP 202*	(3)	Introduction to Computing 1
COMP 206	(3)	Introduction to Software Systems
COMP 250	(3)	Introduction to Computer Science
COMP 251	(3)	Data Structures and Algorithms
COMP 273	(3)	Introduction to Computer Systems
COMP 302	(3)	Programming Languages and Paradigms
COMP 303	(3)	Software Development
COMP 310	(3)	Operating Systems
COMP 361D1	(3)	Software Engineering Project
COMP 361D2	(3)	Software Engineering Project
MATH 223	(3)	Linear Algebra
MATH 240	(3)	Discrete Structures 1

### Complementary Courses (13 credits)

3 credits selected from:

COMP 330	(3)	Theoretical Aspects: Computer Science
COMP 360	(3)	Algorithm Design Techniques

9 - 10 credits selected from the courses below:

\* Students take either COMP 435 or COMP 535, but not both.

COMP 322	(1)	Introduction to C++
COMP 409	(3)	Concurrent Programming
COMP 421	(3)	Database Systems
COMP 435*	(3)	Basics of Computer Networks
COMP 520	(4)	Compiler Design
COMP 525	(3)	Formal Verification
COMP 529	(4)	Software Architecture
COMP 533	(3)	Object-Oriented Software Development
COMP 535*	(3)	Computer Networks 1

Or any computer science course at the 300-level or above, excluding COMP 364, COMP 396, and COMP 431.

### 32.13.9.11 Bachelor of Science (B.Sc.) - Major Computer Science (63 credits)

This program is the standard Major program offered by the School of Computer Science. It provides a broad introduction to the principles of computer science and offers ample opportunity to acquire in-depth knowledge of several sub-disciplines. At the same time, its credit requirements allow students to take an additional minor.

Students may complete this program with a maximum of 63 credits or a minimum of 60 credits if they are exempt from taking COMP 202.

### Required Courses (30 credits)

\* Students who have sufficient knowledge in a programming language do not need to take COMP 202.

COMP 202*	(3)	Introduction to Computing 1
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MATH 222	(3)	Calculus 3
MATH 223	(3)	Linear Algebra

**Required Computer Science Courses**

12 - 16 credits from:

\* Students who have sufficient knowledge in a programming language are not required to take COMP 202.

\*\* Students take either COMP 462 or COMP 561.

COMP 202*	(3)	Introduction to Computing 1
COMP 206	(3)	Introduction to Software Systems
COMP 250	(3)	Introduction to Computer Science
COMP 251	(3)	Data Structures and Algorithms
COMP 462**	(3)	Computational Biology Methods
COMP 561**	(4)	Computational Biology Methods and Research

**Required Biology Courses**

20 credits from:

BIOL 200	(3)	Molecular Biology
BIOL 201	(3)	Cell Biology and Metabolism
BIOL 202	(3)	Basic Genetics
BIOL 215	(3)	Introduction to Ecology and Evolution
BIOL 301	(4)	Cell and Molecular Laboratory
CHEM 212	(4)	Introductory Organic Chemistry 1

**Required Joint Courses**

7 credits from:

BIOL 495	(3)	Integrative Computing in Biology
COMP 401	(3)	Project in Biology and Computer Science
COMP 499	(1)	Undergraduate Bioinformatics Seminar

**Complementary Courses (24 credits)**

6 credits, ONE of the following pairs of courses as follows:

MATH 203 and MATH 204 or MATH 323 and MATH 324 or BIOL 309 and BIOL 373.

BIOL 309	(3)	Mathematical Models in Biology
BIOL 373	(3)	Biometry
MATH 203	(3)	Principles of Statistics 1
MATH 204	(3)	Principles of Statistics 2
MATH 323	(3)	Probability
MATH 324	(3)	Statistics

At least 18 credits are selected from the following blocks:

**Computer Science Block**

At least 9 credits from the following including at least one course at the 400-level or above. In addition to the courses below students may also choose from all COMP courses at the 400-level (except 401, 462, and 499) and all courses at the 500-level (except 561).

- |          |     |                                     |
|----------|-----|-------------------------------------|
| COMP 273 | (3) | Introduction to Computer Systems    |
| COMP 302 | (3) | Programming Languages and Paradigms |
|          |     | Software b                          |

COMP 322	(1)	Introduction to C++
COMP 330	(3)	Theoretical Aspects: Computer Science
COMP 361D1	(3)	Software Engineering Project
COMP 361D2	(3)	Software Engineering Project
COMP 557	(3)	Fundamentals of Computer Graphics
MATH 222	(3)	Calculus 3
MATH 223	(3)	Linear Algebra
MATH 240	(3)	Discrete Structures 1
MATH 323	(3)	Probability

### Complementary Courses (17 credits)

Students complete a minimum of 15 or a maximum of 17 complementary credits selected as follows:

3 credits selected from:

COMP 350	(3)	Numerical Computing
COMP 360	(3)	Algorithm Design Techniques

6 - 8 credits selected from:

COMP 424	(3)	Artificial Intelligence
COMP 507	(3)	Computational Geometry
COMP 521	(4)	Modern Computer Games
COMP 522	(4)	Modelling and Simulation
COMP 529	(4)	Software Architecture
COMP 533	(3)	Object-Oriented Software Development
COMP 559	(4)	Fundamentals of Computer Animation

6 credits selected from:

\* Students take either COMP 435 or COMP 535, but not both.

COMP 409	(3)	Concurrent Programming
COMP 421	(3)	Database Systems
COMP 435*	(3)	Basics of Computer Networks
COMP 535*	(3)	Computer Networks 1

### 32.13.9.14 Bachelor of Science (B.Sc.) - Major Software Engineering (63 credits)

This program provides a broad introduction to the principles of computer science and covers in depth the design and development of software systems.

Students may complete this program with a maximum of 63 credits or a minimum of 60 credits if they are exempt from taking COMP 202.

### Required Courses (39 credits)

\* Students who have sufficient knowledge in a programming language do not need to take COMP 202.

\*\* Students may select either COMP 310 or ECSE 427 but not both.

COMP 202*	(3)	Introduction to Computing 1 Introduction to Softw
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COMP 250	(3)	Introduction to Computer Science
COMP 251	(3)	Data Structures and Algorithms
COMP 273	(3)	Introduction to Computer Systems
COMP 302	(3)	Programming Languages and Paradigms
COMP 303	(3)	Software Development
COMP 310**	(3)	Operating Systems
COMP 361D1	(3)	Software Engineering Project
COMP 361D2	(3)	Software Engineering Project
ECSE 427**	(3)	Operating Systems
ECSE 429	(3)	Software Validation
MATH 223	(3)	Linear Algebra
MATH 240	(3)	Discrete Structures 1

### Complementary Courses (24 credits)

At least 9 credits selected from groups A and B, with at least 3 credits selected from each:

#### Group A:

MATH 222	(3)	Calculus 3
MATH 323	(3)	Probability
MATH 324	(3)	Statistics

#### Group B:

COMP 330	(3)	Theoretical Aspects: Computer Science
COMP 360	(3)	Algorithm Design Techniques

At least 15 credits selected from the following, with at least 6 credits selected from Software Engineering Specializations, and at least 6 credits selected from Applications Specialties.

### Software Engineering Specializations

\* Students may select either COMP 409 or ECSE 420 but not both.

COMP 409*	(3)	Concurrent Programming
COMP 523	(3)	Language-based Security
COMP 525	(3)	Formal Verification
COMP 529	(4)	Software Architecture
COMP 533	(3)	Object-Oriented Software Development
ECSE 420*	(3)	Parallel Computing

3)

### Application Specialties

\* Students may select either COMP 557 or ECSE 532 but not both.

COMP 350	(3)	Numerical Computing
COMP 417	(3)	Introduction Robotics and Intelligent Systems
COMP 421	(3)	Database Systems
COMP 424	(3)	Artificial Intelligence

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COMP 512	(4)	Distributed Systems
COMP 520	(4)	Compiler Design
COMP 521	(4)	Modern Computer Games
COMP 522	(4)	Modelling and Simulation
COMP 535	(3)	Computer Networks 1
COMP 557*	(3)	Fundamentals of Computer Graphics
COMP 558	(3)	Fundamentals of Computer Vision
ECSE 424	(3)	Human-Computer Interaction
ECSE 532*	(3)	Computer Graphics

**32.13.9.15 Bachelor of Science (B.Sc.) - Honours Computer Science (75 credits)**

Students may complete this program with a maximum of 75 credits or a minimum of 72 credits if they are exempt from taking COMP 202.

Honours students must maintain a CGPA of at least 3.00 during their studies and at graduation.

**Required Courses (45 credits)**

\* Students who have sufficient knowledge in a programming language do not need to take COMP 202.

\*\* Students take either MATH 340 or MATH 350.

COMP 202*	(3)	Introduction to Computing 1
COMP 206	(3)	Introduction to Software Systems
COMP 250	(3)	Introduction to Computer Science
COMP 252	(3)	Algorithms and Data Structures
COMP 273	(3)	Introduction to Computer Systems
COMP 302	(3)	Programming Languages and Paradigms
COMP 310	(3)	Operating Systems
COMP 330	(3)	Theoretical Aspects: Computer Science
COMP 350	(3)	Numerical Computing
COMP 362	(3)	Honours Algorithm Design
COMP 400	(3)	Technical Project and Report
MATH 222	(3)	Calculus 3
MATH 223	(3)	Linear Algebra
MATH 240	(3)	Discrete Structures 1
MATH 340**	(3)	Discrete Structures 2
MATH 350**	(3)	Graph Theory and Combinatorics

**Complementary Courses (30 credits)**

At least 3 credits selected from:

COMP 303	(3)	Software Development
COMP 304	(3)	Object-Oriented Design

6 credits selected from:

MATH 318	(3)	Mathematical Logic
MATH 323	(3)	Probability



MATH 324 (3) Statistics

The remaining credits selected from computer science courses at the 300-level or above (except COMP 364, COMP 396, COMP 400, COMP 431) and ECSE 508. A total of 609.92 credits must be completed.

**32.13.9.16 Bachelor of Science (B.Sc.) - Honours Software Engineering (75 credits)**

This program provides a more challenging and research-oriented version of the Major Software Engineering program.

Students may complete this program with a maximum of 75 credits or a minimum of 72 credits if they are exempt from taking COMP 202.

Honours students must maintain a CGPA of at least 3.00 during their studies and at graduation.

**Required Courses (42 credits)**

\* Students who have sufficient knowledge in a programming language do not need to take COMP 202.

\*\* Students may select either COMP 310 or ECSE 427 but not both.

COMP 202\* (3) Introduction to Computing 1

COMP 206 (3) Introduction to Software Systems

COMP 250 (3) Introduction to Computer Science

COMP 251 (3) Data Structures and Algorithms

COMP 273 (3) Introduction to Computer Systems

COMP 302 (3) Programming Languages and Paradigms

COMP 303 (3) Software Development

COMP 310\*\* (3) Operating Systems

COMP 361D1 (3) Software Engineering Project

COMP 361D2 (3) Software Engineering Project

Techn5 0 13Dg1-lm((3))Tj3ly as.ri88ngineering ProjectCOMP 361D23)COMP 361D23)COMP 361D2ut not both.COM

At least 18 credits selected from the following, with at least 6 credits selected from Software Engineering Specializations, and at least 9 credits selected from Applications Specialties.

**Software Engineering Specializations**

\* Students may select either COMP 409 or ECSE 420 but not both.

COMP 409*	(3)	Concurrent Programming
COMP 523	(3)	Language-based Security
COMP 525	(3)	Formal Verification
COMP 529	(4)	Software Architecture
COMP 533	(3)	Object-Oriented Software Development
ECSE 420*	(3)	Parallel Computing

**Application Specialties**

COMP 350	(3)	Numerical Computing
COMP 417	(3)	Introduction Robotics and Intelligent Systems
COMP 421	(3)	Database Systems
COMP 424	(3)	Artificial Intelligence
COMP 512	(4)	Distributed Systems
COMP 520	(4)	Compiler Design
COMP 521	(4)	Modern Computer Games
COMP 522	(4)	Modelling and Simulation
COMP 535	(3)	Computer Networks 1
COMP 557	(3)	Fundamentals of Computer Graphics
COMP 558	(3)	Fundamentals of Computer Vision
ECSE 424	(3)	Human-Computer Interaction

At least 6 credits selected from any COMP courses at the 500-level or above. These may include courses on the Software Engineering Specializations and Application Specialties lists.

**32.13.9.17 Computer Science (COMP) Related Programs**

**32.13.9.17.1 Joint Major in Mathematics and Computer Science**

For more information, see [section 32.13.21: Mathematics and Statistics \(MATH\)](#).

**32.13.9.17.2 Joint Honours in Mathematics and Computer Science**

For more information, see [section 32.13.21: Mathematics and Statistics \(MATH\)](#). Students must consult an Honours adviser in both Departments.

**32.13.9.17.3 Joint Major in Statistics and Computer Science**

For more information, see [section 32.13.21: Mathematics and Statistics \(MATH\)](#).

**32.13.9.17.4 Joint Honours in Statistics and Computer Science**

For more information, see [section 32.13.21: Mathematics and Statistics \(MATH\)](#). Students must consult an Honours adviser in both Departments.

**32.13.9.17.5 Joint Major in Physics and Computer Science**

For more information, see [section 32.13.29: Physics \(PHYS\)](#).

**32.13.9.17.6 Minor in Cognitive Science**

Students following Major or Honours programs in Computer Science may want to consider the Minor in Cognitive Science.

**Earth and Planetar**



9 credits selected from the list below and other 300-level and higher courses in Earth and Planetary Sciences may be substituted with permission.

EPSC 203	(3)	Structural Geology
EPSC 231	(3)	Field School 1
EPSC 334	(3)	Invertebrate Paleontology
EPSC 350	(3)	Tectonics
EPSC 451	(3)	Hydrothermal Mineral Deposits
EPSC 452	(3)	Mineral Deposits
EPSC 542	(3)	Chemical Oceanography
EPSC 561	(3)	Ore-forming Processes 1

**32.13.10.5 Bachelor of Science (B.Sc.) - Minor Geochemistry (18 credits)**

**Required Courses (9 credits)**

EPSC 201	(3)	Understanding Planet Earth
EPSC 210	(3)	Introductory Mineralogy
EPSC 212	(3)	Introductory Petrology

**Complementar**

3 credits, one of:



EPSC 530	(3)	Volcanology
EPSC 542	(3)	Chemical Oceanography
EPSC 547	(3)	Modelling Geochemical Processes
EPSC 548	(3)	Processes of Igneous Petrology
EPSC 549	(3)	Hydrogeology
EPSC 550	(3)	Selected Topics 1
EPSC 551	(3)	Selected Topics 2
EPSC 552	(3)	Selected Topics 3
EPSC 561	(3)	Ore-forming Processes 1
EPSC 562	(3)	Ore-forming Processes 2
EPSC 570	(3)	Cosmochemistry
EPSC 580	(3)	Aqueous Geochemistry
EPSC 590	(3)	Applied Geochemistry Seminar

### **32.13.10.8 Bachelor of Science (B.Sc.) - Honours Earth Sciences (75 credits)**

The program curriculum is designed to provide a rigorous foundation in physical sciences and the flexibility to create an individualized program in preparation for careers in industry, teaching and research. It is intended to provide an excellent preparation for graduate work in the Earth Sciences. The program is accepted for professional qualification in most Canadian provinces.

Note: Honours students must maintain a CGPA equal to or greater than 3.20.

#### **U1 Required Courses (24 credits)**

EPSC 203	(3)	Structural Geology
EPSC 210	(3)	Introductory Mineralogy
EPSC 212	(3)	Introductory Petrology
EPSC 220	(3)	Principles of Geochemistry
EPSC 231	(3)	Field School 1
EPSC 233	(3)	Earth and Life History
EPSC 312	(3)	Spectroscopy of Minerals
MATH 222	(3)	Calculus 3

#### **U2 and/or U3 Required Courses (33 credits)**

EPSC 320	(3)	Elementary Earth Physics
EPSC 340	(3)	Earth and Planetary Inference
EPSC 350	(3)	Tectonics
EPSC 423	(3)	Igneous Petrology
EPSC 445	(3)	Metamorphic Petrology
EPSC 452	(3)	Mineral Deposits
EPSC 455	(3)	Sedimentary Geology
EPSC 480D1	(3)	Honours Research Project
EPSC 480D2	(3)	Honours Research Project
MATH 314	(3)	Advanced Calculus
MATH 315	(3)	Ordinary Differential Equations

#### **Complementary Courses (18 credits)**



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3 credits, one of:

EPSC 331	(3)	Field School 2
EPSC 341	(3)	Field School 3

plus 15 credits (5 courses) chosen from the following:

Note: Courses at the 300-level or higher in other departments in the Faculties of Science and Engineering may also be used as complementary credits, with the permission of the Director of Undergraduate Studies.

EPSC 330	(3)	Earthquakes and Earth Structure
EPSC 334	(3)	Invertebrate Paleontology
EPSC 425	(3)	Sediments to Sequences
EPSC 435	(3)	Applied Geophysics
EPSC 451	(3)	Hydrothermal Mineral Deposits
EPSC 501	(3)	Crystal Chemistry
EPSC 510	(3)	Geodynamics and Geomagnetism
EPSC 519	(3)	Isotope Geology
EPSC 525	(3)	Subsurface Mapping
EPSC 530	(3)	Volcanology
EPSC 542	(3)	Chemical Oceanography
EPSC 547	(3)	Modelling Geochemical Processes
EPSC 548	(3)	Processes of Igneous Petrology
EPSC 549	(3)	Hydrogeology
EPSC 550	(3)	Selected Topics 1
EPSC 551	(3)	Selected Topics 2
EPSC 552	(3)	Selected Topics 3
EPSC 561	(3)	Ore-forming Processes 1
EPSC 562	(3)	Ore-forming Processes 2
EPSC 570	(3)	Cosmochemistry
EPSC 580	(3)	Aqueous Geochemistry
EPSC 590	(3)	Applied Geochemistry Seminar

### **32.13.10.9 Bachelor of Science (B.Sc.) - Honours Planetary Sciences (81 credits)**

The program curriculum is designed to provide a rigorous foundation in physical sciences and the flexibility to create an individualized program in preparation for careers in industry, teaching and research. It is intended to provide an excellent preparation for graduate work in the Earth and Planetary Sciences.

Note: Honours students must maintain a CGPA equal to or greater than 3.20.

#### **U1 Required Courses (27 credits)**

EPSC 203	(3)	Structural Geology
EPSC 210	(3)	Introductory Mineralogy
EPSC 212	(3)	Introductory Petrology
EPSC 220	(3)	Principles of Geochemistry
EPSC 231	(3)	Field School 1
EPSC 233	(3)	Earth and Life History

EPSC 312	(3)	Spectroscopy of Minerals
MATH 222	(3)	Calculus 3
MATH 223	(3)	Linear Algebra

**U2 and/or U3 Required Courses (42 credits)**

EPSC 320	(3)	Elementary Earth Physics
EPSC 330	(3)	Earthquakes and Earth Structure
EPSC 340	(3)	Earth and Planetary Inference
EPSC 350	(3)	Tectonics
EPSC 423	(3)	Igneous Petrology
EPSC 480D1	(3)	Honours Research Project
EPSC 480D2	(3)	Honours Research Project
EPSC 510	(3)	Geodynamics and Geomagnetism
EPSC 570	(3)	Cosmochemistry
MATH 314	(3)	Advanced Calculus
MA	(3)	Ordinary Differential Equations

EPSC 552	(3)	Selected Topics 3
EPSC 561	(3)	Ore-forming Processes 1
EPSC 562	(3)	Ore-forming Processes 2
EPSC 580	(3)	Aqueous Geochemistry
EPSC 590	(3)	Applied Geochemistry Seminar

**3213.10.10 Earth and Planetary Sciences (EPSC) Related Programs**

**3213.10.101 Joint Major in Physics and Geophysics**

See [section 32.13.29: Physics \(PHYS\)](#).

**Earth System Science Interdepar**

ESYS 300	(3)	Investigating the Earth System
ESYS 301	(3)	Earth System Modelling
ESYS 500	(3)	Earth System Applications
GEOG 203	(3)	Environmental Systems
GEOG 308	(3)	Principles of Remote Sensing
MATH 203	(3)	Principles of Statistics 1
MATH 222	(3)	Calculus 3

**Complementary Courses (21 credits)**

<b>EPSC 210</b>	<b>(3)</b>	<b>Introductory Mineralogy</b>
<b>EPSC 220</b>	<b>(3)</b>	<b>Principles of Geochemistry</b>

Level or higher in other departments or courses of Science and Engineering may also be used as complementary credits.

<b>A</b>	<b>(3)</b>	<b>Oceans, Weather and Climate</b>
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EPSC 331	(3)	Field School 2
EPSC 334	(3)	Invertebrate Paleontology
EPSC 341	(3)	Field School 3
EPSC 350	(3)	Tectonics
EPSC 423	(3)	Igneous Petrology
EPSC 425	(3)	Sediments to Sequences
EPSC 445	(3)	Metamorphic Petrology
EPSC 451	(3)	Hydrothermal Mineral Deposits
EPSC 452	(3)	Mineral Deposits
EPSC 455	(3)	Sedimentary Geology
EPSC 519	(3)	Isotope Geology
EPSC 525	(3)	Subsurface Mapping
EPSC 530	(3)	Volcanology
EPSC 542	(3)	Chemical Oceanography
EPSC 549	(3)	Hydrogeology
EPSC 580	(3)	Aqueous Geochemistry
EPSC 590	(3)	Applied Geochemistry Seminar
GEOG 272	(3)	Earth's Changing Surface
GEOG 305	(3)	Soils and Environment
GEOG 306	(3)	Raster Geo-Information Science
GEOG 307	(3)	Socioeconomic Applications of GIS
GEOG 321	(3)	Climatic Environments
GEOG 322	(3)	Environmental Hydrology
GEOG 350	(3)	Ecological Biogeography
GEOG 351	(3)	Quantitative Methods
GEOG 372	(3)	Running Water Environments
GEOG 380	(3)	Adaptive Environmental Management
GEOG 495	(3)	Field Studies - Physical Geography
GEOG 499	(3)	Subarctic Field Studies
GEOG 505	(3)	Global Biogeochemistry
GEOG 506	(3)	Advanced Geographic Information Science
GEOG 522	(3)	Advanced Environmental Hydrology
GEOG 535	(3)	Remote Sensing and Interpretation
GEOG 536	(3)	Geocryology
GEOG 537	(3)	Advanced Fluvial Geomorphology
GEOG 550	(3)	Historical Ecology Techniques
MATH 314	(3)	Advanced Calculus
MATH 315	(3)	Ordinary Differential Equations
MATH 317	(3)	Numerical Analysis
MATH 319	(3)	Introduction to Partial Differential Equations
MATH 323	(3)	Probability
MATH 326	(3)	Nonlinear Dynamics and Chaos
MATH 423	(3)	Regression and Analysis of Variance

MATH 437	(3)	Mathematical Methods in Biology
MATH 447	(3)	Stochastic Processes
MATH 525	(4)	Sampling Theory and Applications
NRSC 540	(3)	Socio-Cultural Issues in Water
PHYS 331	(3)	Topics in Classical Mechanics
PHYS 332	(3)	Physics of Fluids
PHYS 340	(3)	Majors Electricity and Magnetism
PHYS 342	(3)	Majors Electromagnetic Waves

### **32.13.12 Environment**

#### **32.13.12.1 Location**

**Downtown Campus**  
3534 University Street

EXMD 510 (3) Bioanalytical Separation Methods

EXMD 511 (3) Joint Venturing with Industry

### 32.13.14 Field Study

For details about the Minor Program in Field Study, see *Field Studies and Study Abroad > Field Study Minor*.

### 32.13.15 General Science Minor

#### 32.13.15.1 Location

Interdisciplinary Programs Adviser

Wendy Brett

Email: [wendy.brett@mcgill.ca](mailto:wendy.brett@mcgill.ca)

Telephone: 514-398-7330

#### 32.13.15.2 About General Science

The Minor in General Science is only open to students in a B.Sc. Liberal Program. Students interested in completing this minor must consult with the Advisor for this program. See the program description in [section 32.13.15.3: Bachelor of Science \(B.Sc.\) - Minor General Science \(18 credits\)](#) for more information.

#### 32.13.15.3 Bachelor of Science (B.Sc.) - Minor General Science (18 credits)

The Minor General Science is restricted to students in the B.Sc. Liberal program and may be used for the breadth component in this option. Students should consult their program adviser for their core science component and the Interdisciplinary Programs Adviser when selecting courses for this minor.

#### Complementary Courses (18 credits)

Courses are to be chosen according to the following guidelines:

All courses must be offered by the Faculty of Science and must be at or above the 200-level\*.

All courses must be different from the student's core science component courses.

Two options:

9 credits at the 300-level or above and at least 9 credits outside the student's core science component subject.

or

12 credits at the 300-level or above and at least 6 credits outside the student's core science component subject.

\*Note: All Undergraduate Research project courses with the 396 or 397 course number cannot be used toward the General Science Minor.

### 32.13.16 Geography (GEOG)

#### 32.13.16.1 Location

Burnside Hall, Room 705  
805 Sherbrooke Street West  
Montreal, Quebec H3A 2K6

Telephone: 514-398-4951 or 514-398-4111

Fax: 514-398-7437

Website: [www.geog.mcgill.ca](http://www.geog.mcgill.ca)

#### 32.13.16.2 About Geography

**The Department of Geography offers programs in both Arts and Science. All B.A. programs in Geography (including Urban Systems) can be found under *Faculty of Arts > Geography (GEOG)*.**

Geography is a broad, holistic discipline - both a natural and a social science because it examines people and their environment and serves as a bridge between physical and cultural processes. Human Geography (a social science, thus B.A. programs) is concerned especially with the political, economic, social, and cultural processes and resource practices that create spatial patterns and that define particular places. Physical Geography (B.Sc. programs) integrates disciplines such as climatology, geomorphology, geology, biology, hydrology, ecology, soil science and even marine science. Whether considering greenhouse gas emissions, the spread of disease, or threats to biodiversity, in all cases, geographers are interested in where things happen, why, and with what consequences.

Our graduates go on to careers in environmental consulting, social agencies or non-governmental organizations. Skills in Geographic Information Science (GIS) are very marketable. Students are well prepared for graduate work in social sciences, urban planning and en



**32.13.16.5 Bachelor of Science (B.Sc.) - Minor Geography (18 credits)**

The Minor Geography is expandable into the B.Sc. Major Geography.

The Minor Geography is designed to provide students in the Faculty of Science with an overview of basic elements of geography at the introductory and advanced level.

This Minor permits no overlap with any other programs.

**Required Courses (12 credits)**

GEOG 203	(3)	Environmental Systems
GEOG 216	(3)	Geography of the World Economy
GEOG 217	(3)	Cities in the Modern World
GEOG 302	(3)	Environmental Management 1

GEOG 302	(3)	Environmental Management 1
GEOG 351	(3)	Quantitative Methods

**Complementary Courses (27 credits)**

(3) Geocryology

GEOG 495	(3)	Field Studies - Physical Geography
GEOG 496	(3)	Geographical Excursion
GEOG 497	(3)	Ecology of Coastal Waters
GEOG 499	(3)	Subarctic Field Studies

15 credits from approved courses in Geography, or elsewhere in the Faculty of Science, or in the Faculty of Engineering; at least 9 credits of which are to be taken outside Geography. Students may also include any courses that are not already counted towards the GIS techniques or the systematic physical geography requirements. Admission to 500-level courses in Geography requires the instructor's permission. It is not advisable to take more than one 500-level course in a term.

Advising Note: See the Geography website for the list of approved courses in the Faculty of Science. Some courses require the permission of the Department and from the Associate Dean of Science, Student Affairs.

**Geography Approved Course List - Major, Honours and Liberal Programs**

GEOG 404	(3)	Environmental Management 2
GEOG 501	(3)	Modelling Environmental Systems
GEOG 505	(3)	Global Biogeochemistry
GEOG 506	(3)	Advanced Geographic Information Science
GEOG 522	(3)	Advanced Environmental Hydrology
GEOG 523	(3)	Global Ecosystems and Climate
GEOG 535	(3)	Remote Sensing and Interpretation
GEOG 536	(3)	Geocryology
GEOG 537	(3)	Advanced Fluvial Geomorphology
GEOG 550	(3)	Historical Ecology Techniques
GEOG 555	(3)	Ecological Restoration

**32.13.16.9 Bachelor of Science (B.Sc.) - Honours Geography (66 credits)**

The Honours program is designed to provide specialized systematic training in physical geography. In addition to the Faculty requirement that Honours students maintain a minimum CGPA of at least 3.00, students who enter a Geography Honours Program on or after September 2006 must have a program GPA of 3.3.

Honours students are encouraged to participate in 500-level seminars with graduate students, but it is not advisable to take more than one in a term.

**Required Courses (24 credits)**

GEOG 201	(3)	Introductory Geo-Information Science
GEOG 203	(3)	Environmental Systems
GEOG 272	(3)	Earth's Changing Surface
GEOG 302	(3)	Environmental Management 1
GEOG 351	(3)	Quantitative Methods
GEOG 381	(3)	Geographic Thought and Practice
GEOG 491D1	(3)	Honours Research
GEOG 491D2	(3)	Honours Research

**Complementary Courses (42 credits)**

6 credits of introductory courses, two of:

GEOG 210	(3)	Global Places and Peoples
GEOG 216	(3)	Geography of the World Economy

GEOG 217

(3)

Cities in the Modern World

3 credits of statistics\*, one of:

\* Note: Credit given for statistics courses is subject to certain restrictions. Students in Science should consult the "Course Overlap" information in the "Course

GEOG 550	(3)	Historical Ecology Techniques
GEOG 555	(3)	Ecological Restoration

### **32.13.16.10 Geography (GEOG) Related Programs and Study Semesters**

#### **32.13.16.10.1 African Field Study Semester**

The Department of Geography, Faculty of Science, coordinates the 15-credit interdisciplinary African Field Study Semester; see [www.mcgill.ca/africa](http://www.mcgill.ca/africa).

#### **32.13.16.10.2 Panama Field Study Semester**

The program is a joint venture between McGill University and the Smithsonian Tropical Research Institute (STRI) in Panama. For more information, see [www.mcgill.ca/pfss](http://www.mcgill.ca/pfss).

#### **32.13.16.10.3 Earth System Science Interdepartmental Major**

For more information, see [section 32.13.11: Earth System Science Interdepartmental Major \(ESYS\)](#).

This program is offered by the Department of Atmospheric & Oceanic Sciences, Earth & Planetary Sciences and Geography.

Students in the Department of Geography interested in this program should contact: Professor Jeffrey McKenzie ([jeffrey.mckenzie@mcgill.ca](mailto:jeffrey.mckenzie@mcgill.ca)).

### **32.13.17 Immunology Interdepartmental Honours**

#### **32.13.17.1 Location**

Montreal General Hospital  
 Room L11.132-44  
 1650 Cedar Avenue  
 Montreal, Quebec H3G 1A4

or

McIntyre Medical Sciences Building  
 Room 1136  
 3655 Drummond Street  
 Montreal, Quebec H3G 1Y6

#### **32.13.17.2 About Immunology Interdepartmental Honours**

Three Departments offer the Honours Program in Immunology: Biochemistry, Microbiology and Immunology, and Physiology, combining elements of each. The program is a demanding one, which will prepare the student for graduate work in immunology.

This program is comprised of a core of 48 credits in basic science courses in cell and molecular biology, microbiology

\*\*\* Students select either PHGY 209 or MIMM 211.

BIOC 212*	(3)	Molecular Mechanisms of Cell Function
BIOL 200	(3)	Molecular Biology
BIOL 201*	(3)	Cell Biology and Metabolism
CHEM 203**	(3)	Survey of Physical Chemistry
CHEM 204**	(3)	Physical Chemistry/Biological Sciences 1
CHEM 212	(4)	Introductory Organic Chemistry 1
CHEM 222	(4)	Introductory Organic Chemistry 2
MIMM 211***	(3)	Introductory Microbiology
PHGY 209***	(3)	Mammalian Physiology 1

## U2 Required Courses

13 credits from the following:

ANAT 261	(4)	Introduction to Dynamic Histology
BIOC 311	(3)	Metabolic Biochemistry
BIOC 312	(3)	Biochemistry of Macromolecules
MIMM 314	(3)	Immunology

## U3 Required Courses

15 credits from the following:

MIMM 414	(3)	Advanced Immunology
PHGY 419D1	(4.5)	Immunology Research Project
PHGY 419D2	(4.5)	Immunology Research Project
PHGY 513	(3)	Cellular Immunology

## Complementary Courses (27 credits)

### U1 Complementary Courses

6 credits chosen for U1 complementary courses in the following manner.

3 credits selected from:

BIOL 373	(3)	Biometry
MATH 203	(3)	Principles of Statistics 1
PSYC 204	(3)	Introduction to Psychological Statistics

plus 3 credits selected from the following:

\* Students take CHEM 287 and CHEM 297.

ANAT 214	(3)	Systemic Human Anatomy
ANAT 262	(3)	Introductory Molecular and Cell Biology
BIOL 202	(3)	Basic Genetics
BIOL 205(3)	(3)	Biology of Organisms

COMP 202	(3)	Introduction to Computing 1
COMP 203	(3)	Introduction to Computing 2
MATH 204	(3)	Principles of Statistics 2
MIMM 211	(3)	Introductory Microbiology
MIMM 212	(2)	Laboratory in Microbiology Mammalian Ph



### **U3 Complementary Courses**

9 credits of U3 complementary courses chosen in the following manner:

3 credits selected from:

(:                   Immunochemistry

This Minor is not open to students taking a Major, Honours, or Core Science Component in the following units: Anatomy and Cell Biology, Biochemistry, Microbiology and Immunology, and Physiology.

Interested students should contact the Interdisciplinary Programs Advisor.

**Complementary Courses (24 credits)**

The 24 credits required for this program must satisfy the following criteria:

At least 18 credits must be new credits that are not used to satisfy any other program.

At least 18 credits must be outside the student's main discipline.

Depth requirement:

at least 6 credits must be at the 300-level or above.

Breadth requirement:

EXMD 401	(3)	Physiology and Biochemistry Endocrine Systems
MIMM 211	(3)	Introductory Microbiology
MIMM 314	(3)	Immunology
MIMM 323	(3)	Microbial Physiology
MIMM 324	(3)	Fundamental Virology
MIMM 387	(3)	Applied Microbiology and Immunology
MIMM 465	(3)	Bacterial Pathogenesis
MIMM 466	(3)	Viral Pathogenesis
NSCI 201	(3)	Introduction to Neuroscience 2
NUTR 307	(3)	Human Nutrition
PATH 300	(3)	Human Disease
PHAR 300	(3)	Drug Action
PHAR 301	(3)	Drugs and Disease
PHAR 303	(3)	Principles of Toxicology
PHAR 503	(3)	Drug Design and Development 1
PHAR 504	(3)	Drug Design and Development 2
PHGY 209	(3)	Mammalian Physiology 1
PHGY 210	(3)	Mammalian Physiology 2
PHGY 311	(3)	Channels, Synapses & Hormones
PHGY 312	(3)	Respiratory, Renal, & Cardiovascular Physiology
PHGY 313	(3)	Blood, Gastrointestinal, & Immune Systems Physiology
PHGY 314	(3)	Integrative Neuroscience
PSYC 211	(3)	Introductory Behavioural Neuroscience
PSYC 311	(3)	Human Cognition and the Brain
PSYC 317	(3)	Genes and Behaviour
PSYC 318	(3)	Behavioural Neuroscience 2
PSYC 342	(3)	Hormones and Behaviour

### Health Social Science

at least 3 credits from:

ANTH 204	(3)	Anthropology of Meaning
ANTH 227	(3)	Medical Anthropology
ANTH 302	(3)	New Horizons in Medical Anthropology
ANTH 314	(3)	Psychological Anthropology 01
ECON 440	(3)	Health Economics
GEOG 221	(3)	Environment and Health
GEOG 303	(3)	Health Geography
HIST 249	(3)	Health and the Healer in Western History
HIST 335	(3)	Science and Medicine in Canada
HIST 350	(3)	Science and the Enlightenment
HIST 381	(3)	Colonial Africa: Health/Disease
HIST 396	(3)	Disease in Africa Since 1960
HIST 424	(3)	Gender, Sexuality & Medicine

HIST 447

(3)

The Natural History of America

HSEL 308

(3)

Issues in Women's Health

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## **32.13.19 Kinesiology for Science Students**

### **32.13.19.1 Location**

### 32.13.20 Management Minor Programs

The Desautels Faculty of Management offers four programs for non-Management students open for application to students in the Faculty of Science. Please refer to the *Desautels Faculty of Management* section of this publication for detailed information about program requirements and applying.

- Finance for Non-Management Students; see *Desautels Faculty of Management > Minor Finance (For Non-Management Students) (18 credits)*.
- Management for Non-Management Students; see *Desautels Faculty of Management > Minor Management (For Non-Management Students) (18 credits)*.

As of the 2008-09 academic year, the *Minor in Management* for Science students was retired. Students currently registered in the program should consult with their program adviser and refer to the Calendar for the academic year in which they began the program for guidance about program requirements.

- Marketing for Non-Management Students; see *Desautels Faculty of Management > Minor Marketing (For Non-Management Students) (18 credits)*.
- Operations Management for Non-Management Students; see *Desautels Faculty of Management > Minor Operations Management (For Non-Management Students) (18 credits)*.

Also available to Science students is the Minor in Technological Entrepreneurship for Science students; see [section 32.13.35: Technological Entrepreneurship for Science Students](#). (Please note that this Minor is currently under revision.)

### 32.13.21 Mathematics and Statistics (MATH)

#### 32.13.21.1 Location

Burnside Hall, Room 1005  
805 Sherbrooke Street West  
Montreal, Quebec, H3A 2K6

Telephone: 514-398-3800

Fax: 514-398-3899

Website: [www.math.mcgill.ca](http://www.math.mcgill.ca)

#### 32.13.21.2 About Mathematics and Statistics

Mathematics has evolved to a discipline that is mainly characterized by its method of proof, its concern for a progressive broadening of its concepts, and by the search for mathematical entities and operations that represent aspects of reality. It is a subject that is pursued by many for its own sake, and regarded as part of the mainstream of human culture. Mathematics pervades modern society with an impact which, already immense, is rapidly growing.

The two principal divisions of mathematics are pure mathematics and applied mathematics. The pure mathematician is interested in abstract mathematical structures and in mathematics as an intellectual enterprise. The primary concern may not be with its utilitarian aspects or with the current needs of science and technology, although many problems in pure mathematics have developed from the sciences.

The applied mathematician is more interested in how mathematics can be used to study some aspects of the world. Mathematicians are engaged in the creation, study and application of advanced mathematical methods relevant to scientific problems. Statistical science and methodology today is concerned with phenomena in which there is a background of uncertainty arising from inherent variability and the investigator is obliged to arrive at decisions from limited data. A key tool in statistics is probability.

Some of the fields in which pure mathematicians work are algebra, analysis, geometry, topology, number theory and foundations. Applied mathematics, which once referred to the application of mathematics to such disciplines as mechanics and fluid dynamics, has currently assumed a much broader meaning and embraces such diverse fields as communication theory, theory of optimization, theory of games and numerical analysis.

Mathematics offers many vocational possibilities. Such fields as teaching, computing, applied statistics and actuarial science offer opportunities for B.Sc. graduates. Opportunities to do original research in pure and applied mathematics are available in universities and research institutions. Employment is to be found in financially or technologically oriented business firms. The Department of Mathematics and Statistics through its various programs attempts to pro

In planning their programs, students are advised to seriously consider developing some depth in another discipline – preferably one for which mathematics has some relevance and use. Mathematics has been closely linked to areas such as computer science, physics and engineering but has recently come to play an increasingly important role in fields such as biology, linguistics, management and psychology. Students should consider completing the requirements for Minor programs such as those available in Cognitive Science, Computer Science and Statistics.

Students considering programs in Mathematics and Statistics should contact the Department to arrange for academic advising.

The student's attention is called to the fact that a B.Com. degree with a Major in Mathematics is available from the Desautels Faculty of Management. In addition, the Schulich School of Music offers the B.Mus. degree with Honours in Theory with Mathematics Option.

### 32.13.21.3 Internship Opportunities

Students who want to get practical experience in industry before graduation are encouraged to participate in one of the following internship programs:

- The Internship Year in Science (IYS) is an academic program offered for a duration of 8, 12 or 16 months. It is reflected on the transcript and included in the program name (Bachelor of Science - Internship program). Eligible students usually take this program between their U2 and U3 years.
- The Industrial Practicum (IP) has a duration of 4 months and is usually carried out starting in May. It will appear as a 0-credit, pass/fail course on your transcript.

For more information on these programs, consult [section 32.12.1: Industrial Practicum \(IP\) and Internship Year in Science \(IYS\)](#).



**Note:** Students entering a program listed below that has MATH 222 (Calculus 3) as a required course and who have successfully completed a course equivalent to MATH 222 with a grade of C or better may omit MATH 222 (Calculus 3) from the program, but must replace it with 3 credits of elective courses.

### 32.13.21.4 Mathematics and Statistics (MATH) Faculty

#### Chair

Jacques Hurtubise

#### Emeritus Professors

Michael Barr; A.B., Ph.D.(Penn.) (*Peter Redpath Emeritus Professor of Pure Mathematics*)

Marta Bunge; M.A., Ph.D.(Penn.)

Jal R. Choksi; B.A.(Cant.), Ph.D.(Manc.)

Ian Connell; B.Sc., M.Sc.(Manit.), Ph.D.(McG.)

Paul Koosis; B.A., Ph.D.(Calif., Berk.)

Joachim Lambek; M.Sc., Ph.D.(McG.), F.R.S.C. (*Peter Redpath Emeritus Professor of Pure Mathematics*)

Sherwin A. Maslowe; B.Sc.(Wayne State), M.Sc., Ph.D.(Calif.)

Arak M. Mathai; M.Sc.(Kerala), M.A., Ph.D.(Tor.)

Karl Peter Russel; Vor.Dip.(Hamburg), Ph.D.(Calif.)

Georg Schmidt; B.Sc.(Natal), M.Sc.(S.Af.), Ph.D.(Stan.)

V. Seshadri; B.Sc., M.Sc.(Madr.), Ph.D.(Okla.)

George P.H. Styan; M.A., Ph.D.(Col.)

Kwok Kuen Tam; M.A., Ph.D.(Tor.)

John C. Taylor; B.Sc.(Acad.), M.A.(Qu.), Ph.D.(McM.)

Sanjo Zlobec; M.Sc.(Zagreb), Ph.D.(N'western)

#### Professors

William J. Anderson; B.Eng., Ph.D.(McG.)

William G. Brown; M.A.(Col.), B.A., Ph.D.(Tor.)

Henri Darmon; B.Sc.(McG.), Ph.D.(Harv.), F.R.S.C. (*James McGill Professor*)

Stephen W. Drury; M.A., Ph.D.(Cant.)

Eyal Z. Goren; B.A., M.S., Ph.D.(Hebrew)

Kohur GowriSankaran; B.A., M.A.(Madr.), Ph.D.(Bom.)





### **Associate Members**

Michael Mackey (*Physiology*)

Lawrence A. Mysak (*A.O.S.*)

Christopher Conway Paige (*Computer Science*)

Prakash Panangaden (*Computer Science*)

Robert W. Platt (*Pediatrics*)

James O. Ramsay (*Psychology*)

George Alexander Whitmore (*Management*)

Christina Wolfson (*Epidemiology & Biostatistics*)

### **Adjunct Professors**



The following informal guidelines should be discussed with the student's adviser. Where appropriate, Honours courses may be substituted for equivalent Major courses. Students planning to pursue graduate studies are encouraged to make such substitutions.

Students interested in computer science are advised to choose courses from the following: MATH 317, MATH 318, MA

MATH 348	(3)	Topics in Geometry
MATH 352	(1)	Problem Seminar
MATH 407	(3)	Dynamic Programming
MATH 410	(3)	Majors Project
MATH 417	(3)	Mathematical Programming
MATH 423	(3)	Regression and Analysis of Variance
MATH 430	(3)	Mathematical Finance
MATH 447	(3)	Stochastic Processes
MATH 523	(4)	Generalized Linear Models
MATH 524	(4)	Nonparametric Statistics
MATH 525	(4)	Sampling Theory and Applications

### 32.13.21.8 Bachelor of Science (B.Sc.) - Liberal Program - Core Science Component Statistics (45 credits)

#### Program Prerequisites

Students entering the Core Science Component in Statistics are normally expected to have completed the courses below or their equivalents. Otherwise they will be required to make up any deficiencies in these courses over and above the 45 credits required for the program.

MATH 133	(3)	Linear Algebra and Geometry
MATH 140	(3)	Calculus 1
MATH 141	(4)	Calculus 2

#### Required Courses (27 credits)

\* Students who have successfully completed a course equivalent to MATH 222 with a grade of C or better may omit MATH 222, but must replace it with three credits of elective courses.

MATH 222*	(3)	Calculus 3
MATH 235	(3)	Algebra 1
MATH 236	(3)	Algebra 2
MATH 242	(3)	Analysis 1
MATH 243	(3)	Analysis 2
MATH 314	(3)	Advanced Calculus
MATH 323	(3)	Probability
MATH 324	(3)	Statistics
MATH 423	(3)	Regression and Analysis of Variance

#### Complementary Courses (18 credits)

18 credits selected from the following list, with at least 6 credits selected from:

\* Students may take either MATH 316 or MATH 249, but not both.

MATH 249*	(3)	Honours Complex Variables
MATH 315	(3)	Ordinary Differential Equations
MATH 316*	(3)	Complex Variables
MATH 317	(3)	Numerical Analysis
MATH 335	(3)	Computational Algebra
MATH 340	(3)	Discrete Structures 2

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at least 7 credits selected from:

MATH 447	(3)	Stochastic Processes
MATH 523	(4)	Generalized Linear Models
MATH 525	(4)	Sampling Theory and Applications

the remainder of the 18 credits to be selected from:

MATH 204	(3)	Principles of Statistics 2
MATH 318	(3)	Mathematical Logic
MATH 319	(3)	Introduction to Partial Differential Equations
MATH 320	(3)	Differential Geometry
MATH 326	(3)	Nonlinear Dynamics and Chaos
MATH 327	(3)	Matrix Numerical Analysis
MATH 328	(3)	Computability and Mathematical Linguistics
MATH 329	(3)	Theory of Interest
MATH 338	(3)	History and Philosophy of Mathematics
MATH 339	(3)	Foundations of Mathematics
MATH 346	(3)	Number Theory
MATH 348	(3)	Topics in Geometry
MATH 352	(1)	Problem Seminar
MATH 407	(3)	Dynamic Programming
MATH 410	(3)	Majors Project
MATH 417	(3)	Mathematical Programming
MATH 430	(3)	Mathematical Finance

### 32.13.21.9 Bachelor of Science (B.Sc.) - Major Mathematics (54 credits)

#### Program Prerequisites

Students entering the Major program are normally expected to have completed the courses below or their equivalents. Otherwise, they will be required to make up any deficiencies in these courses over and above the 54 credits of required courses.

MATH 133	(3)	Linear Algebra and Geometry
MATH 140	(3)	Calculus 1
MATH 141	(4)	Calculus 2

#### Guidelines for Selection of Courses in the Major Program

The following informal guidelines should be discussed with the student's adviser. Where appropriate, Honours courses may be substituted for equivalent Major courses. Students planning to pursue graduate studies are encouraged to make such substitutions.

Students interested in computer science are advised to choose courses from the following: MATH 317, MATH 318, MATH 327, MATH 328, MATH 335, MATH 340, MATH 407, MATH 417 and to complete the Computer Science Minor.

Students interested in probability and statistics are advised to take MATH 204, MATH 324, MATH 407, MATH 423, MATH 447, MATH 523, MATH 525.

Students interested in applied mathematics should take MATH 317, MATH 319, MATH 324, MATH 326, MATH 327, MATH 407, MATH 417.

Students considering a career in secondary school teaching are advised to take MATH 318, MATH 328, MATH 338, MATH 339, MATH 346, MATH 348.

Students interested in careers in business, industry or government are advised to select courses from the following list:

MATH 317, MATH 319, MATH 327, MATH 329, MATH 407, MATH 417, MATH 423, MATH 430, MATH 447, MATH 523, MATH 525.

**Required Courses (27 credits)**

Note: Students who have done well in MATH 235 and MATH 242 should consider entering the Honours stream by registering in MATH 251 and MATH 255 instead of MATH 236 and MATH 243.

\* Students may select either MATH 249 or MATH 316 but not both.

\*\* Students who have successfully completed a course equivalent to MATH 222 with a grade of C or better may omit MATH 222, but must replace it with three credits of elective courses.

MATH 222**	(3)	Calculus 3
MATH 235	(3)	Algebra 1
MATH 236	(3)	Algebra 2
MATH 242	(3)	Analysis 1
MATH 243	(3)	Analysis 2
MATH 249*	(3)	Honours Complex Variables
MATH 314	(3)	Advanced Calculus
MATH 315	(3)	Ordinary Differential Equations
MATH 316*	(3)	Complex Variables
MATH 323	(3)	Probability

**Complementary Courses (27 credits)**

27 credits selected as follows:

21 credits selected from the following list, with at least 6 credits selected from:

MATH 317	(3)	Numerical Analysis
MATH 324	(3)	Statistics
MATH 335	(3)	Computational Algebra
MATH 340	(3)	Discrete Structures 2

the remainder of the 21 credits to be selected from:

MATH 204	(3)	Principles of Statistics 2
MATH 318	(3)	Mathematical Logic
MATH 319	(3)	Introduction to Partial Differential Equations
MATH 320	(3)	Differential Geometry
MATH 326	(3)	Nonlinear Dynamics and Chaos
MATH 327	(3)	Matrix Numerical Analysis
MATH 328	(3)	Computability and Mathematical Linguistics
MATH 329	(3)	Theory of Interest
MATH 338	(3)	History and Philosophy of Mathematics
MATH 339	(3)	Foundations of Mathematics
MATH 346	(3)	Number Theory
MATH 348	(3)	Topics in Geometry
MATH 352	(1)	Problem Seminar
MATH 407	(3)	Dynamic Programming
MATH 410	(3)	Majors Project
MATH 417	(3)	Mathematical Programming

MATH 423	(3)	Regression and Analysis of Variance
MATH 430	(3)	Mathematical Finance
MATH 447	(3)	Stochastic Processes
MATH 523	(4)	Generalized Linear Models
MATH 525	(4)	Sampling Theory and Applications

6 additional credits in Mathematics or related disciplines selected in consultation with the adviser.

### **321321.10 Bachelor of Science (B.Sc.) - Major Mathematics and Computer Science (72 credits)**

#### **Program Prerequisites**

Students entering the Joint Major in Mathematics and Computer Science are normally expected to have completed the courses below or their equivalents. Otherwise, they will be required to make up any deficiencies in these courses over and above the 72 credits of courses in the program specification.

MATH 133	(3)	Linear Algebra and Geometry
MATH 140	(3)	Calculus 1
MATH 141	(4)	Calculus 2

#### **Required Courses (54 credits)**

\* Students who have sufficient knowledge in a programming language do not need to take COMP 202 but can replace it with an additional Computer Science complementary course.

COMP 202*	(3)	Introduction to Computing 1
COMP 206	(3)	Introduction to Software Systems
COMP 250	(3)	Introduction to Computer Science
COMP 251	(3)	Data Structures and Algorithms
COMP 273	(3)	Introduction to Computer Systems
COMP 302	(3)	Programming Languages and Paradigms
COMP 310	(3)	Operating Systems
COMP 330	(3)	Theoretical Aspects: Computer Science
COMP 360	(3)	Algorithm Design Techniques
MATH 222	(3)	Calculus 3
MATH 235	(3)	Algebra 1
MATH 236	(3)	Algebra 2
MATH 242	(3)	Analysis 1
MATH 315	(3)	Ordinary Differential Equations
MATH 317	(3)	Numerical Analysis
MATH 318	(3)	Mathematical Logic
MATH 323	(3)	Probability





MATH 352	(1)	Problem Seminar
MATH 410	(3)	Majors Project
MATH 447	(3)	Stochastic Processes
MATH 523	(4)	Generalized Linear Models
MATH 524	(4)	Nonparametric Statistics
MATH 525	(4)	Sampling Theory and Applications
MATH 578**	(4)	Numerical Analysis 1

9 credits in Computer Science selected as follows:

At least 6 credits selected from:

COMP 423	(3)	Data Compression
COMP 424	(3)	Artificial Intelligence
COMP 462	(3)	Computational Biology Methods
		Introduction to Probabilistic







MATH 533	(4)	Honours Regression and Analysis of Variance
MATH 556	(4)	Mathematical Statistics 1
MATH 557	(4)	Mathematical Statistics 2

**Complementary Courses (15 credits)**

selected from:

MATH 325	(3)	Honours Ordinary Differential Equations
MATH 350	(3)	Graph Theory and Combinatorics
MATH 352	(1)	Problem Seminar
MATH 366	(3)	Honours Complex Analysis
MATH 375	(3)	Honours Partial Differential Equations
MATH 380	(3)	Honours Differential Geometry
MATH 387	(3)	Honours Numerical Analysis
MATH 397	(3)	Honours Matrix Numerical Analysis
MATH 480	(3)	Honours Independent Study
MATH 490	(3)	Honours Mathematics of Finance
MATH 524	(4)	Nonparametric Statistics
MATH 525	(4)	Sampling Theory and Applications
MATH 550	(4)	Combinatorics
MATH 587	(4)	Advanced Probability Theory 1
MATH 589	(4)	Advanced Probability Theory 2

With at most 3 credits from the following: MATH 325 (3), MATH 350 (3), MATH 352 (1), MATH 366 (3), MATH 375 (3), MATH 380 (3), MATH 387 (3), MATH 397 (3), MATH 480 (3), MATH 490 (3), MATH 524 (4), MATH 525 (4), MATH 550 (4), MATH 587 (4), MATH 589 (4)



COMP 202*	(3)	Introduction to Computing 1
COMP 206	(3)	Introduction to Software Systems
COMP 250	(3)	Introduction to Computer Science
COMP 252	(3)	Algorithms and Data Structures
COMP 273	(3)	Introduction to Computer Systems
COMP 302	(3)	Programming Languages and Paradigms
COMP 330	(3)	Theoretical Aspects: Computer Science
COMP 362	(3)	Honours Algorithm Design
MATH 235	(3)	Algebra 1
MATH 242	(3)	Analysis 1
MATH 247**	(3)	Honours Applied Linear Algebra
MATH 248	(3)	Honours Advanced Calculus
MATH 251**	(3)	Honours Algebra 2
MATH 255	(3)	Honours Analysis 2
MATH 356	(3)	Honours Probability
MATH 357	(3)	Honours Statistics
MATH 533	(4)	Honours Regression and Analysis of Variance

### Complementary Courses (30 credits)

15 credits in Mathematics selected as follows:

3 credits selected from:

MATH 387	(3)	Honours Numerical Analysis
MATH 397	(3)	Honours Matrix Numerical Analysis

At least 8 credits selected from:

MATH 523	(4)	Generalized Linear Models
MATH 524	(4)	Nonparametric Statistics
MATH 525	(4)	Sampling Theory and Applications
MATH 556	(4)	Mathematical Statistics 1
MATH 557	(4)	Mathematical Statistics 2

The remaining Mathematics credits selected from:

\*\* MATH 578 and COMP 540 cannot both be taken for program credit.

MATH 350	(3)	Graph Theory and Combinatorics
MATH 352	(1)	Problem Seminar
MATH 354	(3)	Honours Analysis 3
MATH 355	(3)	Honours Analysis 4
MATH 578**	(4)	Numerical Analysis 1

15 credits in Computer Science selected as follows:





are exposed to these related areas and receive an excellent background in basic biology and chemistry as well as in the more applied areas of biotechnology and medicine.

Many opportunities exist for careers in basic or applied microbiology and immunology, medical microbiology, environmental microbiology, and biotechnology. They include positions in industry (pharmaceutical and biotechnology), hospitals, universities, and government (environment, public health, and energy). A degree in microbiology also provides an excellent basis for entering professional and postgraduate programs in medicine, dentistry, the veterinary sciences, research, and education.



**Notes on admission to Microbiology and Immunology programs:**

Please note that enrolment in Microbiology and Immunology programs is limited to a total of 120 students per year. Students seeking admission to the Liberal, Majors and Honours programs must have completed BIOL 112, CHEM 110, CHEM 120, MATH 139 or MATH 140, MATH 141, PHYS 101 and PHYS 102 or their equivalent with an overall average of at least B+ (75%).

Students transferring from other programs may be admitted with a B+ average up to the maximum program capacity of 120 students. Applicants not admitted will be placed on a waiting list and will be considered should vacancies occur. Application deadline for UO or transfer students from other departments and faculties is the third Monday in April. Students who want to transfer to Microbiology and Immunology should consider taking MIMM 211, or equivalent, as a complementary course.

An Undergraduate handbook, containing detailed course descriptions, a listing of faculty research interests, and information on careers in microbiology and immunology, is available from the Student Affairs Office in Room 511 of the Lyman Duff Building and on the web at [www.mcgill.ca/microimm](http://www.mcgill.ca/microimm).

All students (U1, U2, U3) must attend an advising session. Please check [www.mcgill.ca/microimm](http://www.mcgill.ca/microimm) for dates.

**32.13.22.3 Microbiology and Immunology (MIMM) Faculty**

**Chair**

Malcolm Baines (*Acting Chair*)

**Professors** Bilal, M.Sc.(Karachi), Ph.D.(T)

James W. Coulton; B.Sc.(Tor.), M.Sc.(Calg.), Ph.D.(W)

John Hiscott; B.Sc., M.Sc.(W)

Greg Matlashewski; B.Sc.(C'UiE1 0 0 1 5t 118.r1 0 0 1 70.531 5t 118.r1 0 0 1 72063te.32 Tm(oimm 0 1 70.52 3ai 72R7t. M.Sc.(W)TM Mu Tc21 0804e80 0 m 0 1 70.

## Associate Members

Agricultural & Environmental Sciences: Byong Lee

Human Genetics: Silvia Vidal

Institute of Parasitology: F. Dziarsinski, Armando Jardim, Jay Nadao, Paula Ribeiro

Microbiology & Immunology: Lawrence Kleiman

Medicine: Marcel Behr, Andre Dascal, Sabah Hussain, Arnold Kristof, Chen Liang, Vivian Loo, Ameer Manges, Mark A. Miller, Jay Nadeau, Marianna Newkirk, Roger G.E. Palfree, Kostas Pantopoulos, Joyce E. Rauch, Michael Reed, Maya Saleh, Christos Tsoukas, Bernard Turcotte, Brian J. Ward

Neuroimmunology: Amit Bar-Or

Neurology & Neurosurgery: Jack Antel

Oncology: Anne Gatignol, Antonis E. Koromilas, Andrew Mouland, Arnim Pause, Stephane Richard

Ophthalmology: Miguel Burnier

Surgery: Nicholas V. Christou

Virology: Shan Cen

## Adjunct Professors

J. Archambault; B.Sc.(Montr), Ph.D.(Tor.)

Vibhuti Dave; M.Sc., Ph.D.(Bombay)

Albert Descoteaux; B.Sc., M.Sc.(Montr.), Ph.D.(McG.)

Elias Haddad; B.Sc., M.Sc.(Beirut), Ph.D.(McG.)

Taff Jones; B.Sc., Ph.D.(Univ. Coll., Lond.)

George Kukulj; B.Sc., Ph.D.(McG.)

Peter Lau; Ph.D.(Ott.)

Andrew Makrigiannis; B.Sc., Ph.D.(Dal.)

Allan M. Matte; B.Sc., M.Sc.(Guelph), Ph.D.(Sask.)

Clement Rioux; B.Sc., M.Sc.(Laval), Ph.D.(Guelph)

Rafick-P. Sekaly; B.A.(Stanislas), B.Sc., M.Sc.(Montr.), Ph.D.(Lausanne)

Woong-Kyung Suh; B.Sc., M.Sc.(Seoul), Ph.D.(Tor.)

Dan Ziberstein; B.Sc., M.Sc., Ph.D.(Hebrew)

## Affiliated Centre

Centre for Host Resistance

Montreal General Hospital

1650 Cedar Avenue

Montreal, Quebec H3G 1A4

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MIMM 211	(3)	Introductory Microbiology
MIMM 212	(2)	Laboratory in Microbiology

### U1 Complementary Course (3 credits)

3 credits, select one from:

BIOC 212	(3)	Molecular Mechanisms of Cell Function
BIOL 201	(3)	Cell Biology and Metabolism

### U1, U2 or U3 Required Course (3 credits)

3 credits, select one from:

BIOL 373	(3)	Biometry
MATH 203	(3)	Principles of Statistics 1
PSYC 204	(3)	Introduction to Psychological Statistics

### U2 Required Courses (15 credits)

MIMM 314	(3)	Immunology
MIMM 323	(3)	Microbial Physiology
MIMM 324	(3)	Fundamental Virology
MIMM 386D1	(3)	Laboratory in Microbiology and Immunology
MIMM 386D2	(3)	Laboratory in Microbiology and Immunology

### U3 Complementary Courses (6 credits)

6 credits selected from:

MIMM 387	(3)	Applied Microbiology and Immunology
MIMM 413	(3)	Parasitology
MIMM 414	(3)	Advanced Immunology
MIMM 465	(3)	Bacterial Pathogenesis
MIMM 466	(3)	Viral Pathogenesis
MIMM 509	(3)	Inflammatory Processes

### U1, U2 or U3 Complementary Courses (6 credits)

6 credits selected from:

Students may take either ANAT 458 or BIOC 458 but not both.

Students may take either CHEM 203 or CHEM 204 but not both.

\*\* Students who have taken CHEM 212 or CHEM 222 in CEGEP must replace it with another complementary course.

ANAT 261	(4)	Introduction to Dynamic Histology
ANAT 262	(3)	Introductory Molecular and Cell Biology
ANAT 365	(3)	Cellular Trafficking
ANAT 458	(3)	Membranes and Cellular Signaling
BIOC 311	(3)	Metabolic Biochemistry
BIOC 312	(3)	Biochemistry of Macromolecules
BIOC 450	(3)	Protein Structure and Function

BIOC 454	(3)	Nucleic Acids
BIOC 458	(3)	Membranes and Cellular Signaling
BIOL 300	(3)	Molecular Biology of the Gene
BIOL 314	(3)	Molecular Biology of Oncogenes
BIOT 505	(3)	Selected Topics in Biotechnology
CHEM 203	(3)	Survey of Physical Chemistry
CHEM 204	(3)	Physical Chemistry/Biological Sciences 1
CHEM 222**	(4)	Introductory Organic Chemistry 2
CHEM 302	(3)	Introductory Organic Chemistry 3
EXMD 504	(3)	Biology of Cancer
MIMM 387	(3)	Applied Microbiology and Immunology
MIMM 413	(3)	Parasitology
		Adv

CHEM 204 (3) Physical Chemistry/Biological Sciences 1

**U1, U2 or U3 Required Course (3 credits)**

one of:

BIOL 373 (3) Biometry  
MATH 203 (3) Principles of Statistics 1  
PSYC 204 (3) Introduction to Psychological Statistics

**U2 Required Courses (21 credits)**

BIOC 311 (3) Metabolic Biochemistry  
BIOC 312 (3) Biochemistry of Macromolecules  
MIMM 314 (3) Immunology  
MIMM 323 (3) Microbial Physiology  
MIMM 324 (3) Fundamental Virology  
MIMM 386D1 (3) Laboratory in Microbiology and Immunology  
MIMM 386D2 (3) Laboratory in Microbiology and Immunology

**U3 Required Courses (9 credits)**

MIMM 413 (3) Parasitology  
MIMM 465 (3) Bacterial Pathogenesis  
MIMM 466 (3) Viral Pathogenesis

**Complementary Courses (9 credits)**

9 credits selected from:

\* Students may select either ANAT 458 or BIOC 458 but not both.

ANAT 261 (4) Introduction to Dynamic Histology  
ANAT 262 (3) Introductory Molecular and Cell Biology  
ANAT 365 (3) Cellular Trafficking  
ANAT 458\* (3) Membranes and Cellular Signaling  
BIOC 450 (3) Protein Structure and Function  
BIOC 454 (3) Nucleic Acids  
BIOC 458\* (3) Membranes and Cellular Signaling  
BIOL 300 (3) Molecular Biology of the Gene  
BIOL 314 (3) Molecular Biology of Oncogenes  
BIOT 505 (3) Selected Topics in Biotechnology  
CHEM 302 (3) Introductory Organic Chemistry 3  
EXMD 504 (3) Biology of Cancer  
MIMM 387 (3) Applied Microbiology and Immunology  
MIMM 414 (3) Advanced Immunology  
MIMM 509 (3) Inflammatory Processes



MIMM 386D2 (3) Laboratory in Microbiology and Immunology

**U3 Required Courses (21 credits)**

MIMM 413 (3) Parasitology  
MIMM 465 (3) Bacterial Pathogenesis  
MIMM 466 (3) Viral Pathogenesis  
MIMM 502D1 (6) Honours Research Project in Microbiology  
MIMM 502D2 (6) Honours Research Project in Microbiology

**Complementary Course (3 credits)**

3 credits selected from:

ANAT 458 (3) Membranes and Cellular Signaling  
BIOC 404 (3) Biophysical Chemistry  
BIOC 450 (3) Protein Structure and Function  
BIOC 454 (3) Nucleic Acids  
BIOC 455 (3) Neurochemistry  
BIOC 458 (3) Membranes and Cellular Signaling  
BIOL 520 (3) Gene Activity in Development  
BIOT 505 (3) Selected Topics in Biotechnology  
Advanced Immunology

### 32.13.23.3 Music Faculty

#### Department of Music Research Chair

Lloyd Whitesell

#### Department of Performance Chair

André Roy

#### Adviser (B.A./B.Sc. Music programs)

B. Minorgan  
514-398-4535, ext. 6333

### 32.13.23.4 Music Related Programs

#### 32.13.23.4.1 Minor in Musical Applications of Technology and Minor in Musical Science and Technology

Science students may apply for admission to either the Minor in Musical Applications of Technology, see *Schulich School of Music > Minor in Musical Applications of Technology*, or the Minor in Musical Science and Technology, see *Schulich School of Music > Minor in Musical Science and Technology*. Enrolment in Music Technology programs is highly restricted. Application forms will be available from the Department of Music Research in the Schulich School of Music from February 1 and must be completed and returned to that office by May 15 of each academic year. Late applications will not be accepted and no students will be admitted in January. Successful applicants will be notified by June 1. Registration will be limited to available lab space.

##### ~~32.13.23.4.1~~ Science Minor in Music Technology (24 credits)

This program was retired as of the 2008-09 academic year. Students currently registered in the program should consult with their program adviser and refer to the Calendar for the academic year in which they began the program for guidance about program requirements. Science students are eligible to take the Arts Minor Concentration in Music; see *Faculty of Arts > Music (MUAR)*. Music courses listed as MUAR (see Faculty of Arts courses) are considered to be Arts courses. All other Music courses are considered by the Faculty of Science to be courses outside of Arts and Science (see [section 32.6.5.2: Courses Outside the Faculties of Arts and Science](#) for the relevant regulations).

### 32.13.24 Neurology and Neurosurgery (NEUR)

#### 32.13.24.1 Location

Montreal Neurological Institute and Hospital  
3801 University Street, Room 141  
Montreal, Quebec, Canada H3A 2B4

#### 32.13.24.2 About Neurology and Neurosurgery

There are no B.Sc. programs in Neurology and Neurosurgery,bb1 Neurologi86Lrg0 0B2 5(1d7 s62tion284 Ta8.5)Tj1 0 0 1 432.1,Tm(echnology)Tj420 0 1 264.115 266.1



### **32.13.25.2 About Neuroscience**

Neuroscience is a multidisciplinary science devoted to the understanding of the nervous system. The brain is one of the most complex systems in the universe, and understanding ho

BIOC 455	(3)	Neurochemistry
BIOL 532	(3)	Developmental Neurobiology Seminar
BIOL 588	(3)	Advances in Molecular/Cellular Neurobiology
NEUR 310	(3)	Cellular Neurobiology
PHGY 311	(3)	Channels, Synapses & Hormones
PHGY 451	(3)	Advanced Neurophysiology

### Neurophysiology

ANAT 322	(3)	Neuroendocrinology
BIOL 389	(3)	Laboratory in Neurobiology
BIOL 514	(3)	Neurobiology Learning and Memory
BIOL 588	(3)	Advances in Molecular/Cellular Neurobiology
PHGY 311	(3)	Channels, Synapses & Hormones
PHGY 451	(3)	Advanced Neurophysiology
PHGY 520	(3)	Ion Channels
PHGY 556	(3)	Topics in Systems Neuroscience
PSYC 427	(3)	Sensorimotor Behaviour

### Neuropsychology

ANAT 321	(3)	Circuitry of the Human Brain
ANAT 322	(3)	Neuroendocrinology
BIOL 306	(3)	Neural Basis of Behaviour
PSYC 311	(3)	Human Cognition and the Brain
PSYC 318	(3)	Behavioural Neuroscience 2
PSYC 410	(3)	Special Topics in Neuropsychology
PSYC 470	(3)	Memory and Brain
PSYC 505	(3)	The Psychology of Pain
PSYC 522	(3)	Neurochemistry and Behaviour
PSYC 526	(3)	Advances in Visual Perception

### Neuropharmacology

ANAT 321	(3)	Circuitry of the Human Brain
BIOC 455	(3)	Neurochemistry
BIOL 588	(3)	Advances in Molecular/Cellular Neurobiology
PHAR 300	(3)	Drug Action
PHAR 301	(3)	Drugs and Disease
PHAR 562	(3)	General Pharmacology 1
PHGY 311	(3)	Channels, Synapses & Hormones
PHGY 451	(3)	Advanced Neurophysiology
PHGY 520	(3)	Ion Channels
PSYT 301	(3)	Issues in Drug Dependence
PSYT 500	(3)	Advances: Neurobiology of Mental Disorders

**Bachelor of Science (B.Sc.) - Major Neur**

3 credits from:

BIOL 373	(3)	Biometry
PSYC 305	(3)	Statistics for Experimental Design

3 credits completed by taking the course below or an equivalent in Computer Science.

COMP 202	(3)	Introduction to Computing 1
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3 credits from:

BIOL 309	(3)	Mathematical Models in Biology
MATH 222**	(3)	Calculus 3

\*\* Note: Students who have successfully completed an equivalent to MATH 222 at CEGEP or elsewhere, may substitute another 3-credit course for MATH 222.

### Streams

15 credits selected from one of the following streams:

#### A. Cell and Molecular Stream

15 credits selected as follows:

\* Students take either BIOL 201 OR BIOC 212, but not both.

BIOC 212*	(3)	Molecular Mechanisms of Cell Function
BIOC 311	(3)	Metabolic Biochemistry
BIOL 201*	(3)	Cell Biology and Metabolism
BIOL 202	(3)	Basic Genetics
MIMM 314	(3)	Immunology
PHGY 311	(3)	Channels, Synapses & Hormones

#### B. Neurophysiology/Neural Computation Stream

15 credits selected as follows:

9 credits from:

\* Students take either BIOL 201 OR BIOC 212, but not both.

ANAT 321	(3)	Circuitry of the Human Brain
BIOC 212*	(3)	Molecular Mechanisms of Cell Function
BIOL 201*	(3)	Cell Biology and Metabolism
PHGY 311	(3)	Channels, Synapses & Hormones

3 credits from:

BIOL 306	(3)	Neural Basis of Behaviour
PHGY 314	(3)	Integrative Neuroscience

3 credits from:



\* Students may select either MATH 437 OR PHYS 413, but not both.

### **32.13.26 Nutrition (NUTR)**

#### **32.13.26.1 Location**

School of Dietetics and Human Nutrition  
Room MS2-039, Macdonald-Stewart Building  
21111 Lakeshore Road  
Sainte-Anne-de-Bellevue, Quebec H9X 3V9

#### **32.13.26.2 About Nutrition**

The School of Dietetics and Human Nutrition offers a Minor in Human Nutrition which can be taken by Science students; see *Faculty of Agricultural and Environmental Sciences > Bachelor of Science (Nutritional Sciences) - B.Sc.(Nutr.Sc.)*.

NUTR 307 is considered as a course taught by the Faculty of Science and is offered simultaneously on both campuses.

### **32.13.27 Pathology (PATH)**

#### **32.13.27.1 Location**

Department of Pathology  
Duff Medical Building  
3775 University Street  
Montreal, Quebec H3A 2B4

#### **32.13.27.2 About Pathology**

There are no B.Sc. programs in Pathology, but the course PATH 300 *Human Disease* is considered as one taught by the Faculty of Science.

### **32.13.28 Pharmacology and Therapeutics (PHAR)**

#### **32.13.28.1 Location**

McIntyre Medical Building  
3655 Promenade Sir William Osler  
Montreal, Quebec H3G 1Y6

Telephone: 514-398-3623

Website: [www.medicine.mcgill.ca/pharma](http://www.medicine.mcgill.ca/pharma)

#### **32.13.28.2 About Pharmacology and Therapeutics**

Pharmacology is the science that deals with all aspects of drugs and their interactions with living organisms. Thus, it involves the physical and chemical properties of drugs, their biochemical and physiological effects, mechanisms of action, pharmacokinetics, and therapeutic and other uses. Since the word “drug” encompasses all chemical substances that produce an effect on living cells, it is evident that pharmacology is a very extensive subject. Pharmacology is a multidisciplinary science. It has developed its own set of principles and methods to study the mode of the action of drugs, but it has also utilized many techniques and approaches from various disciplines including biochemistry, physiology, anatomy and molecular biology, as well as others. Pharmacology encompasses a number of different areas such as pharmacogenomics, molecular biology, bioinformatics, neuropharmacology, reproductive pharmacology, endocrine pharmacology, receptor pharmacology, cardiovascular pharmacology, toxicology, developmental pharmacology, autonomic pharmacology, biochemical pharmacology, and therapeutics.

Training in pharmacology is conducted at both the undergraduate and graduate levels. Because of its breadth, students may be attracted to the subject from a variety of viewpoints; this includes those completing a Bachelor’s degree in any number of basic science disciplines, such as biology, zoology, chemistry, physics, biochemistry, microbiology, anatomy and physiology. At the undergraduate level, seven lecture courses are offered. A course involving research



**Note:** This program was retired at the end of the 2008-09 academic year and no new students were accepted as of June 2009.

### **32.13.28.3 Pharmacology and Therapeutics (PHAR) Faculty**

#### **Chair**

Hans H. Zingg

#### **Emeritus Professors**

Brian Collier; B.Sc., Ph.D.(Leeds)

Theodore Sourkes; Ph.D.(C'nell)

#### **Professors**

Guillermina Almazan; Ph.D.(McG.)

Radan Capek; M.D., Ph.D.(Prague)

Paul B.S. Clarke; M.A.(Cant.), Ph.D.(Lond.)

A. Claudio Cuello; M.D.(Buenos Aires), M.A., D.Sc.(Oxf.) F.R.S.C.

Barbara Hales; M.Sc.(Phil. Coll. of Pharm. and Science), Ph.D.(McG.)

Dusica Maysinger; Ph.D.(S. Calif.)

Peter J. McLeod; M.D.(Manit.), F.R.C.P.(C.)

Alfredo Ribeiro-da-Silva; M.D., Ph.D.(Oporto)

Bernard Robaire; B.A.(Calif.), Ph.D.(McG.)

H. Uri Saragovi; Ph.D.(Miami)

Moshe Szyf; M.Sc., Ph.D.(Hebrew)

Jacquetta Trasler; M.D.,C.M., Ph.D.(McG.)

Daya R. Varma; M.D.(Lucknow), Ph.D.(McG.)

Hans H. Zingg; M.D., Ph.D.(McG.)

#### **Associate Professors**

Daniel Bernard; Ph.D.(Johns H.)

Derek Bowie; B.Sc., Ph.D.(Lond.)

Terence Hébert; M.Sc.(Windsor), Ph.D.(Tor.)

Anne McKinney; Ph.D.(Ulster)

Stanley Nattel; B.Sc., M.D.,C.M.(McG.)

Ante L. Padjen; M.D., M.Sc., D.Sc.(Zagreb)

Betty I. Sasyniuk; B.S.P., Ph.D.(Manit.)

Edith A. Zorychta; B.Sc.(St. FX), M.Sc., Ph.D.(McG.)

#### **Assistant Professors**

Greg Miller; Ph.D.(W. Ont.)

Jason Chaim Tanny; Ph.D.(Harv.)

#### **Associate Members**

Moulay Alaoui-Jamali; Ph.D.(Sorbonne)

Gerald Batist; M.D.,C.M.(McG.)

Martine Culty; Ph.D.(Fr.)



### Associate Members

Giovanni Di Battista; B.Sc., Ph.D.(Montr.)  
Lesley Fellows; M.D.(McG.), Ph.D.(Oxf.)  
Pierre Fiset; M.D.(Laval), F.R.C.P.S.(C).  
Serge Gauthier; M.D.(Montr.)  
Timothy Geary; Ph.D.(Mich.)  
Bertrand Jean-Claude; M.Sc.(Moncton), Ph.D.(McG.)  
Sarah Kimmins; Ph.D.(Dal.)  
Stephane Laporte; Ph.D.(Sher.)  
Cristian O'Flaherty; Ph.D.(McG.)  
Vassilios Papadopoulos; Ph.D.(Université Pierre et Marie Curie)  
Roger Prichard; B.Sc., Ph.D.(N.S.W.)  
Yoram Shir; M.D.(Israel), Ph.D.(Johns H.)  
Laura Stone; Ph.D.(Minn.)  
Simon Rousseau; Ph.D.(Laval)  
Remi Quirion; M.Sc., Ph.D.(Sher.)  
Marc Ware; M.D.(Univ. West Indies, Kingston, Jamaica)  
Xiang-Jiao Yang; Ph.D.(Shanghai)

### Adjunct Professors

Bruce Allen; Ph.D.(Br. Col.)  
Martin Bruno; Ph.D.(McG.)  
Sylvain Chemtob; M.D.(Montr.), Ph.D.(McG.)  
Yves De Koninck; Ph.D.(McG.)  
Lorella Garofalo; Ph.D.(McG.)

**Complementary Courses (12 credits)**

12 credits selected as follows:

3 credits, one of:

BIOC 212	(3)	Molecular Mechanisms of Cell Function
BIOL 200	(3)	Molecular Biology
BIOL 201	(3)	Cell Biology and Metabolism

3 credits, one of:

PHGY 209	(3)	Mammalian Physiology 1
PHGY 210	(3)	Mammalian Physiology 2

6 credits, chosen from:

\* PHAR 504 can be taken with PHAR 503 only.

PHAR 303	(3)	Principles of Toxicology
PHAR 503*	(3)	Drug Design and Development 1
PHAR 504*	(3)	Drug Design and Development 2
PHAR 558	(3)	Pharmacology Selected Topics
PHAR 599	(6)	Pharmacology Research Project

**32.13.28.5 Bachelor of Science (B.Sc.) - Major Pharmacology (65 credits)**

This program incorporates extensive studies in Pharmacology with a strong component of related biomedical sciences, providing a solid preparation for employment opportunities or for entry into graduate or professional training programs. Students must consult an adviser upon entering the program and at the beginning of U2 to verify courses and progress. Additional consultation at regular intervals is encouraged.

**U1 Required Courses (19 credits)**

BIOL 200	(3)	Molecular Biology
CHEM 212	(4)	Introductory Organic Chemistry 1
CHEM 222	(4)	Introductory Organic Chemistry 2
PHGY 209	(3)	Mammalian Physiology 1
PHGY 210	(3)	Mammalian Physiology 2
PHGY 212	(1)	Introductory Physiology Laboratory 1
PHGY 213	(1)	Introductory Physiology Laboratory 2

**U2 Required Courses (19 credits)**

BIOC 311	(3)	Metabolic Biochemistry
BIOL 202	(3)	Basic Genetics
BIOL 301	(4)	Cell and Molecular Laboratory
PHAR 300	(3)	Drug Action
PHAR 301	(3)	Drugs and Disease
PHAR 303	(3)	Principles of Toxicology

**U3 Required Courses (12 credits)**

PHAR 503	(3)	Drug Design and Development 1
PHAR 558	(3)	Pharmacology Selected Topics
PHAR 562	(3)	General Pharmacology 1
PHAR 563	(3)	General Pharmacology 2

**Complementary Courses (15 credits)**

15 credits selected as follows:

3 credits selected from:

ANAT 212	(3)	Molecular Mechanisms of Cell Function
BIOC 212	(3)	Molecular Mechanisms of Cell Function
BIOL 201	(3)	Cell Biology and Metabolism

3 credits selected from:

CHEM 203	(3)	Survey of Physical Chemistry
CHEM 204	(3)	Physical Chemistry/Biological Sciences 1

3 credits selected from:

BIOL 373	(3)	Biometry
MATH 203	(3)	Principles of Statistics 1
PSYC 204	(3)	Introduction to Psychological Statistics

6 credits selected from the following upper-level science courses:

Committee approval is required to substitute an upper-level science course not in the list below.

PHAR 599D1 and PHAR 599D2 are taken together.

\* Note: Students may take either ANAT 458 or BIOC 458.

\*\* Note: Students may take either CHEM 504 or PHAR 504.

ANAT 321	(3)	Circuitry of the Human Brain
ANAT 365	(3)	Cellular Trafficking

CHEM 302	(3)	Introductory Organic Chemistry 3
CHEM 502	(3)	Advanced Bio-Organic Chemistry
CHEM 504**	(3)	Drug Design and Development 2
EXMD 504	(3)	Biology of Cancer
EXMD 511	(3)	Joint Venturing with Industry
MIMM 314	(3)	Immunology
MIMM 387	(3)	Applied Microbiology and Immunology
MIMM 414	(3)	Advanced Immunology
NEUR 310	(3)	Cellular Neurobiology
PATH 300	(3)	Human Disease
PHAR 504**	(3)	Drug Design and Development 2
PHAR 599D1	(3)	Pharmacology Research Project
PHAR 599D2	(3)	Pharmacology Research Project
PHGY 311	(3)	Channels, Synapses & Hormones
PHGY 312	(3)	Respiratory, Renal, & Cardiovascular Physiology
PHGY 313	(3)	Blood, Gastrointestinal, & Immune Systems Physiology
PHGY 314	(3)	Integrative Neuroscience
PHGY 520	(3)	Ion Channels
PSYC 311	(3)	Human Cognition and the Brain

### **32.13.28.6 Bachelor of Science (B.Sc.) - Honours Pharmacology (74 credits)**

The Honours program is designed as a preparation for graduate studies and research. In addition to the strong training provided by the Major program, it requires students to have direct research experience in a chosen area during their final year of study. Acceptance into the Honours program takes place in the Winter term of U2 and requires a CGPA of 3.30. Students who wish to enter the Honours program should follow the Major program; those who satisfactorily complete the first three terms with a CGPA of at least 3.30 and a mark of B or higher in core Pharmacology courses are eligible for admission. Applications can be obtained from the Office of the Department of Pharmacology in the McIntyre Medical Building or on the departmental website.

#### **U1 Required Courses (19 credits)**

\* Students with prior credit for CHEM 212 may take CHEM 212 as a corequisite with CHEM 211. Students who have completed CHEM 212 may take CHEM 211 as a corequisite with CHEM 212.

### U3 Required Courses (18 credits)

\* PHAR 599D1 and PHAR 599D2 are taken together.

PHAR 503	(3)	Drug Design and Development 1
PHAR 558	(3)	Pharmacology Selected Topics
PHAR 562	(3)	General Pharmacology 1
PHAR 563	(3)	General Pharmacology 2
PHAR 599D1*	(3)	Pharmacology Research Project
PHAR 599D2*	(3)	Pharmacology Research Project

### Complementary Courses (18 credits)

18 credits selected as follows:

3 credits selected from:

ANAT 212	(3)	Molecular Mechanisms of Cell Function
<del>BIOL</del> 212	(3)	Molecular Mechanisms of Cell Function
BIOL 201	(3)	Cell Biology and Metabolism

3 credits selected from:

CHEM 203	(3)	Survey of Physical Chemistry
CHEM 204	(3)	Physical Chemistry/Biological Sciences 1

3 credits selected from:

BIOL 373	(3)	Biometry
MATH 203	(3)	Principles of Statistics 1
PSYC 204	(3)	Introduction to Psychological Statistics

9 credits selected from the following upper-level science courses:

Committee approval is required to substitute an upper-level science course not in the list below.

\* Note: Students may tak

BIOL 314	(3)	Molecular Biology of Oncogenes
BIOT 505	(3)	Selected Topics in Biotechnology
CHEM 302	(3)	Introductory Organic Chemistry 3
CHEM 502	(3)	Advanced Bio-Organic Chemistry
CHEM 504**	(3)	Drug Design and Development 2
EXMD 504	(3)	Biology of Cancer
EXMD 511	(3)	Joint Venturing with Industry
MIMM 314	(3)	Immunology
MIMM 387	(3)	Applied Microbiology and Immunology
MIMM 414	(3)	Advanced Immunology
NEUR 310	(3)	Cellular Neurobiology
PATH 300	(3)	Human Disease
PHAR 504**	(3)	Drug Design and Development 2
PHGY 311	(3)	Channels, Synapses & Hormones
PHGY 312	(3)	Respiratory, Renal, & Cardiovascular Physiology
PHGY 313	(3)	Blood, Gastrointestinal, & Immune Systems Physiology
PHGY 314	(3)	Integrative Neuroscience
PHGY 520	(3)	Ion Channels
PSYC 311	(3)	Human Cognition and the Brain

## 32.13.29 Physics (PHYS)

### 32.13.29.1 Location

Rutherford Physics Building, Room 108  
3600 University Street  
Montreal, Quebec H3A 2T8

Telephone: 514-398-6477

Fax: 514-398-8434

Email: [secretariat@physics.mcgill.ca](mailto:secretariat@physics.mcgill.ca)

Website: [www.physics.mcgill.ca](http://www.physics.mcgill.ca)

### 32.13.29.2 About Physics

Physics is in many ways the parent of the other natural sciences and its discoveries and laws continually affect their development. Its range and scope extend in space and time from subnuclear particles to the universe itself. The subfields of physics such as mechanics, thermodynamics, electricity, atomic physics and quantum mechanics, to mention but a few, permeate all other scientific disciplines. People trained in physics are employed in industry, government, and educational systems where they find many challenges as teachers, researchers, administrators and in the rapidly developing area of scientific business.

The two main undergraduate programs in Physics at McGill are the Honours and the Major. The Honours program is highly specialized and the courses are very demanding. This program is appropriate for students who wish to make an in-depth study of the subject in preparation for graduate work and an academic or professional career in physics. The two joint honours, one in Mathematics and Physics and the other in Physics and Chemistry, are even more specialized and demanding. They are intended for students who wish to develop a strong basis in both physics and the other discipline and are intended as preparation for graduate work and a professional or academic career. Although these two programs have a bias for theoretical work, they are broad enough and strong enough to prepare students for further study in either experimental physics or respectively mathematics or chemistry. High standing in CEGEP or Freshman-year mathematics and physics is a requirement for admission to these Honours programs.

The Major program, on the other hand, offers a broad training in classical and modern physics and yet leaves room for the student to take a meaningful sequence of courses in other areas. It is intended primarily for students who wish to pursue careers in fields for which physics provides a basis. However, this program also provides a preparation for graduate studies.

It is possible for students to transfer from the Major program to the Honours program after the first year of studies; see [section 32.13.29.9: Bachelor of Science \(B.Sc.\) - Major Physics \(60 credits\)](#).52 1G70.061 TmR 59.483diET 8.1dA1 0 0 1 482.337 179.781c61 TmR 179.78h f 8.1 Tf 10 0 1 103.657 406.3 4

There are also a number of other Major programs: Atmospheric Sciences and Physics, Physics and Computer Science, Physics and Geophysics, and Physiology and Physics, offered jointly with other departments, and a Minor program in Electrical Engineering, available only to students in the Physics Major program. In addition, there is a Minor in Physics and a core Physics component of the Liberal Science Program, for students less interested in a specialized education.

For those interested in a career as a high school science teacher, the concurrent program leading to both a B.Sc. and a B.Ed. degree provides several physics options. These combine physics courses from the Major and Minor programs with courses from either Biology or Chemistry and with Education courses. (For details, see [section 32.13.34: Science or Mathematics for Teachers.](#))

Students from outside of the Province of Quebec will ordinarily register in the Science Freshman program. Physics offers two sequences of courses for this program: they are described below.

The list of pre- and corequisites is not absolute. In many cases permission of the Department may be sought to have a speci

## **Emeritus Professors**

John O. Strom-Olsen; B.A., M.S., Ph.D.(Cant.)

Martin J. Zuckermann; M.A., D.Phil.(Oxf.), F.R.S.C. (*William C. Macdonald Emeritus Professor of Physics*)

## **Professors**

Jean Barrette; B.Sc., M.Sc., Ph.D.(Montr.)

Robert Brandenberger; Dipl., A.M., Ph.D.(Harv.) (*Canada Research Chair*)

James M. Cline; B.Sc.(Calif.), M.Sc., Ph.D.(Cal. Tech.)

François Corriveau; B.Sc.(Laval), M.Sc.(Br. Col.), Docteur Sc.Nat.(Zurich)

Charles Gale; B.Sc.(Ott.), M.Sc., Ph.D.(McG.) (*James McGill Professor*)

Martin Grant; B.Sc.(PEI), M.Sc., Ph.D.(Tor.), F.R.S.C. (*James McGill Professor*)

Peter Grutter; Dipl., Ph.D.(Basel) (*James McGill Professor*)

Hong Guo; B.Sc.(Sichuan), M.Sc., Ph.D.(Pitt.), F.R.S.C. (*James McGill Professor*)

David Hanna; B.Sc.(McG.), M.A., Ph.D.(Harv.) (*William C. Macdonald Professor of Physics*)

Richard Harris; B.A.(Oxf.), D.Phil.(Sus.)

Victoria Kaspi; B.Sc.(McG.), M.A., Ph.D.(Prin.) (*Canada Research Chair*) (*Lorne Trottier Chair in Astrophysics and Cosmology*)

Shaun Lovejoy; B.A.(Cant.), Ph.D.(McG.)

Kenneth J. Ragan; B.Sc.(Alta.), D.Sc.(Geneva) (*William C. Macdonald Professor of Physics*)

Dominic H. Ryan; B.A., Ph.D.(Trin. Coll.)

Mark Sutton; B.Sc., M.Sc., Ph.D.(Tor.) (*Ernest Rutherford Professor of Physics*)

Jorge Vinals; B.Sc., M.Sc., Ph.D.(Barcelona) (*Canada Research Chair*)

## **Associate Professors**

Aashish Clerk; B.Sc.(Tor.), Ph.D.(C'nell) (*Canada Research Chair*)

Andrew Cumming; B.A.(Camb.), Ph.D.(Calif., Berk.)

Michael Hilke; B.Sc., M.Sc., Ph.D.(Geneva)

Sangyong Jeon; B.Sc.(Seoul), M.Sc., Ph.D.(Wash.)

Guy Moore; B.Sc.(Calif.), Ph.D.(Prin.)

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PHYS 241	(3)	Signal Processing
PHYS 258	(3)	Experimental Methods 2

one of:

PHYS 214	(3)	Introductory Astrophysics
PHYS 225	(3)	Musical Acoustics
PHYS 260	(3)	Modern Physics and Relativity
PHYS 271	(3)	Introduction to Quantum Physics

one of:

PHYS 340	(3)	Majors Electricity and Magnetism
PHYS 350	(3)	Honours Electricity and Magnetism

### 32.13.29.7 Bachelor of Science (B.Sc.) - Minor Electrical Engineering (24 credits)

[Program registration done by Student Affairs Office]

The Minor program does not carry professional recognition. Only students who satisfy the requirements of the Major Physics are eligible for this Minor. Students registered for this option cannot count PHYS 241 towards the requirements of the Major in Physics, and should replace this course by another Physics or Mathematics course. Students who select ECSE 334 in the Minor cannot count PHYS 328 towards the requirements of the Major in Physics, and should replace this course by another Physics or Mathematics course.

#### Required Courses (12 credits)

ECSE 200	(3)	Electric Circuits 1
ECSE 210	(3)	Electric Circuits 2
ECSE 303	(3)	Signals and Systems 1
ECSE 330	(3)	Introduction to Electronics

#### Complementary Courses (12 credits)

3 credits from the following and 9 credits of ECSE courses at the 200, 300, or 400 level subject to approval by the Department of Electrical and Computer Engineering.

ECSE 305	(3)	Probability and Random Sig. 1
ECSE 334	(3)	Introduction to Microelectronics

### 32.13.29.8 Bachelor of Science (B.Sc.) - Liberal Program - Core Science Component Physics (48 credits)

#### Program Prerequisites

Students entering Physics programs from the Freshman Program must have successfully completed the courses below or their equivalents. Quebec students must have completed the DEC with appropriate science and mathematics courses.

CHEM 110	(4)	General Chemistry 1
CHEM 120	(4)	General Chemistry 2
PHYS 131	(4)	Mechanics and Waves
PHYS 142	(4)	Electromagnetism and Optics

One of:

BIOL 111	(3)	Principles: Organismal Biology
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BIOL 112                   (3)           Cell and Molecular Biology

MATH 133 and either MATH 140/141 or MATH 150/151.

MATH 133                 (3)           Linear Algebra and Geometry

MATH 140                 (3)           Calculus 1

MATH 141                 (4)           Calculus 2

MATH 150                 (4)           Calculus A

MATH 151                 (4)           Calculus B

**Required Courses (39 credits)**

MATH 222                 (3)           Calculus 3

MATH 223                 (3)           Linear Algebra

MATH 314                 (3)           Advanced Calculus

MATH 315                 (3)           Ordinary Differential Equations

One of:

BIOL 111	(3)	Principles: Organismal Biology
BIOL 112	(3)	Cell and Molecular Biology

MATH 133 and either MATH 140/141 or MATH 150/151.

MATH 133	(3)	Linear Algebra and Geometry
MATH 140	(3)	Calculus 1
MATH 141	(4)	Calculus 2
MATH 150	(4)	Calculus A
MATH 151	(4)	Calculus B

### U1 Required Courses (21 credits)

MATH 222	(3)	Calculus 3
MATH 223	(3)	Linear Algebra
PHYS 230	(3)	Dynamics of Simple Systems
PHYS 232	(3)	Heat and Waves
PHYS 241	(3)	Signal Processing
PHYS 257	(3)	Experimental Methods 1
PHYS 258	(3)	Experimental Methods 2

### U2 Required Courses (24 credits)

MATH 314	(3)	Advanced Calculus
MATH 315	(3)	Ordinary Differential Equations
PHYS 328	(3)	Electronics
PHYS 331	(3)	Topics in Classical Mechanics
PHYS 333	(3)	Thermal and Statistical Physics
PHYS 339	(3)	Measurements Laboratory in General Physics
PHYS 340	(3)	Majors Electricity and Magnetism
PHYS 342	(3)	Majors Electromagnetic Waves

### U3 Required Courses (15 credits)

PHYS 434	(3)	Optics
PHYS 436	(3)	Modern Physics
PHYS 439	(3)	Majors Laboratory in Modern Physics
PHYS 446	(3)	Majors Quantum Physics
PHYS 449	(3)	Majors Research Project

It is possible for students to transfer from the Major to the Honours program after the U1 year if they have passed all U1 Required courses and MATH 314 and MATH 315 with a C or better, and obtained a GPA of 3.5 or better in these courses. The written permission of an adviser is required for this change of program.

Note: The missing MATH 249 and PHYS 260 from the U1 Honours Year should be taken in U2.

**321329.10 Bachelor of Science (B.Sc.) - Major Physics and Geophysics (69 credits)**

This joint program in Physics and Geophysics provides a firm basis for graduate work in geophysics and related fields as well as a sound preparation for those who wish to embark on a career directly after the B.Sc.

**Program Prerequisites**

Students entering Physics programs from the Freshman Program must have successfully completed the courses below or their equivalents. Quebec students must hav

**U2 or U3 Required Courses (6 credits)**

EPSC 330	(3)	Earthquakes and Earth Structure
EPSC 510	(3)	Geodynamics and Geomagnetism

**U3 Required Courses (15 credits)**

PHYS 331	(3)	Topics in Classical Mechanics
PHYS 332	(3)	Physics of Fluids
PHYS 333	(3)	Thermal and Statistical Physics
PHYS 342	(3)	Majors Electromagnetic Waves
PHYS 446	(3)	Majors Quantum Physics

**321329.11 Bachelor of Science (B.Sc.) - Major Physics and Computer Science (66 credits)**

The Major Physics and Computer Science is designed to give motivated students the opportunity to combine the two fields in a way that will distinguish them from the graduates of either field by itself. The two disciplines complement each other, with physics providing an analytic problem-solving outlook and basic understanding of nature, while computer science enhances the ability to make practical and marketable applications, in addition to having its own theoretical interest. Graduates of this program may be able to present themselves as being more immediately useful than a pure physics major, but with more breadth than just a programmer. They will be able to demonstrate their combined expertise in the Special Project course which is the centrepiece of the final year of the program.

**Program Prerequisites**

Students entering Physics programs from the Freshman Program must have successfully completed the courses below or their equivalents. Quebec students must have completed the DEC with appropriate science and mathematics courses.

General Chemistry 1ther

PHYS 230	(3)	Dynamics of Simple Systems
PHYS 257	(3)	Experimental Methods 1
PHYS 258	(3)	Experimental Methods 2

**U2 Required Courses (24 credits)**

COMP 206	(3)	Introduction to Software Systems
COMP 251	(3)	Data Structures and Algorithms
COMP 302	(3)	Programming Languages and Paradigms
COMP 350	(3)	Numerical Computing
MATH 314	(3)	Advanced Calculus
MATH 315	(3)	Ordinary Differential Equations
PHYS 232	(3)	Heat and Waves
PHYS 241	(3)	Signal Processing

**U3 Required Courses (21 credits)**

COMP 360	(3)	Algorithm Design Techniques
MATH 323	(3)	Probability

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MATH 133	(3)	Linear Algebra and Geometry
MATH 140	(3)	Calculus 1
MATH 141	(4)	Calculus 2
MATH 150	(4)	Calculus A
MATH 151	(4)	Calculus B

### U1 Required Courses (27 credits)

MATH 247	(3)	Honours Applied Linear Algebra
MATH 248	(3)	Honours Advanced Calculus
MATH 249	(3)	Honours Complex Variables
MATH 325	(3)	Honours Ordinary Differential Equations
PHYS 241	(3)	Signal Processing
PHYS 251	(3)	Honours Classical Mechanics 1
PHYS 257	(3)	Experimental Methods 1
PHYS 258	(3)	Experimental Methods 2
PHYS 260	(3)	Modern Physics and Relativity

### U2 Required Courses (24 credits)

MATH 375	(3)	Honours Partial Differential Equations
PHYS 253	(3)	Thermal Physics
PHYS 350	(3)	Honours Electricity and Magnetism
PHYS 357	(3)	Honours Quantum Physics 1
PHYS 359	(3)	Honours Laboratory in Modern Physics 1
PHYS 362	(3)	Statistical Mechanics
PHYS 451	(3)	Honours Classical Mechanics 2
PHYS 457	(3)	Honours Quantum Physics 2

### U3 Required Courses (6 credits)

PHYS 352	(3)	Honours Electromagnetic Waves
PHYS 551	(3)	Quantum Theory

### U3 Complementary Courses (21 credits)

6 credits selected from:

Note: PHYS 459D1 and PHYS 459D2 are taken together.

PHYS 459D1	(3)	Honours Research Thesis
PHYS 459D2	(3)	Honours Research Thesis
PHYS 469	(3)	Honours Laboratory in Modern Physics 2
PHYS 479	(3)	Honours Research Project

15 credits selected from the list below (students may substitute one or more courses with any 3-credit course approved by the Department of Physics):

PHYS 332	(3)	Physics of Fluids
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PHYS 434	(3)	Optics
PHYS 479	(3)	Honours Research Project
PHYS 514	(3)	General Relativity
PHYS 521	(3)	Astrophysics
PHYS 557	(3)	Nuclear Physics
PHYS 558	(3)	Solid State Physics
PHYS 559	(3)	Advanced Statistical Mechanics
PHYS 562	(3)	Electromagnetic Theory
PHYS 567	(3)	Particle Physics
PHYS 580	(3)	Introduction to String Theory

**321329.13 Bachelor of Science (B.Sc.) - Honours Mathematics and Physics (81 credits)**

MATH 249	(3)	Honours Complex Variables
MATH 325	(3)	Honours Ordinary Differential Equations
PHYS 241	(3)	Signal Processing
PHYS 251	(3)	Honours Classical Mechanics 1
PHYS 257	(3)	Experimental Methods 1
PHYS 258	(3)	Experimental Methods 2
PHYS 260	(3)	Modern Physics and Relativity

**U2 Required Courses (27 credits)**

MATH 242	(3)	Analysis 1
MATH 255	(3)	Honours Analysis 2

PHYS 558	(3)	Solid State Physics
PHYS 559	(3)	Advanced Statistical Mechanics
PHYS 562	(3)	Electromagnetic Theory
PHYS 567	(3)	Particle Physics
PHYS 580	(3)	Introduction to String Theory

3 credits in Honours Mathematics.

MATH 325	(3)	Honours Ordinary Differential Equations
PHYS 241	(3)	Signal Processing
PHYS 251	(3)	Honours Classical Mechanics 1
PHYS 257	(3)	Experimental Methods 1
PHYS 258	(3)	Experimental Methods 2

**U2 Required Courses (24 credits)**

CHEM 212	(4)	Introductory Organic Chemistry 1
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## **Associate Members**

Anaesthesia: Steven Backman, Fernando Cervero

Biomedical Engineering: Robert E. Kearney, Satya Prakash

Electrical and Computer Engineering: Sam Musallam

Kinesiology and Physical Education: Dilson Rassier

Medicine: Albert Aguayo, Volker Blank, Mark Blostein, Andrey Cybulsky, Abraham Fuks, Claude Gagnon, Raymonde Gagnon, Imed Gallouzi, Harry Goldsmith, Geoffrey Hendy, Louise Larose, Anne Marie Lauzon, James Martin, Shree Mulay, Mariana Newkirk, Barry Posner, Shafaat Rabbani, Mary Stevenson, Simon Wing, Hans Zingg

Nephrology: Serge Lemay, Tomoko Takano

Neurology: David Ragsdale

Neurology & Neurosurgery: Jack Antel, Massimo Avoli, Charles Bourque, Sal T. Carbonetto, Daniel Guitton, Christopher Pack, Melissa Vollrath

Ophthalmology: Curtis Baker

Otolaryngology: Bernard Segal

Pediatrics: Charles Rohlicek

Pharmacology: Terence Hebert

Psychiatry: Nicolas Cermakian, Bernardo Dubrovsky, Christina Gianoulakis

## **Adjunct Professors**

Roy Caplan, Montreal

3 credits selected from:

BIOC 212	(3)	Molecular Mechanisms of Cell Function
BIOL 201	(3)	Cell Biology and Metabolism

3 credits selected from:

BIOL 309	(3)	Mathematical Models in Biology
BIOL 373	(3)	Biometry

### Upper-Level Physiology (ULP) Courses

6 credits selected from the upper-level Physiology (ULP) course list as follows:

All Physiology courses 400-level and above.

Note:

The 6-credit course PHGY 459D1/D2 equals 3 credits of ULP and 3 credits of electives.

The 9-credit course PHGY 461D1/D2 equals 3 credits of ULP and 6 credits of electives.

ANAT 541	(3)	Cell and Molecular Biology of Aging
BIOL 532	(3)	Developmental Neurobiology Seminar
BMDE 519	(3)	Biomedical Signals and Systems
EXMD 502	(3)	Advanced Endocrinology 01
EXMD 503	(3)	Advanced Endocrinology 02
EXMD 506	(3)	Advanced Applied Cardiovascular Physiology
EXMD 507	(3)	Advanced Applied Respiratory Physiology
EXMD 508	(3)	Advanced Topics in Respiration
MIMM 413	(3)	Parasitology
MIMM 414	(3)	Advanced Immunology
MIMM 465	(3)	Bacterial Pathogenesis
MIMM 466	(3)	Viral Pathogenesis
PSYC 470	(3)	Memory and Brain
PSYT 500	(3)	Advances: Neurobiology of Mental Disorders

### 32.13.30.5 Bachelor of Science (B.Sc.) - Major Physiology (65 credits)

The Major Program includes, in addition to some intensive studies in Physiology, a strong core content of related biomedical sciences. Admission to the Major Program will be in U2, upon completion of the U1 required courses, and in consultation with the student's adviser.

If not previously taken, CHEM 212 "Introductory Organic Chemistry 1" must be completed in addition to the 64-65 program credits.

Students may complete this program with a minimum of 64 credits or a maximum of 65 credits depending on their choice of complementary courses.

#### U1 Required Courses (18 credits)

BIOL 200	(3)	Molecular Biology
BIOL 202	(3)	Basic Genetics
CHEM 222	(4)	Introductory Organic Chemistry 2
PHGY 209	(3)	Mammalian Physiology 1
PHGY 210	(3)	Mammalian Physiology 2
PHGY 212	(1)	Introductory Physiology Laboratory 1



PHGY 213 (1) Introductory Physiology Laboratory 2

### U2 and U3 Required Courses (19 credits)

BIOC 311 (3) Metabolic Biochemistry  
BIOL 301 (4) Cell and Molecular Laboratory  
PHGY 311 (3) Channels, Synapses & Hormones  
PHGY 312 (3) Respiratory, Renal, & Cardiovascular Physiology  
PHGY 313 (3) Blood, Gastrointestinal, & Immune Systems Physiology  
PHGY 314 (3) Integrative Neuroscience

### Complementary Courses (28 credits)

12-13 credits selected as follows:

3 credits, one of:

BIOC 212 (3) Molecular Mechanisms of Cell Function  
BIOL 201 (3) Cell Biology and Metabolism

3 credits, one of:

BIOL 309 (3) Mathematical Models in Biology  
BIOL 373 (3) Biometry

3 credits, one of:

CHEM 203 (3) Survey of Physical Chemistry  
CHEM 204 (3) Physical Chemistry/Biological Sciences 1

3-4 credits, one of:

ANAT 214 (3) Systemic Human Anatomy  
ANAT 261 (4) Introduction to Dynamic Histology

### Upper Level Physiology (ULP) Courses

9 credits selected from the upper-level Physiology (ULP) course list as follows:

All Physiology courses 400-level and above.

Note:

The 6-credit course PHGY 459D1/D2 equals 3 credits of ULP and 3 credits of electives.

The 9-credit course PHGY 461D1/D2 equals 3 credits of ULP and 6 credits of electives.

ANAT 541 (3) Cell and Molecular Biology of Aging  
BIOL 532 (3) Developmental Neurobiology Seminar  
BMDE 519 (3) Biomedical Signals and Systems  
EXMD 502 (3) Advanced Endocrinology 01  
EXMD 503 (3) Advanced Endocrinology 02

Advanced Appe 95 72.48P1 0 0 1 165.65.864 119.643 Tm8321. 95 72.48P1 .792 168.803 T10(v)2d

EXMD 507	(3)	Advanced Applied Respiratory Physiology
EXMD 508	(3)	Advanced Topics in Respiration
MIMM 413	(3)	Parasitology
MIMM 414	(3)	Advanced Immunology
MIMM 465	(3)	Bacterial Pathogenesis
MIMM 466	(3)	Viral Pathogenesis
PSYC 470	(3)	Memory and Brain
PSYT 500	(3)	Advances: Neurobiology of Mental Disorders

### Upper Level Science (ULS) Courses

6 credits selected from the upper-level Science course list as follows:

NOTE:

For Anatomy, Chemistry, Neurology and Neurosurgery: select from all courses 300-level and above and the ULS courses listed below.

For Biochemistry, Computer Science, Microbiology and Immunology, Mathematics, Physics and Pathology: select from all courses 300-level and above.

For Biology, Experimental Medicine, Pharmacology and Psychology: select from the ULS courses listed below:

ANAT 214	(3)	Systemic Human Anatomy
ANAT 261	(4)	Introduction to Dynamic Histology
ANAT 262	(3)	Introductory Molecular and Cell Biology
BIOL 300	(3)	Molecular Biology of the Gene
BIOL 303	(3)	Developmental Biology
BIOL 309	(3)	Mathematical Models in Biology
BIOL 313	(3)	Eukaryotic Cell Biology
BIOL 314	(3)	Molecular Biology of Oncogenes
BIOL 324	(3)	Ecological Genetics
BIOL 370	(3)	Human Genetics Applied
BIOL 373	(3)	Biometry
BIOL 389	(3)	Laboratory in Neurobiology
BIOL 416	(3)	Genetics of Mammalian Development
BIOL 468	(6)	Independent Research Project 3
BIOL 518	(3)	Advanced Topics in Cell Biology
BIOL 520	(3)	Gene Activity in Development
BIOL 524	(3)	Topics in Molecular Biology
BIOL 532	(3)	Developmental Neurobiology Seminar
BIOL 544	(3)	Genetic Basis of Life Span
BIOL 551	(3)	Molecular Biology: Cell Cycle
BIOL 575	(3)	Human Biochemical Genetics
BIOL 588	(3)	Advances in Molecular/Cellular Neurobiology
CHEM 214	(3)	Physical Chemistry/Biological Sciences 2
EXMD 401	(3)	Physiology and Biochemistry Endocrine Systems
EXMD 502	(3)	Advanced Endocrinology 01
EXMD 503	(3)	Advanced Endocrinology 02
EXMD 504	(3)	Biology of Cancer
EXMD 506	(3)	Advanced Applied Cardiovascular Physiology

EXMD 507	(3)	Advanced Applied Respiratory Physiology
EXMD 508	(3)	Advanced Topics in Respiration
EXMD 509	(3)	Gastrointestinal Physiology and Pathology
EXMD 510	(3)	Bioanalytical Separation Methods
NEUR 310	(3)	Cellular Neurobiology
PHAR 503	(3)	Drug Design and Development 1
PHAR 504	(3)	Drug Design and Development 2
PHAR 562	(3)	General Pharmacology 1
PHAR 563	(3)	General Pharmacology 2
PHAR 599	(6)	Pharmacology Research Project
PSYC 311	(3)	Human Cognition and the Brain
PSYC 318	(3)	Behavioural Neuroscience 2
PSYC 342	(3)	Hormones and Behaviour
PSYC 353	(3)	Laboratory in Human Perception
PSYC 410	(3)	Special Topics in Neuropsychology
PSYC 427	(3)	Sensorimotor Behaviour
PSYC 470	(3)	Memory and Brain
PSYC 505	(3)	The Psychology of Pain
PSYC 522	(3)	Neurochemistry and Behaviour
PSYC 526	(3)	Advances in Visual Perception
PSYT 500	(3)	Advances: Neurobiology of Mental Disorders

### 32.13.30.6 Bachelor of Science (B.Sc.) - Major Physiology and Mathematics (77 credits)

#### U1 Required Courses (14 credits)

BIOL 200	(3)	Molecular Biology
BIOL 309	(3)	Mathematical Models in Biology
MATH 222	(3)	Calculus 3
PHGY 212	(1)	Introductory Physiology Laboratory 1
PHGY 213	(1)	Introductory Physiology Laboratory 2

one of:

MATH 223	(3)	Linear Algebra
MATH 247	(3)	Honours Applied Linear Algebra

#### U1 Complementary Courses (15 credits)

3 credits, one of:

BIOC 212	(3)	Molecular Mechanisms of Cell Function
BIOL 201	(3)	Cell Biology and Metabolism

6 credits selected as follows:

Either PHGY 209 and PHGY 210 or PHGY 201 and PHGY 202.

PHGY 201	(3)	Human Physiology: Control Systems
PHGY 202	(3)	Human Physiology: Body Functions
PHGY 209	(3)	Mammalian Physiology 1
PHGY 210	(3)	Mammalian Physiology 2

3 credits, one of:

MATH 248	(3)	Honours Advanced Calculus
MATH 314	(3)	Advanced Calculus

3 credits, one of:

MATH 315	(3)	Ordinary Differential Equations
MATH 325	(3)	Honours Ordinary Differential Equations

### U2 Required Courses (24 credits)

MATH 242	(3)	Analysis 1
MATH 243	(3)	Analysis 2
MATH 323	(3)	Probability
MATH 326	(3)	Nonlinear Dynamics and Chaos
PHGY 311	(3)	Channels, Synapses & Hormones
PHGY 312	(3)	Respiratory, Renal, & Cardiovascular Physiology
PHGY 313	(3)	Blood, Gastrointestinal, & Immune Systems Physiology
PHGY 314	(3)	Integrative Neuroscience

### U2 or U3 Required Courses (6 credits)

MATH 437	(3)	Mathematical Methods in Biology
PHYS 413	(3)	Physical Basis of Physiology

### U3 Required Courses (18 credits)

BMDE 519	(3)	Biomedical Signals and Systems
MATH 319	(3)	Introduction to Partial Differential Equations
MATH 324	(3)	Statistics
PHGY 461D1	(4.5)	Experimental Physiology
PHGY 461D2	(4.5)	Experimental Physiology

### 32.13.30.7 Bachelor of Science (B.Sc.) - Major Physiology and Physics (80 credits)

This program provides a firm foundation in physics, mathematics and physiology. It is appropriate for students interested in applying methods of the physical sciences to problems in physiology and allied biological sciences.

### U1 Required Courses (17 credits)

\* The corequisite BIOL 200, BIOL 201 is waived for this program.

MATH 222	(3)	Calculus 3
PHGY 212*	(1)	Introductory Physiology Laboratory 1

PHGY 213*	(1)	Introductory Physiology Laboratory 2
PHYS 230	(3)	Dynamics of Simple Systems
PHYS 232	(3)	Heat and Waves
PHYS 257	(3)	Experimental Methods 1
PHYS 258	(3)	Experimental Methods 2

### U2 Required Courses (21 credits)

MATH 326	(3)	Nonlinear Dynamics and Chaos
PHGY 311	(3)	Channels, Synapses & Hormones
PHGY 312	(3)	Respiratory, Renal, & Cardiovascular Physiology
PHGY 313	(3)	Blood, Gastrointestinal, & Immune Systems Physiology
PHGY 314	(3)	Integrative Neuroscience
PHYS 328	(3)	Electronics
PHYS 339	(3)	Measurements Laboratory in General Physics

### U2 or U3 Required Courses (6 credits)

MATH 437	(3)	Mathematical Methods in Biology
PHYS 413	(3)	Physical Basis of Physiology

### U3 Required Courses (21 credits)

BMDE 519	(3)	Biomedical Signals and Systems
PHGY 461D1	(4.5)	Experimental Physiology
PHGY 461D2	(4.5)	Experimental Physiology
PHYS 333	(3)	Thermal and Statistical Physics
PHYS 340	(3)	Majors Electricity and Magnetism
PHYS 446	(3)	Majors Quantum Physics

### U1 Complementary Courses (9 credits)

3 credits, one of:

MATH 223	(3)	Linear Algebra
MATH 247	(3)	Honours Applied Linear Algebra

6 credits selected as follows:

Either PHGY 209 and PHGY 210\* or PHGY 201 and PHGY 202.

\* The corequisite BIOL 200, BIOL 201 is waived for this program.

PHGY 201	(3)	Human Physiology: Control Systems
PHGY 202	(3)	Human Physiology: Body Functions
PHGY 209	(3)	Mammalian Physiology 1
PHGY 210*	(3)	Mammalian Physiology 2

### U2 Complementary Courses (6 credits)

3 credits, one of:

MATH 315	(3)	Ordinary Differential Equations
MATH 325	(3)	Honours Ordinary Differential Equations

3 credits, one of:

MATH 248	(3)	Honours Advanced Calculus
MATH 314	(3)	Advanced Calculus

### **32.13.30.8 Bachelor of Science (B.Sc.) - Honours Physiology (75 credits)**

All admissions to the Honours program will be in U2, and the student must have a U1 GPA of 3.30, with no less than a B in PHGY 209 and PHGY 210. Admission to U3 requires a U2 CGPA of 3.20 with no less than a B in U2 Physiology courses. Decisions for admission to U3 will be heavily influenced by student standing in U2 courses.

The Department reserves the right to restrict the number of entering students in the Honours program. Students who do not maintain Honours standing may transfer their registration to the Major Program in Physiology.

The deadline to apply to the Honours Program is June 1. Application forms are available in McIntyre 1021. Students should include in their letters telephone numbers where they can be reached during the last week of August. Students are responsible for picking up their letters of decision in McIntyre 1021 no later than one week before classes start.

Graduation: To graduate from the Honours Physiology Program, the student will have a CGPA of 3.20 with a mark no less than a B in all Physiology courses.

If not previously taken, CHEM 212 Introductory Organic Chemistry 1 must be completed in addition to the 75 program credits.

### **Required Courses (60 credits)**

ANA(4)MAMA	(4)	Introduction to Dynamic Histology
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9 credits selected as follows:

3 credits, one of:

BIOC 212	(3)	Molecular Mechanisms of Cell Function
BIOL 201	(3)	Cell Biology and Metabolism

3 credits, one of:

BIOL 309	(3)	Mathematical Models in Biology
BIOL 373	(3)	Biometry

3 credits, one of:

CHEM 203	(3)	Survey of Physical Chemistry
CHEM 204	(3)	Physical Chemistry/Biological Sciences 1

### **Upper-Level Physiology (ULP) Courses**

6 credits selected from the upper-level Physiology (ULP) course list as follows:

All Physiology courses 400-level and above.

Cell and Molecular Biology of

Telephone: 514-398-4176

Website: [www.med.mcgill.ca/psychiatry](http://www.med.mcgill.ca/psychiatry)

### **32.13.31.2 About Psychiatry**

There are no B.Sc. programs in Psychiatry, but the PSYT courses listed below are administered by the Faculty of Science and are open to Arts and Science students and to graduate students.

PSYT 199      FYS: Mental Illness and the Brain

PSYT 301      Issues in Drug Dependence

Adv





## Professors

Caroline Palmer; B.Sc.(Mich.), M.Sc.(Rutg.), Ph.D.(C' nell) (*Canada Research Chair in Cognitive Neuropsychology of Performance*)

Michael Petrides; B.Sc., M.Sc.(Lond.), Ph.D.(Cant.) (*joint appoint. with Neur*)

### Affiliate Members

David Dunkley; B.Sc.(Tor.), Ph.D.(McG.)

Lisa Koski; B.S.(Tor.), Ph.D.(McG.)

### Adjunct Professors

M. Bruck; B.A.(Wheaton), M.A., Ph.D.(McG.)

S. Burstein; B.Sc.(McG.), M.A., Ph.D.(Wat.)

P. Delise; B.Sc., M.Ps., Ph.D.(Montr.)

P. Gregoire; B.A.(College St. Marie), B.Ph., L.Ph., Ph.D.(Montr.)

Z. Pleszewski; M.A., Ph.D.(Poznan)

D. Sookman; B.A.(McG.), M.A.(Guelph), Ph.D.(C' dia)

P. Zelazo; B.A.(Amer. Int'l. Coll.), M.S.(N. Carolina), Ph.D.(Wat.)

### Part-time Appointments

Jessey Bernstein; B.A.(McG.), M.A., Ph.D.(Roch.)

Elizabeth Foley; B.A.(Tor.), Ph.D.(McG.)

Judith LeGallais; B.A., M.A., Ph.D.(McG.)

Zbigniew Pleszewski; M.A., Ph.D.(Poznan)

### 32.13.32.5 Bachelor of Science (B.Sc.) - Minor Psychology (24 credits)

A Minor program in Psychology is available to students registered in any B.Sc. program other than Psychology. This program is intended to complement a student's primary field of study by providing a focused introduction to specialized topics in psychology.

A separate Minor Concentration exists for students registered in a program in the Faculty of Arts.

The Minor program for Science students requires the completion of 24 credits, of which no more than 6 may overlap with the primary program. All courses in the Minor program must be passed with a minimum grade of C. A prerequisite to the program is PSYC 204 or equivalent.

### Complementary Courses (24 credits)

at least 3, but no more than 6, credits selected from:

PSYC 211	(3)	Introductory Behavioural Neuroscience
PSYC 212	(3)	Perception
PSYC 213	(3)	Cognition
PSYC 215	(3)	Social Psychology

18-21 credits selected from Psychology courses at the 300-level or above.

### 32.13.32.6 Bachelor of Science (B.Sc.) - Liberal Program - Core Science Component Psychology (45 credits)

This Core Science Component Psychology requires the completion of 45 credits in Psychology, all of which need to be passed with a minimum grade of C. A prerequisite to the program is PSYC 100 or equivalent. Students completing a Liberal Program with a Core Science Component Psychology must also complete at least one Breadth component in a second area.

### Recommended Background

It is expected that most students who enter the Liberal Program in Psychology will have taken introductory psychology, biology and statistics at the collegial level. Recommended CEGEP courses include Psychology 350-101 or 350-102 or equivalent, Biology CEGEP objective 00UK, 00XU or equivalent, Statistics (Mathematics) 201-307 or 201-337 or equivalent. Students must obtain a minimum grade of 75% in their CEGEP level statistics course to be exempt from PSYC 204. In the first year those students who have not taken the recommended collegial level statistics course, or those who have obtained a grade below 75%, must take Psychology PSYC 204. Those who have not taken the recommended collegial level biology must take BIOL 111 or BIOL 112, and those who have not taken Introductory Psychology in CEGEP must take PSYC 100.

**Required Course (3 credits)**

PSYC 204 (3) Introduction to Psychological Statistics

**Complementary Courses (42 credits)**

9 credits from:

PSYC 211 (3) Introductory Behavioural Neuroscience  
PSYC 212 (3) Perception  
PSYC 213 (3) Cognition  
PSYC 215 (3) Social Psychology

**List A**

6 credits in Psychology from List A (Behavioural Neuroscience, Cognition and Quantitative Methods).

\* Advising Notes Regarding PSYC 308 and NSCI 201:

PSYC 308 is not currently offered but can be substituted with the equivalent course NSCI 201.

In all cases, PSYC 308 and NSCI 201 should be considered interchangeable with respect to prerequisite, exemption, etc., requirements.

Students who have taken PSYC 308 should not take NSCI 201.

NSCI 201\* (3) Introduction to Neuroscience 2  
PSYC 301 (3) Animal Learning & Theory  
PSYC 310 (3) Human Intelligence  
PSYC 311 (3) Human Cognition and the Brain  
PSYC 315 (3) Computational Psychology  
PSYC 317 (3) Genes and Behaviour  
PSYC 318 (3) Behavioural Neuroscience 2  
PSYC 329 (3) Introduction to Auditory Cognition  
PSYC 340 (3) Psychology of Language  
PSYC 341 (3) The Psychology of Bilingualism  
PSYC 342 (3) Hormones and Behaviour  
PSYC 352 (3) Cognitive Psychology Laboratory  
PSYC 353 (3) Laboratory in Human Perception  
PSYC 403 (3) Modern Psychology in Historical Perspective  
PSYC 406 (3) Psychological Tests  
PSYC 410 (3) Special Topics in Neuropsychology  
PSYC 413 (3) Cognitive Development  
PSYC 427 (3) Sensorimotor Behaviour  
PSYC 451 (3) Human Factors Research and Techniques  
PSYC 470 (3) Memory and Brain  
PSYC 501 (3) Auditory Perception  
PSYC 502 (3) Psychoneuroendocrinology  
PSYC 505 (3) The Psychology of Pain  
PSYC 510 (3) Statistical Analysis of Tests  
PSYC 514 (3) Neurobiology of Learning and Memory

PSYC 522 (3) Neurochemistry and Behaviour  
PSYC 526 (3) Advances in Visual Perception  
PSYC 529 (3) Music Cognition

PSYC 5310 0 1 221.949 694.13 Tm(MS62.68SYC 5e Scien )0 0 1 165.864 678.4 T62.6

15 credits in Psychology at the 300-level or above.

6 credits in Psychology at the 400 or 500-level.

**32.13.32.7 Bachelor of Science (B.Sc.) - Major Psychology (54 credits)**

Students majoring in Psychology must obtain a minimum grade of C in all 54 credits of the program. A grade lower than C may be made up by taking another equivalent course (if there is one), by successfully repeating the course, or by successfully writing a supplemental examination (if there is one).

**Recommended Background**

It is expected that most students who enter the Major Program in Psychology will have taken introductory psychology, biology and statistics at the collegial level. Recommended CEGEP courses include Psychology 350-101 or 350-102 or equivalent, Biology CEGEP objective 00UK, 00XU or equivalent, Statistics (Mathematics) 201-307 or 201-337 or equivalent. Students must obtain a minimum grade of 75% in their CEGEP level statistics course. In the first year those students who hav

PSYC 403	(3)	Modern Psychology in Historical Perspective
PSYC 406	(3)	Psychological Tests
PSYC 410	(3)	Special Topics in Neuropsychology
PSYC 413	(3)	Cognitive Development
PSYC 427	(3)	Sensorimotor Behaviour
PSYC 451	(3)	Human Factors Research and Techniques
PSYC 470	(3)	Memory and Brain
PSYC 501	(3)	Auditory Perception
PSYC 502	(3)	Psychoneuroendocrinology
PSYC 505	(3)	The Psychology of Pain
PSYC 510	(3)	Statistical Analysis of Tests
PSYC 514	(3)	Neurobiology of Learning and Memory
PSYC 522	(3)	Neurochemistry and Behaviour
PSYC 526	(3)	Advances in Visual Perception
PSYC 529	(3)	Music Cognition
PSYC 531	(3)	Structural Equation Models
PSYC 532	(3)	Cognitive Science
PSYC 536	(3)	Correlational Techniques
PSYC 537	(3)	Advanced Seminar in Psychology of Language
PSYC 541	(3)	Multilevel Modelling
PSYC 545	(3)	Topics in Language Acquisition
PSYC 561	(3)	Methods: Developmental Psycholinguistics
PSYC 562	(3)	Measurement of Psychological Processes

### List B

6 credits in Psychology from List B (Social, Health and Developmental Psychology).

PSYC 304	(3)	Child Development
PSYC 316	(3)	Psychology of Deafness
PSYC 331	(3)	Inter-Group Relations
PSYC 332	(3)	Introduction to Personality
PSYC 333	(3)	Personality and Social Psychology
PSYC 337	(3)	Introduction: Abnormal Psychology 1
PSYC 338	(3)	Introduction: Abnormal Psychology 2
PSYC 343	(3)	Language Learning in Children
PSYC 351	(3)	Research Methods in Social Psychology
PSYC 408	(3)	Principles of Cognitive Behaviour Therapy
PSYC 409	(3)	Positive Psychology
PSYC 412	(3)	Developmental Psychopathology
PSYC 414	(3)	Social Development
PSYC 416	(3)	Topics in Child Development
PSYC 429	(3)	Health Psychology
PSYC 436	(3)	Human Sexuality and Its Problems
PSYC 471	(3)	Human Motivation

PSYC 473	(3)	Social Cognition and the Self
PSYC 474	(3)	Interpersonal Relationships
PSYC 483	(3)	Seminar in Experimental Psychopathology
PSYC 491D1	(3)	Advanced Study: Behavioural Disorders
PSYC 491D2	(3)	Advanced Study: Behavioural Disorders
PSYC 507	(3)	Emotions, Stress, and Illness
PSYC 511	(3)	Infant Competence
PSYC 512	(3)	Advanced Personality Seminar
PSYC 528	(3)	Vulnerability to Depression
PSYC 530	(3)	Applied Topics in Deafness
PSYC 533	(3)	International Health Psychology
PSYC 535	(3)	Advanced Topics in Social Psychology

6 credits at the 300-level or above.

9 credits in Psychology at the 400 or 500-level.

12 credits at the 300-level or above in any of the following disciplines: Psychology (PSYC), Anatomy and Cell Biology (ANAT), Biology (BIOL), Biochemistry (BIOC), Chemistry (CHEM), Computer Science (COMP), Mathematics (MATH), Physiology (PHGY), Psychiatry (PSYT).

**32.13.32.8 Bachelor of Science (B.Sc.) - Honours Psychology (60 credits)**

Honours in Psychology prepares students for graduate study, and so emphasizes practice in the research techniques which are used in graduate school and



PSYC 305 (3) Statistics for Experimental Design

**U2 Required Courses (9 credits)**

PSYC 380D1 (4.5) Honours Research Project Seminar

PSYC 380D2 (4.5) Honours Research Project Seminar

**U3 Required Course (3 credits)**

PSYC 482 (3) Advanced Honours Seminar

**Complementary Courses (33 credits)**

12 credits to be selected from the list below and any Psychology course at the 500-level.

PSYC 403 (3) Modern Psychology in Historical Perspective

PSYC 483 (3) Seminar in Experimental Psychopathology

PSYC 495 (6) Psychology Research Project 2

PSYC 496 (6) Senior Honours Research 1

PSYC 497 (6) Senior Honours Research 2

PSYC 498D1 (4.5) Senior Honours Research

PSYC 498D2 (4.5) Senior Honours Research

**List A**

6 credits in Psychology from List A (Behavioural Neuroscience, Cognition and Quantitative Methods).

\* Advising Notes Regarding PSYC 308 and NSCI 201:

PSYC 308 is not currently offered but can be substituted with the equivalent course NSCI 201.

In all cases, PSYC 308 and NSCI 201 should be considered interchangeable with respect to prerequisite, exemption, etc., requirements.

Students who have taken PSYC 308 should not take NSCI 201.

NSCI 201\* (3) Introduction to Neuroscience 2

PSYC 301 (3) Animal Learning & Theory

PSYC 310 (3) Human Intelligence

PSYC 311 (3) Human Cognition and the Brain

PSYC 315 (3) Computational Psychology

PSYC 317 (3) Genes and Behaviour

PSYC 318 (3) Behavioural Neuroscience 2

PSYC 329 (3) Introduction to Auditory Cognition

PSYC 340 (3) Psychology of Language

PSYC 341 (3) The Psychology of Bilingualism

PSYC 342 (3) Hormones and Behaviour

PSYC 352 (3) Cognitive Psychology Laboratory

PSYC 353 (3) Laboratory in Human Perception

PSYC 403 (3) Modern Psychology in Historical Perspective

PSYC 406 (3) Psychological Tests

PSYC 410 (3) Special Topics in Neuropsychology

PSYC 413 (3) Cognitive Development

PSYC 427	(3)	Sensorimotor Behaviour
PSYC 451	(3)	Human Factors Research and Techniques
PSYC 470	(3)	Memory and Brain
PSYC 501	(3)	Auditory Perception
PSYC 502	(3)	Psychoneuroendocrinology
PSYC 505	(3)	The Psychology of Pain
PSYC 510	(3)	Statistical Analysis of Tests
PSYC 514	(3)	Neurobiology of Learning and Memory
PSYC 522	(3)	Neurochemistry and Behaviour
PSYC 526	(3)	Advances in Visual Perception
PSYC 529	(3)	Music Cognition
PSYC 531	(3)	Structural Equation Models
PSYC 532	(3)	Cognitive Science
PSYC 536	(3)	Correlational Techniques
PSYC 537	(3)	Advanced Seminar in Psychology of Language
PSYC 541	(3)	Multilevel Modelling
PSYC 545	(3)	Topics in Language Acquisition
PSYC 561	(3)	Methods: Developmental Psycholinguistics
PSYC 562	(3)	Measurement of Psychological Processes

**List B**

PSYC 491D2	(3)	Advanced Study: Behavioural Disorders
PSYC 507	(3)	Emotions, Stress, and Illness
PSYC 511	(3)	Infant Competence
PSYC 512	(3)	Advanced Personality Seminar
PSYC 528	(3)	Vulnerability to Depression
PSYC 530	(3)	Applied Topics in Deafness
PSYC 533	(3)	International Health Psychology
PSYC 535	(3)	Advanced Topics in Social Psychology

9 credits at the 300 level or above selected from:

Anatomy and Cell Biology (ANAT), Biochemistry (BIOC), Biology (BIOL), Chemistry (CHEM), Computer Science (COMP), Mathematics (MATH), Physiology (PHGY), Psychiatry (PYST), Psychology (PSYC).

### 32.13.32.9 Admission Requirements to the Bachelor of Science (B.Sc.) - Honours Psychology

Applications can be obtained from the Undergraduate Office of the Department of Psychology, Room N7/9A, Stewart Biology Building. The applications must be completed and returned to the Undergraduate Office by August 1 for September admission. Candidates will be advised of the Department's decision via email before classes begin in September.

Students should note that awarding of the Honours degree will depend on both cumulative grade point average and a minimum grade of B on PSYC 380D1/PSYC 380D2, PSYC 482. "First Class Honours" is awarded to students who obtain a minimum cumulative grade point average of 3.50 and a minimum CGPA of 3.50 and a minimum grade of A- in the required honours courses, namely PSYC 380D1/PSYC 380D2, PSYC 482. "Honours" is awarded to students with a minimum cumulative grade point average of 3.00 and a minimum program GPA of 3.00 and a minimum grade of B in the required honours courses, namely PSYC 380D1/PSYC 380D2, PSYC 482. Moreover, the awarding of the Honours degree normally requires completion of two full years of study, U2 and U3, in the Honours Program. Students with particularly strong academic records may be admitted for the U3 year only on the basis of their marks and research experience. These students must complete all honours program requirements.

For more information, see [section 32.13.32.8: Bachelor of Science \(B.Sc.\) - Honours Psychology \(60 credits\)](#).

## 32.13.33 Redpath Museum (REDM)

### 32.13.33.1 Location

Redpath Museum, Room 102  
859 Sherbrooke Street West  
Montreal, Quebec H3A 2K6

Telephone: 514-398-4086

Fax: 514-398-3185

Website: [www.mcgill.ca/redpath](http://www.mcgill.ca/redpath)

### 32.13.33.2 About Redpath Museum

The Redpath Museum exists to foster the study of the history and diversity of the natural world. Its mandate includes biological, geological and cultural diversity, and science education. It conducts academic teaching and research activities and also provides academic services to other units. There are no B.Sc. Programs at the Redpath Museum but the REDM courses listed below are considered as ones taught by the Faculty of Science.

REDM 396	Undergraduate Research Project
REDM 399	Science Writing
REDM 400	Science and Museums
REDM 405	Natural History of East Africa

### 32.13.33.3 Redpath Museum (REDM) Faculty

#### Director

David M. Green

**Emeritus Professor**

Robert L. Carroll; B.Sc.(Mich.), Ph.D.(Harv.), F.R.S.C., F.L.S.

**Professor**

David M. Green; B.Sc.(Br. Col.), M.Sc., Ph.D.(Guelph), F.L.S.

**Associate Professors**

Brian J. Alters; B.Sc., Ph.D.(USC) (*Tomlinson Chair in Science Education, Sir William Dawson Scholar*)

Andrew Hendry; B.Sc.(Vic., BC), M.Sc., Ph.D.(Wash.) (*joint appoint. with Biology*)

Hans C.E. Larsson; B.Sc.(McG.), Ph.D.(Chic.) (*CRC Tier 2 Chair in Paleontology*)

Anthony Ricciardi; B.Sc.(Agr.), M.Sc., Ph.D.(McG.) (*joint appoint. with MSE*)

**Assistant Professors**

Claire de Mazancourt; Bacc.(École des Mines), DEA, Ph.D.(Paris VI)

Brian Leung; B.Sc.(Br. Col.), Ph.D.(Car.) (*joint appoint. with Biology & MSE*)

Virginie Millien; Maîtrise(Paris VI), DEA, Ph.D.(Montpellier II)

**Curator**

Karen E. Samonds; B.S., B.A.(Mass.), M.Phil., M.A., Ph.D.(Stony Brook) (*joint appoint. with Anatomy & Dentistry*)

**Faculty Lecturer**

Linda Cooper; B.A.(C'odia), M.A.(McM.)

**Associate Members**

Biology: Graham A.C. Bell, Lauren J. Chapman

Earth & Planetary Sciences: Jeanne Paquette

McGill School of Environment: Colin A. Chapman

**Adjunct Professors**

Hans Hofmann

Robert Holmes

Hendry M. Reiswig

Michael Woloch

**32.13.33.4 Bachelor of Science (B.Sc.) - Minor Natural History (24 credits)**

The Minor Natural History involves the exploration of the natural world via specimen-based studies, object-oriented investigations and field studies. Museum collections are used to provide hands-on experience with real objects and specimens. The required course brings students to the Redpath Museum and other McGill natural science museums and exposes them to natural history methodologies and the value of specimen-based studies. Complementary course lists are drawn from a variety of disciplines to emphasize breadth and integration with the inclusion of specimen- or object-based courses and field courses in zoology, botany, and earth and environmental sciences. To ensure breadth, students are required to choose courses from among these lists. A compulsory field course component rounds out the program.

**Required Course (3 credits)**

REDM 400 (3) Science and Museums

**Complementary Courses (21 credits)**

Students select 21 credits from among four course lists (A (Zoology), B (Botany), C (Earth and Environmental Sciences), and D (Field Courses)) with the following specifications.

- At least 3 credits and no more than 9 credits from each of Lists A, B, and C.
- At least 3 credits from List D.
- No more than 3 credits from any one list may be at the 200-level.

Note: Students may take up to a maximum of 9 credits of courses outside the Faculties of Arts and of Science.

### List A: Zoology

\*Note: BIOL 205 and BIOL 215 may be applied to either List A or List B.

\*\*Note: Students may take either ENTO 330 or one of the cross-listed courses BIOL 350 and ENTO 350 as these courses have similar content.

AEBI 211	(3)	Organisms 2
ANTH 312	(3)	Zooarchaeology
BIOL 205*	(3)	Biology of Organisms
BIOL 215*	(3)	Introduction to Ecology and Evolution
BIOL 305	(3)	Animal Diversity
BIOL 341	(3)	History of Life
BIOL 350**	(3)	Insect Biology and Control
BIOL 352	(3)	Vertebrate Evolution
BIOL 418	(3)	Freshwater Invertebrate Ecology
BIOL 427	(3)	Herpetology
BIOL 463	(3)	Mammalian Evolution
ENTO 330**	(3)	Insect Biology
ENTO 350**	(3)	Insect Biology and Control
ENTO 440	(3)	Insect Diversity
ENTO 535	(3)	Aquatic Entomology
EPSC 334	(3)	Invertebrate Paleontology
WILD 307	(3)	Natural History of Vertebrates
WILD 350	(3)	Mammalogy
WILD 420	(3)	Ornithology

### List B: Botany

\*Note: BIOL 205 and BIOL 215 may be applied to either List A or List B.

AEBI 210	(3)	Organisms 1
BIOL 205*	(3)	Biology of Organisms
BIOL 215*	(3)	Introduction to Ecology and Evolution
BIOL 240	(3)	Monteregian Flora
BIOL 355	(3)	Trees: Ecology & Evolution
PLNT 304	(3)	Biology of Fungi
PLNT 353	(3)	Plant Structure and Function
PLNT 358	(3)	Flowering Plant Diversity
PLNT 460	(3)	Plant Ecology

### List C: Earth and Environmental Sciences

BIOL 540	(3)	Ecology of Species Invasions
ENVR 200	(3)	The Global Environment

ENVR 202	(3)	The Evolving Earth
EPSC 210	(3)	Introductory Mineralogy
EPSC 233	(3)	Earth and Life History
ESYS 200	(3)	Earth System Processes
ESYS 300	(3)	Investigating the Earth System
GEOG 203	(3)	Environmental Systems
GEOG 272	(3)	Earth's Changing Surface
GEOG 470	(3)	Wetlands
GEOG 550	(3)	Historical Ecology Techniques

**List D: Field Studies**

To be admitted, candidates must satisfy the admission requirements of both faculties. Normally, students will be admitted to both components of the Concurrent B.Sc. and B.Ed. simultaneously. It is possible for students to apply for transfer into this program at any time during their B.Sc. or B.Ed. program. However, because this is a concurrent program, both degrees must be granted at the same Convocation. After admission, students should contact one of the coordinators to discuss course selection and scheduling.

Students in the Concurrent B.Sc. and B.Ed. may apply to transfer to either a conventional B.Sc. or a conventional B.Ed. program. To do so, they must submit a Faculty Transfer Application to the appropriate Student Affairs Office. The decision will be based on their grades in the relevant component of the Concurrent Program. Students who do transfer to a conventional program may not transfer back to the Concurrent Program.

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with the exception of EDEM 220, are also among the Education courses required in this dual degree program. Equally, students having completed a B.Sc. degree, including the Minor, whose content substantially matches that of one of the Concurrent B.Sc. and B.Ed. combinations are likely eligible for the maximum number of advanced standing credits, as specified by the Faculty of Education.

**Required Course (3 credits)**

EDPE 300 (3) Educational Psychology

**Complementary Courses (15 credits)**

9 credits selected as follows:

3 credits, one of:

EDEC 233 (3) First Nations and Inuit Education

EDEC 248 (3) Multicultural Education

3 credits, one of:

EDEC 260 (3) Philosophical Foundations

EDEC 261 (3) Philosophy of Catholic Education

3 credits, one of:

EDEC 247 (3) Policy Issues in Quebec Education

EDEM 220 (3) Contemporary Issues in Education

6 credits from the list below:

\*Note: Students select either EDES 335 or EDES 353.

EDEC 262 (3) Media, Technology and Education

EDES 335\* (3) Teaching Secondary Science 1

EDES 353\* (3) Teaching Secondary Mathematics 1

EDPE 304 (3) Measurement and Evaluation

EDPI 309 (3) Exceptional Students

**32.13.34.5 Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Biology - Cell/Molecular with Minor Chemistry for Teachers (135 credits)**

The Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Biology - Cell/Molecular with Minor Chemistry for Teachers is jointly offered by the Faculty of Science and the Faculty of Education. Separately, the Bachelor of Science degree requires 90 credits (or 120 credits for students who have not completed the basic sciences) and the Bachelor of Education degree requires 120 credits. In the concurrent program, the requirements for the two degrees are combined in such a way that students complete 135 (or 165 credits) to fulfil all the requirements for graduation for both the B.Sc. and the B.Ed.

Graduates of the B.Ed. degree are recommended by the University to the Quebec Ministère de l'Éducation, du Loisir et du Sport (MELS) for Quebec Teacher Certification. For more information about teacher certification in Quebec, please refer to the Faculty of Education section under "Overview of Faculty Programs," "Undergraduate Education Programs," and "Quebec Teacher Certification."

The Major Concentration Biology - Cell/Molecular with Minor Chemistry is one of the nine variations of the program and allows students to focus their Science degree in Cell/Molecular Biology with a subspecialization in Chemistry.

To fulfil the requirements for graduation for the Concurrent Bachelor of Science and Bachelor of Education the 135 credits (or 165 credits for students admitted without basic sciences) include the following:

(30 credits of Science Freshman Program (for students admitted without basic sciences))

60 credits of Education Component



69 credits of Science Component consisting of:

- 36 credits of Major Concentration Biology - Cell/Molecular
- 18 credits of Minor Chemistry
- 15 credits of Additional Science Courses

6 credits of Electives, of which at least 3 credits must be Science Electives, depending on how many credits count toward both the B.Sc. and the B.Ed. degrees

For details on the counting of credits toward both degrees (double-counting) visit the program website <http://www.mcgill.ca/scienceforteachers/>.

### **B.Sc. Freshman Program**

Students who enter Science in U0 will normally be registered in the Science Freshman Program until they complete their first year. They must consult an adviser in the Science Office for Undergraduate Student Advising (SOUSA) to obtain advice and approval of their course selection. Full details are available on the SOUSA website at <http://www.mcgill.ca/science/sousa>. Academic advising is also available by email. The address is [newstudentadvising.science@mcgill.ca](mailto:newstudentadvising.science@mcgill.ca).

Students normally complete 30 credits which must include at least 7 courses from the list of Approved Freshman Science courses, selected as follows:

#### **General Math and Science Breadth**

Six of the freshman courses must satisfy one of the following:

Option 1) 2 courses from MATH and 4 courses from BIOL, CHEM or PHYS;

or

Option 2) 3 courses from MATH and 3 courses from BIOL, CHEM or PHYS.

#### **Science Complementary**

The seventh course is chosen from the list of Approved Freshman Science Courses.

Notes:

1. Students who have not studied all of Biology, Chemistry and Physics at the grade 12 level or equivalent are strongly advised to include at least one course in the missing discipline in their freshman program.
2. Many students will complete more than 7 courses from the Approved Freshman Science Courses list, particularly those who wish to leave several options open for their choice of major.
3. Students entering the Freshman Program must be aware of the department specific requirements when selecting their courses. Detailed advising information is available at <http://www.mcgill.ca/science/sousa/bsc/freshman>.
4. The maximum number of courses per term, required, complementary and elective, is five.

#### **List of Approved Freshman Science Courses**

Select the approved courses according to the instructions above.

Note:

CHEM 115 (not open to students who are taking or have taken CHEM 110 or CHEM 120)

CHEM 120 (not open to students who have taken CHEM 115)

BIOL 111	(3)	Principles: Organismal Biology
BIOL 112	(3)	Cell and Molecular Biology
CHEM 110	(4)	General Chemistry 1
CHEM 115	(4)	Accelerated General Chemistry: Giants in Science
CHEM 120	(4)	General Chemistry 2
COMP 202	(3)	Introduction to Computing 1
ESYS 104	(3)	The Earth System
MATH 133	(3)	Linear Algebra and Geometry
PSYC 100	(3)	Introduction to Psychology

First calculus course, one of:

MATH 139	(4)	Calculus 1 with Precalculus
MATH 140	(3)	Calculus 1
MATH 150	(4)	Calculus A

Second calculus course, one of:

MATH 141	(4)	Calculus 2
MATH 151	(4)	Calculus B

First physics course, one of:

PHYS 101	(4)	Introductory Physics - Mechanics
PHYS 131	(4)	Mechanics and Waves

Second physics course, one of:

PHYS 102	(4)	Introductory Physics - Electromagnetism
PHYS 142	(4)	Electromagnetism and Optics

### Electives

Students wishing to take elective courses may choose them from introductory courses offered by departments in the Faculties of Science or of Arts. A list of recommended courses is found at <http://www.mcgill.ca/science/sousa/bsc/freshman/approved>. Certain courses offered by other faculties may also be taken, but some restrictions apply.

Consult the SOUSA website at <http://www.mcgill.ca/science/sousa/bsc/course/outside> for more information about taking courses from other faculties.

### Education Component (60 credits)

60 credits of Education Component consists of:

54 credits of required courses

6 credits of complementary courses

### Required Courses

54 credits

\*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

The English Language Requirement (EDEC 215) must be taken in the Fall semester following the Freshman Year.

EDEC 201	(1)	First Year Professional Seminar
EDEC 215	(0)	English Language Requirement
EDEC 247*	(3)	Policy Issues in Quebec Education
EDEC 254	(1)	Second Professional Seminar (Secondary)
EDEC 262*	(3)	Media, Technology and Education
EDEC 351	(2)	Third Professional Seminar (Secondary)
EDEC 404	(3)	Fourth Year Professional Seminar (Sec)
EDES 335	(3)	Teaching Secondary Science 1
EDES 350	(3)	Classroom Practices (Secondary)
EDES 435	(3)	Teaching Secondary Science 2
EDFE 200	(2)	First Field Experience (K/Elem & Secondary)

EDFE 254	(3)	Second Field Experience (Secondary)
EDFE 351	(8)	Third Field Experience (Secondary)
EDFE 451	(7)	Fourth Field Experience (Secondary)
EDPE 300*	(3)	Educational Psychology
EDPE 304	(3)	Measurement and Evaluation
EDPI 309*	(3)	Exceptional Students
EDPI 341	(3)	Instruction in Inclusive Schools

### Complementary Courses

6 credits selected as follows:

\*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

3 credits, one of the three following courses:

EDEC 233*	(3)	First Nations and Inuit Education
EDEC 248*	(3)	Multicultural Education
EDEC 249*	(3)	Global Education and Social Justice

3 credits, one of the two following courses:

EDEC 260*	(3)	Philosophical Foundations
EDEC 261*	(3)	Philosophy of Catholic Education

### Major Concentration Biology - Cell/Molecular (36 credits)

The Major Concentration Biology - Cell/Molecular is a planned sequence of courses designed to permit a degree of specialization in cell/molecular biology.

Advising Note: Freshman students should be aware that PHYS 101 and/or PHYS 102 are required for some of the courses in the major and minor concentrations in Biology.

### Required Courses

25 credits selected as follows:

BIOL 200	(3)	Molecular Biology
BIOL 201	(3)	Cell Biology and Metabolism
BIOL 202	(3)	Basic Genetics
		Biology of Organisms

BIOL 370	(3)	Human Genetics Applied
BIOL 373	(3)	Biometry
BIOL 413	(1)	Directed Reading
BIOL 568	(3)	Topics on the Human Genome
BIOL 575	(3)	Human Biochemical Genetics

or other appropriate course at the 300-level or higher with the permission of an adviser.

### Minor Chemistry (18 credits)

#### Required Courses

18 credits selected as follows:

\*Note: denotes courses with CEGEP equivalents.

Substitutions for these by more advanced courses may be made at the discretion of the adviser.

CHEM 203	(3)	Survey of Physical Chemistry
CHEM 212*	(4)	Introductory Organic Chemistry 1
CHEM 222*	(4)	Introductory Organic Chemistry 2
CHEM 253	(1)	Introductory Physical Chemistry 1 Laboratory
CHEM 281	(3)	Inorganic Chemistry 1
CHEM 287	(2)	Introductory Analytical Chemistry
CHEM 297	(1)	Introductory Analytical Chemistry Laboratory

#### Additional Science Courses

15 credits selected as follows:

12 credits:

BIOL 210	(3)	Perspectives of Science
CHEM 381	(3)	Inorganic Chemistry 2
MATH 203	(3)	Principles of Statistics 1
MATH 222	(3)	Calculus 3

plus 3 credits, one of:

CHEM 180	(3)	World of Chemistry: Environment
CHEM 181	(3)	World of Chemistry: Food
CHEM 182	(3)	World of Chemistry: Technology
CHEM 183	(3)	World of Chemistry: Drugs

#### Electives (6 credits)

6 credits, of which at least 3 credits must be Science Electives.

The electives must be chosen in such a way that the credit counts needed for graduation are satisfied.

### 32.13.34.6 Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Biology - Organismal with Minor Chemistry for Teachers (135 credits)

The Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Biology - Organismal with Minor Chemistry for Teachers is jointly offered by the Faculty of Science and the Faculty of Education. Separately, the Bachelor of Science degree requires 90 credits (or 120 credits for students who have not completed the basic sciences) and the Bachelor of Education degree requires 120 credits. In the concurrent program, the

requirements for the two degrees are combined in such a way that students complete 135 (or 165 credits) to fulfil all the requirements for graduation for both the B.Sc. and the B.Ed.

Graduates of the B.Ed. degree are recommended by the University to the Quebec Ministère de l'Éducation, du Loisir et du Sport (MELS) for Quebec Teacher Certification. For more information about teacher certification in Quebec, please refer to the Faculty of Education section under "Overview of Faculty Programs," "Undergraduate Education Programs," and "Quebec Teacher Certification."

The Major Concentration Biology - Organismal with Minor Chemistry is one of the nine variations of the program and allows students to focus their Science degree in Organismal Biology with a subspecialization in Chemistry.

To fulfil the requirements for graduation for the Concurrent Bachelor of Science and Bachelor of Education the 135 credits (or 165 credits for students admitted without basic sciences) include the following for science and Bachelor of Education students.

CHEM 110	(4)	General Chemistry 1
CHEM 115	(4)	Accelerated General Chemistry: Giants in Science
CHEM 120	(4)	General Chemistry 2
COMP 202	(3)	Introduction to Computing 1
ESYS 104	(3)	The Earth System
MATH 133	(3)	Linear Algebra and Geometry
PSYC 100	(3)	Introduction to Psychology

First calculus course, one of:

MATH 139	(4)	Calculus 1 with Precalculus
MATH 140	(3)	Calculus 1
MATH 150	(4)	Calculus A

Second calculus course, one of:

MATH 141	(4)	Calculus 2
MATH 151	(4)	Calculus B

First physics course, one of:

PHYS 101	(4)	Introductory Physics - Mechanics
PHYS 131	(4)	Mechanics and Waves

Second physics course, one of:

PHYS 102	(4)	Introductory Physics - Electromagnetism
PHYS 142	(4)	Electromagnetism and Optics

### Electives

Students wishing to take elective courses may choose them from introductory courses offered by departments in the Faculties of Science or of Arts. A list of recommended courses is found at <http://www.mcgill.ca/science/sousa/bsc/freshman/approved>. Certain courses offered by other faculties may also be taken, but some restrictions apply.

Consult the SOUSA website at <http://www.mcgill.ca/science/sousa/bsc/course/outside> for more information about taking courses from other faculties.

### Education Component (60 credits)

60 credits of Education Component consists of:

54 credits of required courses

6 credits of complementary courses

### Required Courses

54 credits

\*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

The English Language Requirement (EDEC 215) must be taken in the Fall semester following the Freshman Year.

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EDEC 247*	(3)	Policy Issues in Quebec Education
EDEC 254	(1)	Second Professional Seminar (Secondary)
EDEC 262*	(3)	Media, Technology and Education
EDEC 351	(2)	Third Professional Seminar (Secondary)
EDEC 404	(3)	Fourth Year Professional Seminar (Sec)
EDES 335	(3)	Teaching Secondary Science 1
EDES 350	(3)	Classroom Practices (Secondary)
EDES 435	(3)	Teaching Secondary Science 2
EDFE 200	(2)	First Field Experience (K/Elem & Secondary)
EDFE 254	(3)	Second Field Experience (Secondary)
EDFE 351	(8)	Third Field Experience (Secondary)
EDFE 451	(7)	Fourth Field Experience (Secondary)
EDPE 300*	(3)	Educational Psychology
EDPE 304	(3)	Measurement and Evaluation
EDPI 309*	(3)	Exceptional Students
EDPI 341	(3)	Instruction in Inclusive Schools

### Complementary Courses

6 credits selected as follows:

\*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

3 credits, one of the three following courses:

EDEC 233*	(3)	First Nations and Inuit Education
EDEC 248*	(3)	Multicultural Education
EDEC 249*	(3)	Global Education and Social Justice

3 credits, one of the two following courses:

EDEC 260*	(3)	Philosophical Foundations
EDEC 261*	(3)	Philosophy of Catholic Education

### Major Concentration Biology - Organismal (36 credits)

The Major Concentration Biology - Organismal is a planned sequence of courses designed to permit a degree of specialization in organismal biology.

Advising Note: Freshman students should be aware that PHYS 101 and/or PHYS 102 are required for some of the courses in the major and minor concentrations in Biology.

### Required Courses

24 credits

BIOL 200	(3)	Molecular Biology
BIOL 201	(3)	Cell Biology and Metabolism
BIOL 202	(3)	Basic Genetics
BIOL 205	(3)	Biology of Organisms
BIOL 206	(3)	Methods in Biology of Organisms

BIOL 215	(3)	Introduction to Ecology and Evolution
BIOL 304	(3)	Evolution
BIOL 308	(3)	Ecological Dynamics

### Complementary Courses

12 credits selected from:

BIOL 303	(3)	Developmental Biology
BIOL 305	(3)	Animal Diversity
BIOL 306	(3)	Neural Basis of Behaviour
BIOL 307	(3)	Behavioural Ecology/Sociobiology
BIOL 310	(3)	Biodiversity and Ecosystems
BIOL 331	(3)	Ecology/Behaviour Field Course
BIOL 342	(3)	Marine Biology
BIOL 350	(3)	Introductf Physical Chemistry2((3))Tj1 0 0 1 70822 525.963 Tm(CH8L 427)Tj1 0 0 1 221.202 505.963 Tm(Introductf P Insect Biology and Control
BIOL 373	(3)	Biometry
BIOL 427	(3)	Herpetology
BIOL 435	(3)	Natural Selection
BIOL 441	(3)	Biological Oceanography
BIOL 465	(3)	Conservation Biology

or other appropriate course at the 300-level or higher with the permission of an adviser.

### Minor Chemistry (18 credits)

#### Required Courses

18 credits selected as follows:

\*Note: denotes courses with CEGEP equivalents.

Substitutions for these by more advanced courses may be made at the discretion of the adviser.

CHEM 203	(3)	Survey of Physical Chemistry
CHEM 212*	(4)	Introductory Organic Chemistry 1
CHEM 222*	(4)	Introductory Organic Chemistry 2
CHEM 253vanic Chemistry 1((B)CH8L 441		Introductory Physical Chemistry 1 Laboratory



plus 3 credits, one of:

World of Chemistry: Environment

Notes:

1. Students who have not studied all of Biology, Chemistry and Physics at the grade 12 level or equivalent are strongly advised to include at least one course in the missing discipline in their freshman program.
2. Many students will complete more than 7 courses from the Approved Freshman Science Courses list, particularly those who wish to leave several options open for their choice of major.

Students wishing to take elective courses may choose them from introductory courses offered by departments in the Faculties of Science or of Arts. A list of recommended courses is found at <http://www.mcgill.ca/science/sousa/bsc/freshman/approved>. Certain courses offered by other faculties may also be taken, but some restrictions apply.

Consult the SOUSA website at <http://www.mcgill.ca/science/sousa/bsc/course/outside> for more information about taking courses from other faculties.

### **Education Component (60 credits)**

60 credits of Education Component consists of:

54 credits of required courses

6 credits of complementary courses

### **Required Courses**

54 credits

\*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

The English Language Requirement (EDEC 215) must be taken in the Fall semester following the Freshman Year.

EDEC 201	(1)	First Year Professional Seminar
EDEC 215	(0)	English Language Requirement
EDEC 247*	(3)	Policy Issues in Quebec Education
EDEC 254	(1)	Second Professional Seminar (Secondary)
EDEC 262*	(3)	Media, Technology and Education
EDEC 351	(2)	Third Professional Seminar (Secondary)
		Fourth Y

EDEC 260*	(3)	Philosophical Foundations
EDEC 261*	(3)	Philosophy of Catholic Education

**Major Concentration Biology - Cell/Molecular (36 credits)**

The Major Concentration Biology - Cell/Molecular is a planned sequence of courses designed to permit a degree of specialization in cell/molecular biology.

Advising Note: Freshman students should be aware that PHYS 101 and/or PHYS 102 are required for some of the courses in the major and minor concentrations in Biology.

**Required Courses\***

29 credits selected as follows:

\* Students who have already taken CHEM 212 or its equivalent will choose another appropriate complementary course, to be approved by the adviser. Regardless of the substitution, students must take at least 36 credits in this program.

BIOL 200	(3)	Molecular Biology
BIOL 201	(3)	Cell Biology and Metabolism
BIOL 202	(3)	Basic Genetics
BIOL 205	(3)	Biology of Organisms
BIOL 215	(3)	Introduction to Ecology and Evolution
BIOL 300	(3)	Molecular Biology of the Gene
BIOL 301	(4)	Cell and Molecular Laboratory
BIOL 303	(3)	Developmental Biology
CHEM 212*	(4)	Introductory Organic Chemistry 1

**Complementary Courses**

At least 7 credits selected from:

BIOL 306	(3)	Neural Basis of Behaviour
BIOL 313	(3)	Eukaryotic Cell Biology
BIOL 314	(3)	Molecular Biology of Oncogenes
BIOL 370	(3)	Human Genetics Applied
BIOL 373	(3)	Biometry
BIOL 413	(1)	Directed Reading
BIOL 568	(3)	Topics on the Human Genome
BIOL 575	(3)	Human Biochemical Genetics

or other appropriate course at the 300-level or higher with the permission of an adviser.

**Minor Physics (18 credits)**

**Required Course**

3 credits

PHYS 257	(3)	Experimental Methods 1
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**Complementary Courses**

15 credits to be selected as follows:

one of:

PHYS 230	(3)	Dynamics of Simple Systems
PHYS 251	(3)	Honours Classical Mechanics 1

one of:

PHYS 232	(3)	Heat and Waves
PHYS 253	(3)	Thermal Physics

one of:

PHYS 241	(3)	Signal Processing
PHYS 258	(3)	Experimental Methods 2

one of:

PHYS 214	(3)	Introductory Astrophysics
PHYS 225	(3)	Musical Acoustics
PHYS 260	(3)	Modern Physics and Relativity
PHYS 271	(3)	Introduction to Quantum Physics

one of:

PHYS 340	(3)	Majors Electricity and Magnetism
PHYS 350	(3)	Honours Electricity and Magnetism

#### **Additional Science Courses (15 credits)**

BIOL 210	(3)	Perspectives of Science
MATH 203	(3)	Principles of Statistics 1
MATH 222	(3)	Calculus 3
MATH 223	(3)	Linear Algebra
MATH 314	(3)	Advanced Calculus

#### **Electives (6 credits)**

6 credits, of which at least 3 credits must be Science Electives.

The electives must be chosen in such a way that the credit counts needed for graduation are satisfied.

#### **32.13.34.8 Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Biology - Organismal with Minor Physics for Teachers (135 credits)**

The Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Biology - Organismal with Minor Physics for Teachers is jointly offered by the Faculty of Science and the Faculty of Education. Separately, the Bachelor of Science degree requires 90 credits (or 120 credits for students who have not completed the basic sciences) and the Bachelor of Education degree requires 120 credits. In the concurrent program, the requirements for the two degrees are combined in such a way that students complete 135 (or 165 credits) to fulfil all the requirements for graduation for both the B.Sc. and the B.Ed.

Graduates of the B.Ed. degree are recommended by the University to the Quebec Ministère de l'Éducation, du Loisir et du Sport (MELS) for Quebec Teacher Certification. For more information about teacher certification in Quebec, please refer to the Faculty of Education section under "Overview of Faculty Programs," "Undergraduate Education Programs," and "Quebec Teacher Certification."

The Major Concentration Biology - Organismal with Minor Physics is one of the nine variations of the program and allows students to focus their Science degree in Organismal Biology with a subspecialization in Physics.

To fulfil the requirements for graduation for the Concurrent Bachelor of Science and Bachelor of Education the 135 credits (or 165 credits for students admitted without basic sciences) include the following:

(30 credits of Science Freshman Program (for students admitted without basic sciences))

60 credits of Education Component

70 credits of Science Component consisting of:

- 37 credits of Major Concentration Biology - Organismal

- 18 credits of Minor Physics

- 15 credits of Additional Science Courses

5 credits of Electives, of which at least 2 credits must be Science Electives, depending on how many credits count toward both the B.Sc. and the B.Ed. degrees

For details on the counting of credits toward both degrees (double-counting) visit the program website <http://www.mcgill.ca/scienceforteachers/>.

### **B.Sc. Freshman Program**

Students who enter Science in U0 will normally be registered in the Science Freshman Program until they complete their first year. They must consult an adviser in the Science Office for Undergraduate Student Advising (SOUA) to obtain advice and approval of their course selection. Full details are available on the SOUSA website at <http://www.mcgill.ca/science/sousa>. Academic advising is also available by email. The address is [newstudentadvising.science@mcgill.ca](mailto:newstudentadvising.science@mcgill.ca).

Students normally complete 30 credits which must include at least 7 courses from the list of Approved Freshman Science courses, selected as follows:

### **General Math and Science Breadth**

Six of the freshman courses must satisfy one of the following:

Option 1) 2 courses from MATH and 4 courses from BIOL, CHEM or PHYS;

or

Option 2) 3 courses from MATH and 3 courses from BIOL, CHEM or PHYS.

### **Science Complementary**

The seventh course is chosen from the list of Approved Freshman Science Courses.

Notes:

1. Students who have not studied all of Biology, Chemistry and Physics at the grade 12 level or equivalent are strongly advised to include at least one course in the missing discipline in their freshman program.
2. Many students will complete more than 7 courses from the Approved Freshman Science Courses list, particularly those who wish to leave several options open for their choice of major.
3. Students entering the Freshman Program must be aware of the department specific requirements when selecting their courses. Detailed advising information is available at <http://www.mcgill.ca/science/sousa/bsc/freshman>.
4. The maximum number of courses per term, required, complementary and elective, is five.

### **List of Approved Freshman Science Courses**

Select the approved courses according to the instructions above.

Note:

CHEM 115 (not open to students who are taking or have taken CHEM 110 or CHEM 120)

CHEM 120 (not open to students who have taken CHEM 115)

BIOL 111	(3)	Principles: Organismal Biology
BIOL 112	(3)	Cell and Molecular Biology
CHEM 110	(4)	General Chemistry 1
CHEM 115	(4)	Accelerated General Chemistry: Giants in Science
CHEM 120	(4)	General Chemistry 2
COMP 202	(3)	Introduction to Computing 1
ESYS 104	(3)	The Earth System

MATH 133	(3)	Linear Algebra and Geometry
PSYC 100	(3)	Introduction to Psychology

First calculus course, one of:

MATH 139	(4)	Calculus 1 with Precalculus
MATH 140	(3)	Calculus 1
MATH 150	(4)	Calculus A

Second calculus course, one of:

MATH 141	(4)	Calculus 2
MATH 151	(4)	Calculus B

First physics course, one of:

PHYS 101	(4)	Introductory Physics - Mechanics
PHYS 131	(4)	Mechanics and Waves

Second physics course, one of:

PHYS 102	(4)	Introductory Physics - Electromagnetism
PHYS 142	(4)	Electromagnetism and Optics

### **Electives**

Students wishing to take electiv

EDES 335	(3)	Teaching Secondary Science 1
EDES 350	(3)	Classroom Practices (Secondary)
EDES 435	(3)	Teaching Secondary Science 2
EDFE 200	(2)	First Field Experience (K/Elem & Secondary)
EDFE 254	(3)	Second Field Experience (Secondary)
EDFE 351	(8)	Third Field Experience (Secondary)
EDFE 451	(7)	Fourth Field Experience (Secondary)
EDPE 300*	(3)	Educational Psychology
EDPE 304	(3)	Measurement and Evaluation
EDPI 309*	(3)	Exceptional Students



CHEM 212\* (4) Introductory Organic Chemistry 1

**Complementary Courses**

9 credits selected from:

BIOL 303	(3)	Developmental Biology
BIOL 305	(3)	Animal Diversity
BIOL 306	(3)	Neural Basis of Behaviour
BIOL 307	(3)	Behavioural Ecology/Sociobiology
BIOL 310	(3)	Biodiversity and Ecosystems
BIOL 331	(3)	Ecology/Behaviour Field Course
BIOL 342	(3)	Marine Biology
BIOL 350	(3)	Insect Biology and Control
BIOL 352	(3)	Vertebrate Evolution
BIOL 373	(3)	Biometry
BIOL 427	(3)	Herpetology
BIOL 435	(3)	Natural Selection
BIOL 441	(3)	Biological Oceanography
BIOL 465	(3)	Conservation Biology

or other appropriate course at the 300-level or higher with the permission of an adviser.

**Minor Physics (18 credits)****Required Course**

3 credits

PHYS 257 (3) Experimental Methods 1

**Complementary Courses**

15 credits to be selected as follows:

one of:

PHYS 230	(3)	Dynamics of Simple Systems
PHYS 251	(3)	Honours Classical Mechanics 1

one of:

PHYS 232	(3)	Heat and Waves
PHYS 253	(3)	Thermal Physics

one of:

PHYS 241	(3)	Signal Processing
PHYS 258	(3)	Experimental Methods 2

one of:

PHYS 214	(3)	Introductory Astrophysics
PHYS 225	(3)	Musical Acoustics
PHYS 260	(3)	Modern Physics and Relativity
PHYS 271	(3)	Introduction to Quantum Physics

one of:

PHYS 340	(3)	Majors Electricity and Magnetism
PHYS 350	(3)	Honours Electricity and Magnetism

#### **Additional Science Courses (15 credits)**

BIOL 210	(3)	Perspectives of Science
MATH 203	(3)	Principles of Statistics 1
MATH 222	(3)	Calculus 3
MATH 223	(3)	Linear Algebra
MATH 314	(3)	Advanced Calculus

#### **Electives (5 credits)**

5 credits, of which at least 2 credits must be Science Electives.

The electives must be chosen in such a way that the credit counts needed for graduation are satisfied.

#### **32.13.34.9 Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Chemistry with Minor Biology for Teachers (135 credits)**

The Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Chemistry with Minor Biology for Teachers is jointly offered by the Faculty of Science and the Faculty of Education. Separately, the Bachelor of Science degree requires 90 credits (or 120 credits for students who have not completed the basic sciences) and the Bachelor of Education degree requires 120 credits. In the concurrent program, the requirements for the two degrees are combined in such a way that students complete 135 (or 165 credits) to fulfil all the requirements for graduation for both the B.Sc. and the B.Ed.

Graduates of the B.Ed. degree are recommended by the University to the Quebec Ministère de l'Éducation, du Loisir et du Sport (MELS) for Quebec Teacher Certification. For more information about teacher certification in Quebec, please refer to the Faculty of Education section under "Overview of Faculty Programs," "Undergraduate Education Programs," and "Quebec Teacher Certification."

The Major Concentration Chemistry with Minor Biology is one of the nine variations of the program and allows students to focus their Science degree in Chemistry with a subspecialization in Biology.

To fulfil the requirements for graduation for the Concurrent Bachelor of Science and Bachelor of Education the 135 credits (or 165 credits for students admitted without basic sciences) include the following:

(30 credits of Science Freshman Program (for students admitted without basic sciences))

60 credits of Education Component

69 credits of Science Component consisting of:

- 36 credits of the Major Concentration Chemistry

- 24 credits of the Minor Biology

- 9 credits of Additional Science Courses

6 credits of Electives, of which at least 3 credits must be Science Electives, depending on how many credits count toward both the B.Sc. and the B.Ed. degrees

For details on the counting of credits toward both degrees (double-counting) visit the program website <http://www.mcgill.ca/scienceforteachers/>.

#### **B.Sc. Freshman Program**

Students who enter Science in U0 will normally be registered in the Science Freshman Program until they complete their first year. They must consult an adviser in the Science Office for Undergraduate Student Advising (SOUSA) to obtain advice and approval of their course selection. Full details are available

on the SOUSA website at <http://www.mcgill.ca/science/sousa>. Academic advising is also available by email. The address is [newstudentadvising.science@mcgill.ca](mailto:newstudentadvising.science@mcgill.ca).

Students normally complete 30 credits which must include at least 7 courses from the list of Approved Freshman Science courses, selected as follows:

**General Math and Science Breadth**

Six of the freshman courses must satisfy one of the following:

Option 1) 2 courses from MATH and 4 courses from BIOL, CHEM or PHYS;

or

Option 2) 3 courses from MATH and 3 courses from BIOL, CHEM or PHYS.

**Science Complementary**

The seo



\*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

3 credits, one of the three following courses:

EDEC 233*	(3)	First Nations and Inuit Education
EDEC 248*	(3)	Multicultural Education
EDEC 249*	(3)	Global Education and Social Justice

3 credits, one of the two following courses:

EDEC 260*	(3)	Philosophical Foundations
EDEC 261*	(3)	Philosophy of Catholic Education

### **Major Concentration Chemistry (36 credits)**

The Major Concentration Chemistry is not certified by the Ordre des Chimistes du Québec. Students interested in pursuing a career in Chemistry in Quebec are advised to take an appropriate B.Sc. program in Chemistry.

The Major Concentration is a planned sequence of courses designed to permit a degree of specialization in this discipline.

### **Required Courses\***

18 credits

\*Note: Required courses taken at CEGEP or elsewhere that are not credited toward the Concurrent B.Sc. and B.Ed. must be replaced by courses from the Complementary Course List equal to or exceeding their credit value. Regardless of the substitution, students must take at least 36 credits in this program.

CHEM 203	(3)	Survey of Physical Chemistry
CHEM 212	(4)	Introductory Organic Chemistry 1
CHEM 222	(4)	Introductory Organic Chemistry 2
CHEM 253	(1)	Introductory Physical Chemistry 1 Laboratory
CHEM 281	(3)	Inorganic Chemistry 1
CHEM 287	(2)	Introductory Analytical Chemistry
CHEM 297	(1)	Introductory Analytical Chemistry Laboratory

### **Complementary Courses**

## Minor Biology (24 credits)

### Required Courses

15 credits

BIOL 200	(3)	Molecular Biology
BIOL 201	(3)	Cell Biology and Metabolism
BIOL 202	(3)	Basic Genetics
BIOL 205	(3)	Biology of Organisms
BIOL 215	(3)	Introduction to Ecology and Evolution

### Complementary Courses

9 credits selected from the Biology Department's course offerings, at the 300-level or above.

### Additional Science Courses (9 credits)

BIOL 210	(3)	Perspectives of Science
MATH 203	(3)	Principles of Statistics 1
MATH 222	(3)	Calculus 3

### Electives (6 credits)

6 credits, of which at least 3 credits must be Science Electives.

The electives must be chosen in such a way that the credit counts needed for graduation are satisfied.

## **321334.10 Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Chemistry with Minor Physics for Teachers (135 credits)**

The Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Chemistry with Minor Physics for Teachers is jointly offered by the Faculty of Science and the Faculty of Education. Separately, the Bachelor of Science degree requires 90 credits (or 120 credits for students who have not completed the basic sciences) and the Bachelor of Education degree requires 120 credits. In the concurrent program, the requirements for the two degrees are combined in such a way that students complete 135 (or 165 credits) to fulfil all the requirements for graduation for both the B.Sc. and the B.Ed.

Graduates of the B.Ed. degree are recommended by the University to the Quebec Ministère de l'Éducation, du Loisir et du Sport (MELS) for Quebec Teacher Certification. For more information about teacher certification in Quebec, please refer to the Faculty of Education section under "Overview of Faculty Programs," "Undergraduate Education Programs," and "Quebec Teacher Certification."

The Major Concentration Chemistry with Minor Physics is one of the nine variations of the program and allows students to focus their Science degree in Chemistry with a subspecialization in Physics.

To fulfil the requirements for graduation for the Concurrent Bachelor of Science and Bachelor of Education the 135 credits (or 165 credits for students admitted without basic sciences) include the following:

(30 credits of Science Freshman Program (for students admitted without basic sciences))

60 credits of Education Component

69 credits of Science Component consisting of:

- 36 credits of the Major Concentration Chemistry
- 18 credits of the Minor Physics
- 15 credits of Additional Science Courses

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Students who enter Science in UO will normally be registered in the Science Freshman Program until they complete their first year. They must consult an adviser in the Science Office for Undergraduate Student Advising (SOUSA) to obtain advice and approval of their course selection. Full details are available on the SOUSA website at <http://www.mcgill.ca/science/sousa>. Academic advising is also available by email. The address is [newstudentadvising.science@mcgill.ca](mailto:newstudentadvising.science@mcgill.ca).

Students normally complete 30 credits which must include at least 7 courses from the list of Approv

First physics course, one of:

PHYS 101	(4)	Introductory Physics - Mechanics
PHYS 131	(4)	Mechanics and Waves

Second physics course, one of:

PHYS 102	(4)	Introductory Physics - Electromagnetism
PHYS 142	(4)	Electromagnetism and Optics

### Electives

Students wishing to take elective courses may choose them from introductory courses offered by departments in the Faculties of Science or of Arts. A list of recommended courses is found at <http://www.mcgill.ca/science/sousa/bsc/freshman/approved>. Certain courses offered by other faculties may also be taken, but some restrictions apply.

Consult the SOUSA website at <http://www.mcgill.ca/science/sousa/bsc/course/outside> for more information about taking courses from other faculties.

### Education Component (60 credits)

60 credits of Education courses:

54 credits of required courses

6 credits of complementary courses

### Required Courses

54 credits

\*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

The English Language Requirement (EDEC 215) must be taken in the Fall semester following the Freshman Year.

EDEC 201	(1)	First Year Professional Seminar
EDEC 215	(0)	English Language Requirement
EDEC 247*	(3)	Policy Issues in Quebec Education
EDEC 254	(1)	Second Professional Seminar (Secondary)
EDEC 262*	(3)	Media, Technology and Education
EDEC 351	(2)	Third Professional Seminar (Secondary)
EDEC 404	(3)	Fourth Year Professional Seminar (Sec)
EDES 335	(3)	Teaching Secondary Science 1
EDES 350	(3)	Classroom Practices (Secondary)
EDES 435	(3)	Teaching Secondary Science 2
EDFE 200	(2)	First Field Experience (K/Elem & Secondary)
EDFE 254	(3)	Second Field Experience (Secondary)
EDFE 351	(8)	Third Field Experience (Secondary)
EDFE 451	(7)	Fourth Field Experience (Secondary)
EDPE 300*	(3)	Educational Psychology
EDPE 304	(3)	Measurement and Evaluation
EDPI 309*	(3)	Exceptional Students
EDPI 341	(3)	Instruction in Inclusive Schools



## Complementary Courses

6 credits selected as follows:

\*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

3 credits, one of the three following courses:

EDEC 233*	(3)	First Nations and Inuit Education
EDEC 248*	(3)	Multicultural Education
EDEC 249*	(3)	Global Education and Social Justice

3 credits, one of the two following courses:

EDEC 260*	(3)	Philosophical Foundations
EDEC 261*	(3)	Philosophy of Catholic Education

## Major Concentration Chemistry (36 credits)

The Major Concentration Chemistry is not certified by the Ordre des Chimistes du Québec. Students interested in pursuing a career in Chemistry in Quebec are advised to take an appropriate B.Sc. program in Chemistry.

The Major Concentration is a planned sequence of courses designed to permit a degree of specialization in this discipline.

## Required Courses\*

18 credits selected as follows:

\*Note: Required courses taken at CEGEP or elsewhere that are not credited toward the Concurrent B.Sc. and B.Ed. must be replaced by courses from the Complementary Course List equal to or exceeding their credit value. Regardless of the substitution, students must take at least 36 credits in this program.

CHEM 203	(3)	Survey of Physical Chemistry
CHEM 212	(4)	Introductory Organic Chemistry 1
CHEM 222	(4)	Introductory Organic Chemistry 2
CHEM 253	(1)	Introductory Physical Chemistry 1 Laboratory
CHEM 281	(3)	Inorganic Chemistry 1
CHEM 287	(2)	Introductory Analytical Chemistry
CHEM 297	(1)	Introductory Analytical Chemistry Laboratory

## Complementary Courses

18 credits selected from:

CHEM 219	(3)	Introduction to Atmospheric Chemistry
CHEM 263	(1)	Introductory Physical Chemistry 2 Laboratory
CHEM 302	(3)	Introductory Organic Chemistry 3
CHEM 307	(3)	Analytical Chemistry of Pollutants
CHEM 334	(3)	Advanced Materials
CHEM 367	(3)	Instrumental Analysis 1
CHEM 381	(3)	Inorganic Chemistry 2
CHEM 382	(3)	Organic Chemistry: Natural Products
CHEM 531	(3)	Chemistry of Inorganic Materials
CHEM 571	(3)	Polymer Synthesis

CHEM 582	(3)	Supramolecular Chemistry
CHEM 591	(3)	Bioinorganic Chemistry

### Minor Physics (18 credits)

#### Required Course

3 credits

PHYS 257	(3)	Experimental Methods 1
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#### Complementary Courses

15 credits to be selected as follows:

one of:

PHYS 230	(3)	Dynamics of Simple Systems
PHYS 251	(3)	Honours Classical Mechanics 1

one of:

PHYS 232	(3)	Heat and Waves
PHYS 253	(3)	Thermal Physics

one of:

PHYS 241	(3)	Signal Processing
PHYS 258	(3)	Experimental Methods 2

one of:

PHYS 214	(3)	Introductory Astrophysics
PHYS 225	(3)	Musical Acoustics
PHYS 260	(3)	Modern Physics and Relativity
PHYS 271	(3)	Introduction to Quantum Physics

one of:

PHYS 340	(3)	Majors Electricity and Magnetism
PHYS 350	(3)	Honours Electricity and Magnetism

### Additional Science Courses (15 credits)

BIOL 210	(3)	Perspectives of Science
MATH 203	(3)	Principles of Statistics 1
MATH 222	(3)	Calculus 3
MATH 223	(3)	Linear Algebra
MATH 314	(3)	Advanced Calculus

### **Electives (6 credits)**

6 credits, of which at least 3 credits must be Science Electives.

The electives must be chosen in such a way that the credit counts needed for graduation are satisfied.

### **3213.34.11 Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Physics with Minor Biology for Teachers (135 credits)**

The Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Physics with Minor Biology for Teachers is jointly offered by the Faculty of Science and the Faculty of Education. Separately, the Bachelor of Science degree requires 90 credits (or 120 credits for students who have not completed the basic sciences) and the Bachelor of Education degree requires 120 credits. In the concurrent program, the requirements for the two degrees are combined in such a way that students complete 135 (or 165 credits) to fulfil all the requirements for graduation for both the B.Sc. and the B.Ed.

Graduates of the B.Ed. degree are recommended by the University of the Quebec Ministère de l'Éducation, du Loisir et du Sport (MELS) for Quebec Teacher Certification. For more information about teacher certification in Quebec, please refer to the Faculty of Education section under "Overview of Faculty Programs," "Undergraduate Education Programs," and "Quebec Teacher Certification."

The Major Concentration Physics with Minor Biology is one of the nine variations of the program and allows students to focus their Science degree in Physics with a subspecialization in Biology.

To fulfil the requirements for graduation for the Concurrent Bachelor of Science and Bachelor of Education the 135 credits (or 165 credits for students admitted without basic sciences) include the following:

(30 credits of Science Freshman Program (for students admitted without basic sciences))

60 credits of Education Component

69 credits of Science Component consisting of:

- 36 credits of Major Concentration Physics

- 24 credits of Minor Biology

- 9 credits of Additional Science Courses

6 credits of Electives, of which at least 3 credits must be Science Electives, depending on how many credits count toward both the B.Sc. and the B.Ed. degrees

For details on the counting of credits toward both degrees (double-counting) visit the program website <http://www.mcgill.ca/scienceforteachers/>.

### **B.Sc. Freshman Program**

Students who enter Science in UO will normally be registered in the Science Freshman Program until they complete their first year. They must consult an adviser in the Science Office for Undergraduate Student Advising (SOUSA) to obtain advice and approval of their course selection. Full details are available on the SOUSA website at <http://www.mcgill.ca/science/sousa>. Academic advising is also available by email. The address is [newstudentadvising.science@mcgill.ca](mailto:newstudentadvising.science@mcgill.ca).

Students normally complete 30 credits which must include at least 7 courses from the list of Approved Freshman Science courses, selected as follows:

### **General Math and Science Breadth**

Six of the freshman courses must satisfy one of the follo

## List of Approved Freshman Science Courses

Select the approved courses according to the instructions above.

Note:

CHEM 115 (not open to students who are taking or have taken CHEM 110 or CHEM 120)

CHEM 120 (not open to students who have taken CHEM 115)

BIOL 111	(3)	Principles: Organismal Biology
BIOL 112	(3)	Cell and Molecular Biology
CHEM 110	(4)	General Chemistry 1
CHEM 115	(4)	Accelerated General Chemistry: Giants in Science
CHEM 120	(4)	General Chemistry 2
COMP 202	(3)	Introduction to Computing 1
ESYS 104	(3)	The Earth System
MATH 133	(3)	Linear Algebra and Geometry
PSYC 100	(3)	Introduction to Psychology

First calculus course, one of:

MATH 139	(4)	Calculus 1 with Precalculus
MATH 140	(3)	Calculus 1
MATH 150	(4)	Calculus A

Second calculus course, one of:

MATH 141	(4)	Calculus 2
MATH 151	(4)	Calculus B

First physics course, one of:

PHYS 101	(4)	Introductory Physics - Mechanics
PHYS 131	(4)	Mechanics and Waves

Second physics course, one of:

PHYS 102	(4)	Introductory Physics - Electromagnetism
PHYS 142	(4)	Electromagnetism and Optics

## Electives

Students wishing to take elective courses may choose them from introductory courses offered by dep0tcoursesme Scienc TmScienc TmScienc Tmc 120

6 credits of complementary courses

### Required Courses

54 credits

\*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

The English Language Requirement (EDEC 215) must be taken in the Fall semester following the Freshman Year.

EDEC 201	(1)	First Year Professional Seminar
EDEC 215	(0)	English Language Requirement
EDEC 247*	(3)	Policy Issues in Quebec Education
EDEC 254	(1)	Second Professional Seminar (Secondary)
EDEC 262*	(3)	Media, Technology and Education
EDEC 351	(2)	Third Professional Seminar (Secondary)
EDEC 404	(3)	Fourth Year Professional Seminar (Sec)
EDES 335	(3)	Teaching Secondary Science 1
EDES 350	(3)	Classroom Practices (Secondary)
EDES 435	(3)	Teaching Secondary Science 2
EDFE 200	(2)	First Field Experience (K/Elem & Secondary)
EDFE 254	(3)	Second Field Experience (Secondary)
EDFE 351	(8)	Third Field Experience (Secondary)
EDFE 451	(7)	Fourth Field Experience (Secondary)
EDPE 300*	(3)	Educational Psychology
EDPE 304	(3)	Measurement and Evaluation
EDPI 309*	(3)	Exceptional Students
EDPI 341	(3)	Instruction in Inclusive Schools

### Complementary Courses

6 credits selected as follows:

\*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

3 credits, one of the three following courses:

EDEC 233*	(3)	First Nations and Inuit Education
EDEC 248*	(3)	Multicultural Education
EDEC 249*	(3)	Global Education and Social Justice

3 credits, one of the two following courses:

EDEC 260*	(3)	Philosophical Foundations
EDEC 261*	(3)	Philosophy of Catholic Education

### Major Concentration Physics (36 credits)

The Major Concentration Physics is a planned sequence of courses designed to permit a degree of specialization in this discipline.

### Required Courses\*

30 credits selected as follows:

\*Note: Required courses taken at CEGEP or elsewhere that are not credited toward the Concurrent B.Sc. and B.Ed. must be replaced by courses from the Complementary Course List equal to or exceeding their credit value. Regardless of the substitution, students must take at least 36 credits in this program.

Calculus 3

9 credits selected as follows:

6 credits:

BIOL 210	(3)	Perspectives of Science
MATH 203	(3)	Principles of Statistics 1

plus 3 credits, one additional Physics (PHYS) course approved by the Physics Department.

**Electives (6 credits)**

6 credits, of which at least 3 credits must be Science Electives.

The electives must be chosen in such a way that the credit counts needed for graduation are satisfied.

**3213.34.12 Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Physics with Minor Chemistry for Teachers (135 credits)**

The Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Physics with Minor Chemistry for Teachers is jointly offered by the Faculty of Science and the Faculty of Education. Separately, the Bachelor of Science degree requires 90 credits (or 120 credits for students who have not completed the basic sciences) and the Bachelor of Education degree requires 120 credits. In the concurrent program, the requirements for the two degrees are combined in such a way that students complete 135 (or 165 credits) to fulfil all the requirements for graduation for both the B.Sc. and the B.Ed.

Graduates of the B.Ed. degree are recommended by the University to the Quebec Ministère de l'Éducation, du Loisir et du Sport (MELS) for Quebec Teacher

1. Students who have not studied all of Biology, Chemistry and Physics at the grade 12 level or equivalent are strongly advised to include at least one course in the missing discipline in their freshman program.
2. Many students will complete more than 7 courses from the Approved Freshman Science Courses list, particularly those who wish to leave several options open for their choice of major.
3. Students entering the Freshman Program must be aware of the department specific requirements when selecting their courses. Detailed advising information is available at <http://www.mcgill.ca/science/sousa/bsc/freshman>.
4. The maximum number of courses per term, required, complementary and elective, is five.

### List of Approved Freshman Science Courses

Select the approved courses according to the instructions above.

Note:

CHEM 115 (not open to students who are taking or have taken CHEM 110 or CHEM 120)

CHEM 120 (not open to students who have taken CHEM 115)

BIOL 111	(3)	Principles: Organismal Biology
BIOL 112	(3)	Cell and Molecular Biology
CHEM 110	(4)	General Chemistry 1
CHEM 115	(4)	Accelerated General Chemistry: Giants in Science
CHEM 120	(4)	General Chemistry 2
COMP 202	(3)	Introduction to Computing 1
ESYS 104	(3)	The Earth System
MATH 133	(3)	Linear Algebra and Geometry
PSYC 100	(3)	Introduction to Psychology

First calculus course, one of:

MATH 139	(4)	Calculus 1 with Precalculus
MATH 140	(3)	Calculus 1
MATH 150	(4)	Calculus A

Second calculus course, one of:

MATH 141	(4)	Calculus 2
MATH 151	(4)	Calculus B

First physics course, one of:

PHYS 101	(4)	Introductory Physics - Mechanics
PHYS 131	(4)	Mechanics and Waves

Second physics course, one of:

PHYS 102	(4)	Introductory Physics - Electromagnetism
PHYS 142	(4)	Electromagnetism and Optics

### Electives

Students wishing to take elective courses may choose them from introductory courses offered by departments in the Faculties of Science or of Arts. A list of recommended courses is found at <http://www.mcgill.ca/science/sousa/bsc/freshman/approved>. Certain courses offered by other faculties may also be taken, but some restrictions apply.

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Consult the SOUSA website at <http://www.mcgill.ca/science/sousa/bsc/course/outside> for more information about taking courses from other faculties.

### Education Component (60 credits)

60 credits of Education Component consists of:

54 credits of required courses

6 credits of complementary courses

### Required Courses

54 credits

\*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

The English Language Requirement (EDEC 215) must be taken in the Fall semester following the Freshman Year.

EDEC 201	(1)	First Year Professional Seminar
EDEC 215	(0)	English Language Requirement
EDEC 247*	(3)	Policy Issues in Quebec Education
EDEC 254	(1)	Second Professional Seminar (Secondary)
EDEC 262*	(3)	Media, Technology and Education
EDEC 351	(2)	Third Professional Seminar (Secondary)
EDEC 404	(3)	Fourth Year Professional Seminar (Sec)
EDES 335	(3)	Teaching Secondary Science 1
EDES 350	(3)	Classroom Practices (Secondary)
EDES 435	(3)	Teaching Secondary Science 2
EDFE 200	(2)	First Field Experience (K/Elem & Secondary)
EDFE 254	(3)	Second Field Experience (Secondary)
EDFE 351	(8)	Third Field Experience (Secondary)
EDFE 451	(7)	Fourth Field Experience (Secondary)
EDPE 300*	(3)	Educational Psychology
EDPE 304	(3)	Measurement and Evaluation
EDPI 309*	(3)	Exceptional Students
EDPI 341	(3)	Instruction in Inclusive Schools

### Complementary Courses

6 credits selected as follows:

\*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

3 credits, one of the three following courses:

EDEC 233*	(3)	First Nations and Inuit Education
EDEC 248*	(3)	Multicultural Education
EDEC 249*	(3)	Global Education and Social Justice

3 credits, one of the two following courses:

EDEC 260*	(3)	Philosophical Foundations
EDEC 261*	(3)	Philosophy of Catholic Education

## Major Concentration Physics (36 credits)

The Major Concentration Physics is a planned sequence of courses designed to permit a degree of specialization in this discipline.

### Required Courses\*

30 credits

\*Note: Required courses taken at CEGEP or elsewhere that are not credited toward the Concurrent B.Sc. and B.Ed. must be replaced by courses from the Complementary Course List equal to or exceeding their credit value. Regardless of the substitution, students must take at least 36 credits in this program.

MATH 222	(3)	Calculus 3
MATH 223	(3)	Linear Algebra
MATH 314	(3)	Advanced Calculus
MATH 315	(3)	Ordinary Differential Equations
PHYS 230	(3)	Dynamics of Simple Systems
PHYS 232	(3)	Heat and Waves
PHYS 257	(3)	Experimental Methods 1
PHYS 333	(3)	Thermal and Statistical Physics
PHYS 340	(3)	Majors Electricity and Magnetism
PHYS 446	(3)	Majors Quantum Physics

### Complementary Courses

6 credits selected from:

PHYS 214	(3)	Introductory Astrophysics
PHYS 225	(3)	Musical Acoustics
PHYS 241	(3)	Signal Processing
PHYS 258	(3)	Experimental Methods 2
PHYS 334	(3)	Advanced Materials
PHYS 534	(3)	Nanoscience and Nanotechnology

or any 300- or 400-level course approved by an adviser.

## Minor Chemistry (18 credits)

### Required Courses

18 credits selected as follows:

\* denotes courses with CEGEP equivalents.

Substitutions for these by more advanced courses may be made at the discretion of the adviser.

CHEM 203	(3)	Survey of Physical Chemistry
CHEM 212*	(4)	Introductory Organic Chemistry 1
CHEM 222*	(4)	Introductory Organic Chemistry 2
CHEM 253	(1)	Introductory Physical Chemistry 1 Laboratory
CHEM 281	(3)	Inorganic Chemistry 1
CHEM 287	(2)	Introductory Analytical Chemistry
CHEM 297	(1)	Introductory Analytical Chemistry Laboratory

## Additional Science Courses (15 credits)

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15 credits selected as follows:

9 credits

BIOL 210	(3)	Perspectives of Science
CHEM 381	(3)	Inorganic Chemistry 2
MATH 203	(3)	Principles of Statistics 1

plus 3 credits, one of:

CHEM 180	(3)	World of Chemistry: Environment
CHEM 181	(3)	World of Chemistry: Food
CHEM 182	(3)	World of Chemistry: Technology
CHEM 183	(3)	World of Chemistry: Drugs

plus 3 credits, one additional Physics (PHYS) course approved by the Physics Department.

### Electives (6 credits)

6 credits, of which at least 3 credits must be Science Electives.

The electives must be chosen in such a way that the credit counts needed for graduation are satisfied.

### 32.1334.13 Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Mathematics for Teachers (135 credits)

The Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Mathematics for Teachers is jointly offered by the Faculty of Science and the Faculty of Education. Separately, the Bachelor of Science degree requires 90 credits (or 120 credits for students who have not completed the basic sciences) and the Bachelor of Education degree requires 120 credits. In the concurrent program, the requirements for the two degrees are combined in such a way that students complete 135 (or 165 credits) to fulfil all the requirements for graduation for both the B.Sc. and the B.Ed.

Graduates of the B.Ed. degree are recommended by the University to the Quebec Ministère de l'Éducation, du Loisir et du Sport (MELS) for Quebec Teacher Certification. For more information about teacher certification in Quebec, please refer to the Faculty of Education section under "Overview of Faculty Programs," "Undergraduate Education Programs," and "Quebec Teacher Certification."

The Major Mathematics is one of the nine variations of the program and allows students to focus their Science degree in Mathematics.

To fulfil the requirements for graduation for the Concurrent Bachelor of Science and Bachelor of Education the 135 credits (or 165 credits for students admitted without basic sciences) include the following:

(30 credits of Science Freshman Program (for students admitted without basic sciences))

60 credits of Education Component

54 credits of Science Component consisting of:

- 54 credits of the Major Mathematics

21 credits of Electives, of which at least 18 credits must be Science Electives, depending on how many credits count toward both the B.Sc. and the B.Ed. degrees

For details on the counting of credits toward both degrees (double-counting) visit the program website <http://www.mcgill.ca/scienceforteachers/>.

### B.Sc. Freshman Program

Students who enter Science in U0 will normally be registered in the Science Freshman Program until they complete their first year. They must consult an adviser in the Science Office for Undergraduate Student Advising (SOUA) to obtain advice and approval of their course selection. Full details are available on the SOUSA website at <http://www.mcgill.ca/science/sousa>. Academic advising is also available by email. The address is [newstudentadvising.science@mcgill.ca](mailto:newstudentadvising.science@mcgill.ca).

Students normally complete 30 credits which must include at least 7 courses from the list of Approved Freshman Science courses, selected as follows:

### General Math and Science Breadth

Six of the freshman courses must satisfy one of the following:

Option 1) 2 courses from MATH and 4 courses from BIOL, CHEM or PHYS;

or

Option 2) 3 courses from MATH and 3 courses from BIOL, CHEM or PHYS.

### **Science Complementary**

The seventh course is chosen from the list of Approved Freshman Science Courses.

Notes:

1. Students who have not studied all of Biology, Chemistry and Physics at the grade 12 level or equivalent are strongly advised to include at least one course in the missing discipline in their freshman program.
2. Many students will complete more than 7 courses from the Approved Freshman Science Courses list, particularly those who wish to leave several options open for their choice of major.
3. Students entering the Freshman Program must be aware of the department specific requirements when selecting their courses. Detailed advising information is available at <http://www.mcgill.ca/science/sousa/bsc/freshman>.
4. The maximum number of courses per term, required, complementary and elective, is five.

### **List of Approved Freshman Science Courses**

**Electives**

Students wishing to take elective courses may choose them from introductory courses offered by departments in the Faculties of Science or of Arts. A list of recommended courses is found at <http://www.mcgill.ca/science/sousa/bsc/freshman/approved>. Certain courses offered by other faculties may also be taken, but some restrictions apply.

Consult the SOUSA website at <http://www.mcgill.ca/science/sousa/bsc/course/outside> for more information about taking courses from other faculties.

**Education Component (60 credits)**

60 credits of Education Component consists of:

54 credits of required courses

6 credits of complementary courses

**Required Courses**

54 credits

\*Note: The courses marked with an asterisk are counted to

3 credits, one of the two following courses:

EDEC 260*	(3)	Philosophical Foundations
EDEC 261*	(3)	Philosophy of Catholic Education

### Major Mathematics (54 credits)

#### Program Prerequisites

Students entering the Major program are normally expected to have completed the courses below or their equivalents. Otherwise they will be required to make up any deficiencies in these courses over and above the 54 credits for the program.

MATH 133	(3)	Linear Algebra and Geometry
MATH 140	(3)	Calculus 1
MATH 141	(4)	Calculus 2

#### Required Courses

27 credits

Where appropriate, Honours courses may be substituted for equivalent Major courses.

\*Students select either MATH 249 or MATH 316 but not both.

MATH 222	(3)	Calculus 3
MATH 235	(3)	Algebra 1
MATH 236	(3)	Algebra 2
MATH 242	(3)	Analysis 1
MATH 243	(3)	Analysis 2
MATH 249*	(3)	Honours Complex Variables
MATH 314	(3)	Advanced Calculus
MATH 315	(3)	Ordinary Differential Equations
MATH 316*	(3)	Complex Variables
MATH 323	(3)	Probability

#### Complementary Courses

27 credits selected with the following specifications:

12 credits specifically required of students in the Concurrent B.Sc. and B.Ed. Major Mathematics:

COMP 202	(3)	Introduction to Computing 1
MATH 324	(3)	Statistics
MATH 338	(3)	History and Philosophy of Mathematics
MATH 348	(3)	Topics in Geometry

at least 3 credits from:

MATH 317	(3)	Numerical Analysis Computational
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12 credits from:

It is highly recommended that students include MATH 318, MATH 328, MATH 339 and MATH 346 in their complementary courses.

MATH 204 (3) Principles of Statistics 2

MATH 318 (3) Mathematical Logic

MATH 328 (3) Introduction to Partial Differential Equations

Differential Geometry

Acceptance to the program is both competitive and restricted. Application procedures will be announced in September. Please consult Ron Critchley, Student Adviser, Desautels Faculty of Management Student Affairs Office, Bronfman 110, for details.

Students registered in the Minor Technological Entrepreneurship for Science Students may not take additional courses outside the Faculties of Arts and of Science.

To obtain the Minor, all courses must be completed with a grade of C 10w0eetr



Telephone: 514-398-7559

Fax: 514-398-7846

### **33.3.2 Administrative Officers**

Chandra Madramootoo; B.Sc.(Agr.Eng.), M.Sc., Ph.D.(McG.)

Christopher Manfredi; B.A.(Calg.), M.A., Ph.D.(Claremont)

Martin Grant; B.Sc.(PEI), M.Sc., Ph.D.(Tor.)

Marilyn Scott; B.Sc.(New Br.), Ph.D.(McG.)

Madhav Badami; B.Tech., M.Sc.(IIT), M.E.Des.(Calg.), Ph.D.(Br. Col.)

George McCourt; B.Sc., M.Sc.(Alta.), M.Sc.(McG.)

Anthon

**Dean, Faculty of Agricultural and Environmental Sciences**

**Dean, Faculty of Arts**

**Dean, Faculty of Science**

**Director**

**Associate Director, Graduate Affairs**

**Associate Director, Undergraduate Affairs**

**Associate Director, Research**

### Associate Members

Biology: Lauren Chapman, Andrew Gonzalez, Irene Gregory-Eaves, Martin Lechowicz, Catherine Potvin, Michel Loreau

Bioresource Engineering: Jan Adamowski, Suzelle Barrington, Grant Clark, Robert Kok, Chandra Madramootoo

Chemical Engineering: Nathalie Tufenkji, Viviane Yargeau

Civil Engineering and Applied Mechanics: Susan Gaskin, Van-Thanh-Van Nguyen, Jim Nicell

Dietetics and Human Nutrition, School of: Tim Johns

Earth and Planetary Sciences: Jeanne Paquette

Economics: Robert Cairns, Chris Green, Tom Naylor

Electrical and Computer Engineering: Geza Joos

Epidemiology and Biostatistics: Mark Goldberg

Geography: Gail Chmura, Oliver Coomes, Thom Meredith, Tim Moore, Wayne H. Pollard, Navin Ramankutty, Nigel Roulet

Law, Faculty of: Jane Glenn, Richard Janda

Management, Desautels Faculty of: Dror Etzion, Steve Maguire, Vedat Verter

Natural Resource Sciences: Benoit Côté, Jim W. Fyles, William Hendershot, Gordon Hickey, Ian Strachan, Paul Thomassin, Joann Whalen, Terry Wheeler

Nursing, School of: Fiona Hanley

Parasitology, Institute of: Marilyn Scott

Pathology: Bruce Case

Philosophy: Philip Buckley

Plant Science: Caroline Begg, Pierre Dutilleul, Don Smith, Marcia Waterway

Political Science: Philip Oxhorn

Redpath Museum: David M. Green, Claire Seizilles de Mazancourt

Urban Planning, School of: Nik Luka

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## 33.4 Admission, Registration and Regulations

Information concerning admission to the McGill School of Environment and the regulations concerning the Environment programs is provided in these sections:

*[section 33.4.1: Admission](#)*

*[section 33.4.2: Degree Requirements](#)*

*[section 33.4.3: Advising in the MSE](#)*

*[section 33.4.4: Important Information about Program Selection](#)*

*[section 33.4.5: Course Numbering System at McGill](#)*

*[section 33.4.6: Examination Regulations](#)*

*[section 33.4.7: Courses Outside the Student's Faculty](#)*

### 33.4.1 Admission

You may be admitted to a B.A., B.A. & Sc., B.Sc.(Ag.Env.Sc.), or a B.Sc. program offered by the MSE on the University's two campuses: the Macdonald Campus and the Downtown Campus. You register as a student within your faculty of admission and are governed by all rules and regulations of your faculty.

If you have already completed a Bachelor or an equivalent degree, you may be admitted to the Diploma in Environment through the Faculty of Agricultural and Environmental Sciences, the Faculty of Arts, or the Faculty of Science. You register as a student within your faculty of admission and are governed by all rules and regulations of your faculty relative to the Diploma.

Please see the *Undergraduate Admissions Guide*, found at [www.mcgill.ca/applying/undergrad](http://www.mcgill.ca/applying/undergrad).

### **33.4.2 Degree Requirements**

To be eligible for a B.A. degree, you must fulfil all the faculty and program requirements as indicated in *Faculty of Arts > Faculty of Arts Degrees*.

To be eligible for a B.A. & Sc. degree, you must fulfil all the faculty and program requirements as indicated in *Bachelor of Arts and Science > Degree Requirements*.

To be eligible for a B.Sc.(Ag.Env.Sc.) degree, you must fulfil all the faculty and program requirements as indicated in *Faculty of Agricultural and Environmental Sciences > Degree Requirements*.

- Faculty of Science students in particular should be aware that some courses are restricted and cannot be taken for credit. See the Science Office for Under





RELG 370	(3)	Religion and Human Rights
RELG 376	(3)	Religious Ethics
SOCI 222	(3)	Urban Sociology

ENTO 340	(3)	Field Entomology
ENVB 210	(3)	The Biophysical Environment
ENVB 301	(3)	Meteorology
ENVB 305	(3)	Population & Community Ecology
ENVB 315**	(3)	Science of Inland Waters
ENVB 410	(3)	Ecosystem Ecology
ENVB 415	(3)	Ecosystem Management
ENVR 200	(3)	The Global Environment
ENVR 202	(3)	The Evolving Earth
EPSC 201	(3)	Understanding Planet Earth
EPSC 233	(3)	Earth and Life History
EPSC 425	(3)	Sediments to Sequences
EPSC 549	(3)	Hydrogeology
ESYS 301	(3)	Earth System Modelling
GEOG 200	(3)	Geographical Perspectives: World Environmental Problems
GEOG 201	(3)	Introductory Geo-Information Science
GEOG 205	(3)	Global Change: Past, Present and Future
GEOG 272	(3)	Earth's Changing Surface
GEOG 3.0.4 Science1 1 70.e	(3)	Principles of Remote Sensing





AGEC 333	(3)	Resource Economics
AGEC 430	(3)	Agriculture, Food and Resource Policy
AGEC 442	(3)	Economics of International Agricultural Development
AGRI 210	(3)	Agro-Ecological History
AGRI 411	(3)	Global Issues on Development, Food and Agriculture
ANTH 206	(3)	Environment and Culture
ANTH 212	(3)	Anthropology of Development
ANTH 339	(3)	Ecological Anthropology
ANTH 512	(3)	Political Ecology
CIVE 433	(3)	Urban Planning
ECON 205	(3)	An Introduction to Political Economy
ECON 225	(3)	Economics of the Environment
ECON 326	(3)	Ecological Economics
ECON 347	(3)	Economics of Climate Change
ECON 405	(3)	Natural Resource Economics
ENVR 201	(3)	Society and Environment Knowledge, Ethics and En

PHIL 348	(3)	Philosophy of Law 1
POLI 211	(3)	Comparative Government and Politics
POLI 212	(3)	Government and Politics - Developed World
POLI 227	(3)	Developing Areas/Introduction
POLI 345	(3)	International Organizations
POLI 445	(3)	International Political Economy: Monetary Relations
POLI 466	(3)	Public Policy Analysis
PSYC 215	(3)	Social Psychology
RELG 270	(3)	Religious Ethics and the Environment
RELG 340	(3)	Religion and the Sciences
RELG 370	(3)	Religion and Human Rights
RELG 376	(3)	Religious Ethics
SOCI 222	(3)	Urban Sociology
SOCI 234	(3)	Population and Society
SOCI 235	(3)	Technology and Society
SOCI 254	(3)	Development and Underdevelopment
SOCI 386	(3)	Contemporary Social Movements
URBP 201	(3)	Planning the 21st Century City
URBP 506	(3)	Environmental Policy and Planning
URBP 530	(3)	Urban Environmental Planning
WILD 415*	(2)	Conservation Law

### **Natural Sciences and Technology**

\*Note: you may take MIMM 211 or LSCI 230 but not both; you may take ENVB 315 or BIOL 432 but not both.

AGRI 340	(3)	Principles of Ecological Agriculture
AGRI 435	(3)	Soil and Water Quality Management Fundamentals of Population Genetics

BREE 518	(3)	Bio-Treatment of Wastes
BTEC 502	(3)	Biotechnology Ethics and Society
CHEE 230	(3)	Environmental Aspects of Technology
CHEE 430	(3)	Technology Impact Assessment
CHEM 212	(4)	Introductory Organic Chemistry 1
CHEM 281	(3)	Inorganic Chemistry 1
CHEM 462	(3)	Green Chemistry
CIVE 225	(4)	Environmental Engineering
CIVE 323	(3)	Hydrology and Water Resources
CIVE 550	(3)	Water Resources Management
ENTO 340	(3)	Field Entomology

NRSC 384	(3)	Field Research Project
NRSC 430	(3)	GIS for Natural Resource Management
NRSC 510	(3)	Agricultural Micrometeorology
NRSC 514	(3)	Freshwater Ecosystems
PARA 410	(3)	Environment and Infection
PARA 515	(3)	Water, Health and Sanitation
PLNT 304	(3)	Biology of Fungi
PLNT 305	(3)	Plant Pathology
PLNT 358	(3)	Flowering Plant Diversity
PLNT 426	(3)	Plant Ecophysiology
PLNT 430	(3)	Plant Disease Epidemiology
PLNT 460	(3)	Plant Ecology
SOIL 300	(3)	Geosystems
WILD 410	(3)	Wildlife Ecology
WILD 421	(3)	Wildlife Conservation

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### 33.8 B.A. Faculty Program in Environment

The B.A. Faculty Program has two components: Core and Domain. Students follow three steps in their degree program.

- 1. Core:** The Core consists of four introductory courses and one intermediate-level course where students are exposed to the different approaches, perspectives, and world views that will help them gain an understanding of the complexity and conflicts that underlie most environmental problems. Through the Core program students go beyond the confines of their individual views of environment.
- 2. Domain:**

### **33.8.1.1 Bachelor of Arts (B.A.) - Faculty Program Environment - Ecological Determinants of Health in Society (54 credits)**

An understanding of the interface between human health and environment depends not only on an appreciation of the biological and ecological determinants of health, but equally on an appreciation of the role of social sciences in the design, implementation, and monitoring of interventions. Demographic patterns and urbanization, economic forces, ethics, indigenous knowledge and culture, and an understanding of how social change can be effected are all critical if we are to be successful in our efforts to assure health of individuals and societies in the future. Recognizing the key role that nutritional status plays in maintaining a healthy body, and the increasing importance of infection as a health risk linked intimately with the environment, this domain prepares students to contribute to the solution of problems of nutrition and infection by tying the relevant natural sciences to the social sciences.

#### **Program Prerequisites or Corequisites**

All B.A. Environment students MUST take these pre- or corequisite courses, or their equivalents. These courses should be taken in the Freshman year if possible. Quebec students can take them in U1.

#### **Calculus**

3 credits of calculus from the following, or equivalent (e.g., CEGEP objective 00UN):

MATH 139	(4)	Calculus 1 with Precalculus
MATH 140	(3)	Calculus 1

#### **Basic Science**

3 credits of basic science from the following, or equivalent (e.g., CEGEP objective 00UK):

AEBI 120	(3)	General Biology
BIOL 111	(3)	Principles: Organismal Biology

#### **Suggested First Year (U1) Courses**

For suggestions on courses to take in your first year (U1), you can consult the "MSE Student Handbook 2010-11" available on the MSE website (<http://www.mcgill.ca/mse>), or contact Kath

**Complementary Cour**

SOCI 309 (3) Health and Illness

**Hydrology and Climate**

BREE 217 (3) Hydrology and Water Resources

GEOG 321 (3) Climatic Environments

GEOG 322 (3) Environmental Hydrology

NRSC 510 (3) Agricultural Micrometeorology

**Agriculture**

A (3) Agro-Ecological History



ENVB 410	(3)	Ecosystem Ecology
WILD 410	(3)	Wildlife Ecology

**Pest Management**

BIOL 350	(3)	Insect Biology and Control
ENTO 352	(3)	Control of Insect Pests

**Techniques and Management**

CHEE 230	(3)	Environmental Aspects of Technology
GEOG 201	(3)	Introductory Geo-Information Science
GEOG 302	(3)	Environmental Management 1
GEOG 380	(3)	Adaptive Environmental Management
NRSC 430	(3)	GIS for Natural Resource Management
PARA 515	(3)	Water, Health and Sanitation

**Social Change** Sociat 0 0 1 64A.

### **33.8.2.1 Bachelor of Arts (B.A.) - Faculty Program Environment - Economics and the Earth's Environment (54 credits)**

Understanding Earth's geologic processes provides us with the knowledge to mitigate many of our society's environmental impacts due to resource extraction and waste disposal. This knowledge is not always enough, as economics often plays a controlling role in how we use and abuse our environment.

This Domain educates students in the fundamentals of economics and Earth sciences. The fundamentals of economics are provided, as is their application to the effects of economic choices on Earth's environment. Examples of these applications include the economic effects of public policy towards resource industries and methods of waste disposal, and the potential effects of global warming on the global economy. Students also learn of minerals, rocks, soils, and waters that define much of Earth's environment and how these materials interact with each other and with the atmosphere. Courses in specific subdisciplines of Earth sciences combined with courses presenting a global vision of how the Earth and its environment operate provide the student with the necessary knowledge of geologic processes. Examples of this knowledge include the effects of mineral and energy extraction on the environment and how industrial w

AGRI 519	(6)	Sustainable Development Plans
ENVR 401	(3)	Environmental Research
ENVR 451	(6)	Research in Panama

**Domain: Required Courses (15 credits)**

ECON 230D1	(3)	Microeconomic Theory
ECON 230D2	(3)	Microeconomic Theory
ECON 405	(3)	Natural Resource Economics
EPSC 210	(3)	Introductory Mineralogy
EPSC 212	(3)	Introductory Petrology

**Domain: Complementary Courses (18 credits)**

ECON 408	(3)	Public Sector Economics 1
ECON 409	(3)	Public Sector Economics 2
ECON 412	(3)	Topics in Economic Development 1
ENVB 305	(3)	Population & Community Ecology
EPSC 455	(3)	Sedimentary Geology
EPSC 549	(3)	Hydrogeology
GEOG 302	(3)	Environmental Management 1
GEOG 322	(3)	Environmental Hydrology
GEOG 380	(3)	Adaptive Environmental Management
GEOG 404	(3)	Environmental Management 2
GEOG 498	(3)	Humans in Tropical Environments
NRSC 437	(3)	Assessing Environmental Impact
SOIL 510	(3)	Environmental Soil Chemistry
URBP 520	(3)	Globalization: Planning and Change
WILD 415*	(2)	Conservation Law

### 33.8.3 Environment and Development Domain

This domain is open only to students in the B.A. Faculty Program in Environment. [vir](#)

**Suggested First Year (U1) Courses**

For suggestions on courses to take in your first year (U1), you can consult the "MSE Student Handbook 2010-11" available on the MSE website (<http://www.mcgill.ca/mse>), or contact Ms. Kathy Roulet, the Program Advisor ([kathy.roulet@mcgill.ca](mailto:kathy.roulet@mcgill.ca)).

**Program Requirements**

NOTE: Students are required to take a maximum of 30 credits at the 200-level and a minimum of 12 credits at the 400-level or higher in this program. This includes Core and Required courses.

Location Note: When planning their schedule and registering for courses, students should verify where each course is offered because courses for this program are taught at both McGill's downtown campus and at the Macdonald Campus in Ste. Anne de Bellevue.

**Core: Required Courses (18 credits)**

Location Note: Core required courses are taught at both McGill's downtown campus and at the Macdonald Campus in Ste. Anne de Bellevue. You should register in Section 001 of an ENVR course that you plan to take on the downtown campus, and in Section 051 of an ENVR course that you plan to take on the Macdonald campus.

ENVR 200	(3)	The Global Environment
ENVR 201	(3)	Society and Environment
ENVR 202	(3)	The Evolving Earth
ENVR 203	(3)	Knowledge, Ethics and Environment
ENVR 301	(3)	Environmental Research Design
ENVR 400	(3)	Environmental Thought

**Core: Complementary Course - Senior Research Project (3 credits)**

Only 3 credits will be applied to the program; extra credits will count as electives.

AGRI 519	(6)	Sustainable Development Plans
ENVR 401	(3)	Environmental Research
ENVR 451	(6)	Research in Panama

**Domain: Required Courses (12 credits)**

ANTH 339	(3)	Ecological Anthropology
ECON 313	(3)	Economic Development 1
ECON 314	(3)	Economic Development 2
GEOG 302	(3)	Environmental Management 1

**Domain: Complementary Courses (21 credits)**

21 credits of complementary courses are chosen from various domains as follows:

**Microeconomics**

one of:

AGEC 200	(3)	Principles of Microeconomics
ECON 208	(3)	Microeconomic Analysis and Applications

**Statistics**

3 credits, one of the following statistics courses or equivalent:

Note: Credit given for statistics courses is subject to certain restrictions. Students should consult the "Course Overlap" information in the "Course Requirements" section for the Faculty of Arts.

AEMA 310	(3)	Statistical Methods 1
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GEOG 202	(3)	Statistics and Spatial Analysis
MATH 203	(3)	Principles of Statistics 1
PSYC 204	(3)	Introduction to Psychological Statistics

### Advanced Development Courses

6 credits from:

AGEC 442	(3)	Economics of International Agricultural Development
ANTH 418	(3)	Environment and Development
GEOG 408	(3)	Geography of Development
GEOG 410	(3)	Geography of Underdevelopment: Current Problems

### Natural Sciences

3 credits from:

AGRI 550	(3)	Sustained Tropical Agriculture
BIOL 308	(3)	Ecological Dynamics
BIOL 465	(3)	Conservation Biology
BIOL 553	(3)	Neotropical Environments
ENVB 305	(3)	Population & Community Ecology
GEOG 305	(3)	Soils and Environment
GEOG 322	(3)	Environmental Hydrology
NUTR 403	(3)	Nutrition in Society
NUTR 501	(3)	Nutrition in Developing Countries
PARA 410	(3)	Environment and Infection

### Social Sciences

6 credits from:

AGEC 333	(3)	Resource Economics
AGEC 442	(3)	Economics of International Agricultural Development
AGRI 210	(3)	Agro-Ecological History
AGRI 452	(3)	Water Resources in Barbados
ANTH 439	(3)	Theories of Development
ANTH 445	(3)	Property and Land Tenure
CANS 407	(3)	Regions of Canada
ECON 326	(3)	Ecological Economics
ECON 405	(3)	Natural Resource Economics
GEOG 201	(3)	Introductory Geo-Information Science
GEOG 300	(3)	Human Ecology in Geography
GEOG 311	(3)	Economic Geography
GEOG 331	(3)	Urban Social Geography
GEOG 380	(3)	Adaptive Environmental Management
GEOG 404	(3)	Environmental Management 2
GEOG 408	(3)	Geography of Development

GEOG 416	(3)	Africa South of the Sahara
GEOG 496	(3)	Geographical Excursion
GEOG 498	(3)	Humans in Tropical Environments
GEOG 508	(3)	Resources, People and Power
GEOG 510	(3)	Humid Tropical Environments
GEOG 551	(3)	Environmental Decisions
MGPO 440	(3)	Strategies for Sustainability
POLI 445	(3)	International Political Economy: Monetary Relations
POLI 472	(3)	Developing Areas/Social Movements
SOCI 565	(3)	Social Change in Panama
URBP 507	(3)	Planning and Infrastructure
URBP 520	(3)	Globalization: Planning and Change

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### 33.9 Bachelor of Arts and Science (B.A. & Sc.) - Interfaculty Program in Environment

The Interfaculty Program in Environment is open only to students in the B.A. & Sc. degree.

#### Advisor

Ms. Kathy Roulet, MSE Program Advisor

Email: [kathy.roulet@mcgill.ca](mailto:kathy.roulet@mcgill.ca)

Telephone: 514-398-4306

To obtain a B.A. & Sc. Interfaculty Program in Environment students must:

- register in the program online, using Minerv

Location Note: Core required courses are taught at both McGill's downtown campus and at the Macdonald campus in Ste. Anne de Bellevue. You should register in Section 001 of an ENVR course that you plan to take on the downtown campus, and in Section 051 of an ENVR course that you plan to take on the Macdonald campus.

ENVR 200	(3)	The Global Environment
ENVR 201	(3)	Society and Environment
ENVR 202	(3)	The Evolving Earth
ENVR 203	(3)	Knowledge, Ethics and Environment
ENVR 301	(3)	Environmental Research Design
ENVR 400	(3)	Environmental Thought

**Complementary Courses (36 credits)**

36 credits of Complementary Courses are selected as follows:

3 credits - Senior Research Project

3 credits - Statistics

30 credits - chosen from amongst 12 Areas of focus

**Senior Research Project**

Only 3 credits will be applied to the program; extra credits will count as electives.

AGRI 519	(6)	Sustainable Development Plans
ENVR 401	(3)	Environmental Research
ENVR 451	(6)	Research in Panama

**Statistics:**

one of:

AEMA 310	(3)	Statistical Methods 1
BIOL 373	(3)	Biometry
GEOG 202	(3)	Statistics and Spatial Analysis
MATH 203	(3)	Principles of Statistics 1
PSYC 204	(3)	Introduction to Psychological Statistics

**Areas:**

30 credits from at least 3 of the following Areas. At least 6 credits must be at the 400-level or higher, selected either from these lists or in consultation with the Program Advisor.

**Area 1: Population, Community and Ecosystem Ecology**

\* Note: you may take BIOL 540 or ENVR 540 but not both.

BIOL 308	(3)	Ecological Dynamics
BIOL 432	(3)	Limnology
BIOL 441	(3)	Biological Oceanography
BIOL 540*	(3)	Ecology of Species Invasions
ENVB 305	(3)	Population & Community Ecology
ENVB 410	(3)	Ecosystem Ecology
ENVR 540*	(3)	Ecology of Species Invasions
GEOG 350	(3)	Ecological Biogeography
PLNT 460	(3)	Plant Ecology





PHAR 303\* (3) Principles of Toxicology

**Area 6: Earth and soil sciences**

ATOC 215 (3) Oceans, Weather and Climate  
EPSC 201 (3) Understanding Planet Earth  
GEOG 272 (3) Earth's Changing Surface  
GEOG 305 (3) Soils and Environment  
GEOG 321 (3) Climatic Environments  
SOIL 326 (3) Soils in a Changing Environment

**Area 7: Economics**

\* Note: you may take AGECE 200 or ECON 208 but not both.

AGECE 200\* (3) Principles of Microeconomics  
AGECE 333 (3) Resource Economics  
ECON 208\* (3) Microeconomic Analysis and Applications  
ECON 326 (3) Ecological Economics  
ECON 347 (3) Economics of Climate Change

SOCI 309 (3) Health and Illness

**Area 11: Spirituality, Philosophy, Thought**

EDER 461 (3) Society and Change  
PHIL 220 (3) Introduction to History and Philosophy of Science 1  
PHIL 221 (3) Introduction to History and Philosophy of Science 2  
PHIL 237 (3) Contemporary Moral Issues  
PHIL 341 (3) Philosophy of Science 1  
PHIL 348 (3) Philosophy of Law 1  
RELG 270 (3) Religious Ethics and the Environment  
RELG 340 (3) Religion and the Sciences  
RELG 370 (3) Religion and Human Rights

**Area 12: Environmental Management**

\* Note: If WILD 415 is taken, 1 additional credit of complementary courses must be taken.

AGRI 210 (3) Agro-Ecological History  
AGRI 435 (3) Soil and Water Quality Management  
AGRI 452 (3) Water Resources in Barbados  
ENT (3) Economic Entomology

- Land Surface Processes and Environmental Change
- Renewable Resource Management
- Water Environments and Ecosystems (Biological, and Physical stream options)

B.Sc. students in the Faculty of Science can also choose from the following two domains:

- Atmospheric Environment and Air Quality
- Earth Sciences and Economics

**3. Senior Core and Research:** In the two senior courses of the Core, students will apply the general and specialized knowledge that they have gained in the program to the analysis of some specific, contemporary environmental problems.

To obtain a Major in Environment, students must:

- register in a Domain online using Minerva;
- pass all courses counted towards the Major with a **grade of C or higher**;
- confirm that their course selection satisfies the required components of the MSE Core and their chosen Domain, and that the complementary courses are approved courses in their chosen Domain; and
- fulfil all faculty requirements as specified by the faculty in which they are registered: for the B.Sc.(Ag.Env.Sc.), refer to *Faculty of Agricultural and Environmental Sciences > Faculty Information and Regulations*; for the B.Sc., see *Faculty of Science > Faculty Degree Requirements*. This includes meeting the minimum credit requirement as specified in their letter of admission.

### 33.10.1 Biodiversity and Conservation Domain

This domain is open only to students in the B.Sc.(Ag.Env.Sc.) Major Environment or B.Sc. Major Environment program.

Advisor	Mentor
Ms Kathy Roulet Email: <a href="mailto:kathy.roulet@mcgill.ca">kathy.roulet@mcgill.ca</a> Telephone: 514-398-4306	Professor Graham Bell Email: <a href="mailto:graham.bell@mcgill.ca">graham.bell@mcgill.ca</a> Telephone: 514-398-6485

#### 33.10.1.1 Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) or Bachelor of Science (B.Sc.) - Major Environment - Biodiversity and Conservation (63 credits)

This Domain (63 credits including Core) is open only to students in the B.Sc.(Ag.Env.Sc.) Major in Environment or B.Sc. Major in Environment program.

This Domain links the academic study of biological diversity with the applied field of conservation biology. The study of biological diversity, or "biodiversity", lies at the intersection of evolution with ecology and genetics, combining the subdisciplines of evolutionary ecology, evolutionary genetics and ecological genetics. It has two main branches, the creation of diversity and the maintenance of diversity. Both processes are governed by a general mechanism of selection acting over different scales of space and time. This gives rise to a distinctive set of principles and generalizations that regulate rates of diversification and levels of diversity, as well as the abundance or rarity of different species. Conservation biology constitutes the application of these principles in the relevant

ENVR 201	(3)	Society and Environment
ENVR 202	(3)	The Evolving Earth
ENVR 203	(3)	Knowledge, Ethics and Environment
ENVR 301	(3)	Environmental Research Design
ENVR 400	(3)	Environmental Thought

**Core: Complementary Course - Senior Research Project (3 credits)**

Only 3 credits will be applied to the program; extra credits will count as electives.

AGRI 519	(6)	Sustainable Development Plans
ENVR 401	(3)	Environmental Research
ENVR 451	(6)	Research in Panama

**Domain: Complementary Courses (42 credits)**

42 credits of complementary courses are selected as follows:

9 credits - basic courses in the biological principles of diversity, systematics and conservation

3 credits - ecology

3 credits - statistics

9 credits - interface between science, policy and management

3 credits - field courses

6 credits - general scientific principles

3 credits - social science

6 credits - organisms and diversity

**Biological Principles of Diversity/Systematics/Conservation:**

9 credits are chosen from basic courses in the biological principles of diversity, systematics and conservation as follows:

one of:

AEBI 212	(3)	Evolution and Phylogeny
BIOL 304	(3)	Evolution

one of:

AEBI 211	(3)	Organisms 2
BIOL 305	(3)	Animal Diversity

one of:

BIOL 465	(3)	Conservation Biology
WILD 421	(3)	Wildlife Conservation

**Ecology:**

one of:

BIOL 308	(3)	Ecological Dynamics
ENVB 305	(3)	Population & Community Ecology

**Statistics:**

one of:

AEMA 310	(3)	Statistical Methods 1
BIOL 373	(3)	Biometry

**Science, Policy and Management:**

9 credits are chosen from interface between science, policy and management as follows:

\* Note: you may take ECON 208 or AGECE 200 but not both.

AGECE 200*	(3)	Principles of Microeconomics
AGRI 550	(3)	Sustained Tropical Agriculture
ANTH 418	(3)	Environment and Development
ECON 208*	(3)	Microeconomic Analysis and Applications
ECON 225	(3)	Economics of the Environment
GEOG 302	(3)	Environmental Management 1
GEOG 370	(3)	Protected Areas
GEOG 380	(3)	Adaptive Environmental Management
GEOG 408	(3)	Geography of Development
GEOG 410	(3)	Geography of Underdevelopment: Current Problems

**Field Courses**

one of:

AGRI 452	(3)	Water Resources in Barbados
BIOL 331	(3)	Ecology/Behaviour Field Course
BIOL 334	(3)	Applied Tropical Ecology
BIOL 553	(3)	Neotropical Environments
GEOG 495	(3)	Field Studies - Physical Geography
GEOG 497	(3)	Ecology of Coastal Waters
GEOG 499	(3)	Subarctic Field Studies
WILD 475	(3)	Desert Ecology

**General Scientific Principles**

6 credits of general scientific principles selected from the following:

\* Note: you may take GEOG 306 or NRSC 430 but not both.

(A second field course from the Domain curriculum may also be taken)

BIOL 324	(3)	Ecological Genetics
BIOL 341	(3)	History of Life
BIOL 342	(3)	Marine Biology
BIOL 432	(3)	Limnology
BIOL 441	(3)	Biological Oceanography
BIOL 505	(3)	Diversity and Systematics Seminar
ENVB 313	(3)	Phylogeny and Biogeography
ENVB 315	(3)	Science of Inland Waters

ENVB 410	(3)	Ecosystem Ecology
GEOG 272	(3)	Earth's Changing Surface
GEOG 306*	(3)	Raster Geo-Information Science
GEOG 321	(3)	Climatic Environments
GEOG 322	(3)	Environmental Hydrology
GEOG 350	(3)	Ecological Biogeography
MICR 331	(3)	Microbial Ecology
NRSC 430*	(3)	GIS for Natural Resource Management
NRSC 437	(3)	Assessing Environmental Impact
PLNT 460	(3)	Plant Ecology
WILD 311	(3)	Ethology
WILD 410	(3)	Wildlife Ecology
WOOD 420	(3)	Environmental Issues: Forestry

**Social Science:**

one of:

\* Note: If WILD 415 is taken, 1 additional credit of complementary courses must be taken.

AGEC 333	(3)	Resource Economics
ANTH 339	(3)	Ecological Anthropology
ANTH 416	(3)	Environment/Development: Africa
ECON 326	(3)	Ecological Economics
GEOG 404	(3)	Environmental Management 2
GEOG 498	(3)	Humans in Tropical Environments
GEOG 510	(3)	Humid Tropical Environments
URBP 520	(3)	Globalization: Planning and Change
WILD 415*	(2)	Conservation Law

**Organisms and Diversity:**

6 credits of organisms and diversity selected as follows:

\* Note: you may take BIOL 350 or ENTO 350 but not both; you may take BIOL 540 or ENVR 540 but not both.

AGRI 340	(3)	Principles of Ecological Agriculture
ANTH 311	(3)	Primate Behaviour and Ecology
BIOL 335	(3)	Marine Mammals
BIOL 350*	(3)	Insect Biology and Control
BIOL 355	(3)	Trees: Ecology & Evolution
BIOL 427	(3)	Herpetology
BIOL 540*	(3)	Ecology of Species Invasions
ENTO 350*	(3)	Insect Biology and Control
ENTO 352	(3)	Control of Insect Pests
ENTO 440	(3)	Insect Diversity
ENVR 540*	(3)	Ecology of Species Invasions
PLNT 304	(3)	Biology of Fungi
PLNT 358	(3)	Flowering Plant Diversity

PLNT 458	(3)	Flowering Plant Systematics
WILD 307	(3)	Natural History of Vertebrates
WILD 350	(3)	Mammalogy
WILD 420	(3)	Ornithology
WILD 424	(3)	Parasitology

### 33.10.2 Ecological Determinants of Health Domain

This domain is open only to students in the B.Sc.(Ag.Env.Sc.) Major Environment or B.Sc. Major Environment program.

Advisor	Mentor
Ms. Kathy Roulet Email: <a href="mailto:kathy.roulet@mcgill.ca">kathy.roulet@mcgill.ca</a> Telephone: 514-398-4306	Professor Marilyn Scott Email: <a href="mailto:marilyn.scott@mcgill.ca">marilyn.scott@mcgill.ca</a> Telephone: 514-398-7996

#### 33.10.2.1 Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) or Bachelor of Science (B.Sc.) - Major Environment - Ecological Determinants of Health - Cellular (63 credits)

The Cellular concentration in this Domain is open only to students in the B.Sc.(Ag.Env.Sc.) Major Environment or B.Sc. Major Environment program.

This Domain considers the interface between the environment and human well-being, with particular focus on the triad that ties human health to the environment through the elements of food and infectious agents. Each of these elements is influenced by planned and unplanned environmental disturbances. For example, agricultural practices shift the balance between beneficial and harmful ingredients of food. Use of insecticides presents dilemmas with regard to the environment, economics and human health. The distribution of infectious diseases is influenced by the climatic conditions that permit vectors to coexist with man, by deforestation, by urbanization, and by human interventions ranging from the building of dams to provision of potable water.

In designing interventions that aim to prevent or reduce infectious contaminants in the environment, or to improve food production and nutritional quality, not only is it important to understand methods of intervention, but also to understand social forces that influence how humans respond to such interventions.

Students in the Cellular concentration will explore these interactions in more depth, at a physiological level. Students in the Population concentration will gain a depth of understanding at an ecosystem level that looks at society, land and population health.

#### Suggested First Year (U1) Courses

For suggestions on courses to take in your first year (U1), you can consult the "MSE Student Handbook 2010-11" available on the MSE website (<http://www.mcgill.ca/mse>), or contact Ms. Kathy Roulet, the Program Advisor ([kathy.roulet@mcgill.ca](mailto:kathy.roulet@mcgill.ca)).

#### Program Requirements

NOTE: Students are required to take a maximum of 31 credits at the 200-level and a minimum of 12 credits at the 400-level or higher in this program. This includes Core and Required courses.

Location Note: When planning your schedule and registering for courses, you would verify where each course is offered because courses for this program are taught at both McGill's downtown campus and at the Macdonald campus in Ste. Anne de Bellevue.

#### Core: Required Courses (18 credits)

Location Note: Core Required courses for this program are taught at both McGill's downtown campus and at the Macdonald Campus in Ste. Anne de Bellevue. You should register in Section 001 of an ENVR course that you plan to take on the downtown campus, and in Section 051 of an ENVR course that you plan to take on the Macdonald campus.

ENVR 200	(3)	The Global Environment
ENVR 201	(3)	Society and Environment
ENVR 202	(3)	The Evolving Earth
ENVR 203	(3)	Knowledge, Ethics and Environment
ENVR 301	(3)	Environmental Research Design
ENVR 400	(3)	Environmental Thought

#### Core: Complementary Course - Senior Research Project (3 credits)





**Statistics**

One of the following statistics courses or equivalent:

Note: Credit given for statistics courses is subject to certain restrictions. Students in Science should consult the "Course Overlap" information in the "Course

AGRI 452	(3)	Water Resources in Barbados
BREE 217	(3)	Hydrology and Water Resources
GEOG 321	(3)	Climatic Environments
GEOG 322	(3)	Environmental Hydrology
NRSC 510	(3)	Agricultural Micrometeorology

**Techniques and Management**

Organic Waste Management

In designing interventions that aim to prevent or reduce infectious contaminants in the environment, or to improve food production and nutritional quality, not only is it important to understand methods of intervention, but also to understand social forces that influence how humans respond to such interventions. Students in the Population concentration will gain a depth of understanding at an ecosystem level that looks at society, land and population health. Students in the Cellular concentration will explore these interactions in more depth, at a physiological level.

### **Suggested First Year (U1) Courses**

For suggestion on courses to take in your first year (U1), you can consult the "MSE Student Handbook 2010-11" available on the MSE website (<http://www.mcgill.ca/mse>), or contact Ms. Kathy Roulet, the Program Advisor ([kathy.roulet@mcgill.ca](mailto:kathy.roulet@mcgill.ca)).

### **Program Requirements**

NOTE: Students are required to take a maximum of 31 credits at the 200-level and a minimum of 12 credits at the 400-level or higher in this program. This includes Core and Required courses.

Location Note: When planning your schedule and registering for courses, you should verify where each course is offered because courses for this program are taught at both McGill's downtown campus and at the Macdonald campus in Ste. Anne de Bellevue.

### **Core: Required Courses (18 credits)**

Location Note: Core Required courses for this program are taught at both McGill's downtown campus and at the Macdonald Campus in Ste. Anne de Bellevue. You should register in Section 001 of an ENVR course that you plan to take on the downtown campus, and in Section 051 of an ENVR course that you plan to take on the Macdonald campus.

ENVR 200	(3)	The Global Environment
ENVR 201	(3)	Society and Environment
		The Ev

**Health and Society**

GEOG 303	(3)	Health Geography
SOCI 234	(3)	Population and Society
SOCI 309	(3)	Health and Illness

**Toxicology**

ANSC 312	(3)	Animal Health and Disease
NUTR 420	(3)	Toxicology and Health Risks
PHAR 303	(3)	Principles of Toxicology

**Biology**

BIOL 200	(3)	Molecular Biology
BIOL 201	(3)	Cell Biology and Metabolism
LSCI 211	(3)	Biochemistry 1

**Statistics**

One of the following statistics courses or equivalent:

### **Hydrology, Climate, and Agriculture**

AGRI 340	(3)	Principles of Ecological Agriculture
AGRI 452	(3)	Water Resources in Barbados
AGRI 550	(3)	Sustained Tropical Agriculture
BREE 217	(3)	Hydrology and Water Resources
GEOG 321	(3)	Climatic Environments
GEOG 322	(3)	Environmental Hydrology
	(3)	Agricultural Micrometeorology



expertise in environmental sciences by taking complementary courses along each of two axes: statistics and mathematics, and environmental sciences. An internship is also offered to students to provide them with preliminary professional experience.

### **Suggested First Year (U1) Courses**

For suggestions on courses to take in your first year (U1), you can consult the 'MSE Student Handbook 2010-11' (available on the MSE website <http://www.mcgill.ca/mse>, or contact Kathy Roulet, the Program Advisor ([kathy.roulet@mcgill.ca](mailto:kathy.roulet@mcgill.ca)).

Prerequisites and equivalent courses are common with math courses, so check with your advisor when choosing your courses. Be especially careful with statistics courses, as you will receive no credit (and no warning!) for a course that is considered equivalent to one you have already taken. Note: Credit given for statistics courses is subject to certain restrictions. Students in Science should consult the "Course Overlap" information in the "Course Requirements" section for the Faculty of Science.

Statistics courses BIOL 373 OR AEMA 310 can be taken in U1, b



**Ecology**

BIOL 308	(3)	Ecological Dynamics
ENVB 305	(3)	Population & Community Ecology

**Impact**

MIME 308	(3)	Social Impact of Technology
NRSC 437	(3)	Assessing Environmental Impact

**Modelling**

AEMA 406	(3)	Quantitative Methods: Ecology
BIOL 309	(3)	Mathematical Models in Biology

**GIS Techniques**

GEOG 201	(3)	Introductory Geo-Information Science
NRSC 430	(3)	GIS for Natural Resource Management

**Basic Environmental Science:**

one of:

BREE 217	(3)	Hydrology and Water Resources
CIVE 323	(3)	Hydrology and Water Resources
ENVB 210	(3)	The Biophysical Environment
GEOG 305	(3)	Soils and Environment
GEOG 322	(3)	Environmental Hydrology
GEOG 350	(3)	Ecological Biogeography

**Statistics:**

6 credits of Statistics are selected from one of the following two options.

Note: Credit given for statistics courses is subject to certain restrictions. Students in Science should consult the "Course Overlap" information in the "Course Requirements" section for the Faculty of Science. Several statistics courses overlap (especially with MATH 324) and cannot be taken together. These rules do not apply to B.Sc.(Ag.Env.Sc.) students.

**Option 1**

MATH 323	(3)	Probability
MATH 324	(3)	Statistics

**Option 2**

one of:

AEMA 310	(3)	Statistical Methods 1
BIOL 373	(3)	Biometry

and one of:

AEMA 411	(3)	Experimental Designs 01
CIVE 555	(3)	Environmental Data Analysis
GEOG 351	(3)	Quantitative Methods
SOCI 461	(3)	Quantitative Data Analysis

A total of 15 credits are chosen from the following two lists.

**List 1**

3 credits minimum of statistics and mathematics chosen from:

\*Note: or equivalent courses to BREE 252 or BREE 319.

BIOL 434	(3)	Theoretical Ecology
BREE 252*	(3)	Computing for Engineers
BREE 319*	(3)	Engineering Mathematics
GEOG 501	(3)	Modelling Environmental Systems
MATH 223	(3)	Linear Algebra
MATH 326	(3)	Nonlinear Dynamics and Chaos
MATH 423	(3)	Regression and Analysis of Variance
MATH 447	(3)	Stochastic Processes
MATH 525	(4)	Sampling Theory and Applications
SOCI 504	(3)	Quantitative Methods 1
SOCI 505	(3)	Quantitative Methods 2
SOCI 580	(3)	Social Research Design and Practice

**List 2**

3 credits minimum of environmental sciences chosen from:

AGRI 452	(3)	Water Resources in Barbados
AGRI 550	(3)	Sustained Tropical Agriculture
BIOL 331	(3)	Ecology/Behaviour Field Course
BIOL 553	(3)	Neotropical Environments
ENVB 313	(3)	Phylogeny and Biogeography
GEOG 300	(3)	Human Ecology in Geography
GEOG 302	(3)	Environmental Management 1
GEOG 404	(3)	Environmental Management 2
GEOG 494	(3)	Urban Field Studies
GEOG 497	(3)	Ecology of Coastal Waters
GEOG 499	(3)	Subarctic Field Studies
NRSC 333	(3)	Pollution and Bioremediation
PLNT 460	(3)	Plant Ecology
WILD 401	(4)	Fisheries and Wildlife Management
WOOD 300	(3)	Urban Forests and Trees
WOOD 420	(3)	Environmental Issues: Forestry

### 33.10.4 Food Production and Environment Domain

This domain is open only to students in the B.Sc.(Ag.Env.Sc.) Major Environment or B.Sc. Major Environment program.

Advisor	Mentor
Ms. Kathy Roulet Email: <a href="mailto:kathy.roulet@mcgill.ca">kathy.roulet@mcgill.ca</a> Telephone: 514-398-4306	Professor Joan Marshall email: <a href="mailto:joan.marshall@mcgill.ca">joan.marshall@mcgill.ca</a> Telephone: 514-398-7822

#### 33.10.4.1 Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) or Bachelor of Science (B.Sc.) - Major Environment - Food Production and Environment (63 credits)

This Domain (63 credits including Core) is open only to students in the B.Sc.(Ag.Env.Sc.) Major in Environment or B.Sc. in Environment program.

The business of food production is an area of human activity with a large and intimate interaction with the environment. Modern agriculturalists must strike a delicate balance between trying to provide food for themselves, their families and urban dwellers while trying to minimize environmental damage. When

ENVR 202	(3)	The Evolving Earth
ENVR 203	(3)	Knowledge, Ethics and Environment
ENVR 301	(3)	Environmental Research Design
ENVR 400	(3)	Environmental Thought

**Core: Complementary Course - Senior Research Project (3 credits)**

Only 3 credits will be applied to the program; extra credits will count as electives.

AGRI 519	(6)	Sustainable Development Plans
ENVR 401	(3)	Environmental Research
ENVR 451	(6)	Research in Panama

**Domain: Required Courses (9 credits)**

AEBI 210	(3)	Organisms 1
AGRI 210	(3)	Agro-Ecological History
PLNT 300	(3)	Cropping Systems

**Domain: Complementary Courses (33 credits)**

33 credits of Complementary Courses selected as follows:

15 credits - Basic Sciences

12 credits - Applied Sciences

6 credits - Social Sciences/Humanities

**Basic Sciences:**

15 credits of Basic Sciences selected as follows:

One of the following statistics courses or equivalent:

Note: Credit given for statistics courses is subject to certain restrictions. Students in Science should consult the "Course Overlap" information in the "Course Requirements" section for the Faculty of Science.

AEMA 310	(3)	Statistical Methods 1
MATH 203	(3)	Principles of Statistics 1

One of:

AGRI 340	(3)	Principles of Ecological Agriculture
ANSC 250	(3)	Principles of Animal Science

One of:

BIOL 202	(3)	Basic Genetics
LSCI 204	(3)	Genetics

One of:

ENVB 210	(3)	The Biophysical Environment
GEOG 305	(3)	Soils and Environment

One of:

BIOL 308	(3)	Ecological Dynamics
ENVB 305	(3)	Population & Community Ecology

**Applied Sciences:**

12 credits of Applied Sciences from the following:

\* Note: you may take BREE 217 or GEOG 322 but not both; you may take FDSC 200 or NUTR 207 but not both.

AGRI 411	(3)	Global Issues on Development, Food and Agriculture
AGRI 435	(3)	Soil and Water Quality Management
AGRI 550	(3)	Sustained Tropical Agriculture
BIOL 465	(3)	Conservation Biology
BIOL 553	(3)	Neotropical Environments
BREE 217*	(3)	Hydrology and Water Resources
BREE 322	(3)	Organic Waste Management
BREE 518	(3)	Bio-Treatment of Wastes
ENTO 446	(3)	Apiculture
FDSC 200*	(3)	Introduction to Food Science
FDSC 535	(3)	Food Biotechnology
GEOG 302	(3)	Environmental Management 1
GEOG 322*	(3)	Environmental Hydrology
GEOG 380	(3)	Adaptive Environmental Management
MICR 331	(3)	Microbial Ecology
NRSC 333	(3)	Pollution and Bioremediation
NRSC 437	(3)	Assessing Environmental Impact
NUTR 207*	(3)	Nutrition and Health
NUTR 403	(3)	Nutrition in Society
NUTR 420	(3)	Toxicology and Health Risks
PARA 410	(3)	Environment and Infection
PHAR 303	(3)	Principles of Toxicology
PLNT 434	(3)	Weed Biology and Control
SOIL 315	(3)	Soil Fertility and Fertilizer Use
SOIL 445	(3)	Agroenvironmental Fertilizer Use
SOIL 510	(3)	Environmental Soil Chemistry
SOIL 521	(3)	Soil Microbiology and Biochemistry
WILD 401	(4)	Fisheries and Wildlife Management

**Social Sciences/Humanities:**

6 credits in Social Sciences and Humanities are selected as follows:

\* Note: you may take AGECE 200 or ECON 208 but not both; you may take AGECE 333 or ECON 405 but not both.

\*\* Note: If WILD 415 is taken, 1 additional credit of complementary courses must be taken.

AGECE 200*	(3)	Principles of Microeconomics
AGECE 320	(3)	Intermediate Microeconomic Theory

AGEC 333*	(3)	Resource Economics
AGEC 430	(3)	Agriculture, Food and Resource Policy
AGEC 442	(3)	Economics of International Agricultural Development
ANTH 418	(3)	Environment and Development
ECON 208*	(3)	Microeconomic Analysis and Applications
ECON 225	(3)	Economics of the Environment
ECON 405*	(3)	Natural Resource Economics
ENVR 465	(3)	Environment and Social Change
GEOG 404	(3)	Environmental Management 2
GEOG 410	(3)	Geography of Underdevelopment: Current Problems
GEOG 498	(3)	Humans in Tropical Environments
GEOG 510	(3)	Humid Tropical Environments
SOCI 254	(3)	Development and Underdevelopment
SOCI 565	(3)	Social Change in Panama
WILD 415**	(2)	Conservation Law

**Land Surface Pr**

(3)

The Global Environment

**Fundamental Land Surface Processes:**

9 credits of fundamental land surface processes chosen as follows:

GEOG 321 (3) Climatic Environments

and/or one of:

GEOG 272 (3) Earth's Changing Surface

SOIL 300 (3) Geosystems

and/or one of:

GEOG 305 (3) Soils and Environment

SOIL 326 (3) Soils in a Changing Environment

and/or one of:

BREE 217 (3) Hydrology and Water Resources

GEOG 322 (3) Environmental Hydrology

**Environment and Resource Management:**

one of:

AGRI 435 (3) Soil and Water Quality Management

AGRI 452 (3) Water Resources in Barbados

AGRI 550 (3) Sustained Tropical Agriculture

BIOL 308 (3) Ecological Dynamics

BIOL 465 (3) Conservation Biology

CHEE 230 (3) Environmental Aspects of Technology

CIVE 225 (4) Environmental Engineering

ENVB 305 (3) Population & Community Ecology

ESYS 301 (3) Earth System Modelling

GEOG 302 (3) Environmental Management 1

GEOG 380 (3) Adaptive Environmental Management

GEOG 404 (3) Environmental Management 2

NRSC 437 (3) Assessing Environmental Impact

WILD 421 (3) Wildlife Conservation

WOOD 420 (3) Environmental Issues: Forestry

WOOD 441 (3) Integrated Forest Management

**Field Course:**

one of:

BIOL 553 (3) Neotropical Environments

GEOG 495 (3) Field Studies - Physical Geography

GEOG 496 (3) Geographical Excursion



Subarctic Field gmStudies

GEOG 522	(3)	Advanced Environmental Hydrology
GEOG 537	(3)	Advanced Fluvial Geomorphology
NRSC 333	(3)	Pollution and Bioremediation
SOIL 331	(3)	Soil Physics
SOIL 510	(3)	Environmental Soil Chemistry

### 33.10.6 Renewable Resource Management Domain

This domain is open only to students in the B.Sc.(Ag.Env.Sc.) Major Environment or B.Sc. Major Environment program.

Advisor	Mentor
Ms. Kathy Roulet, MSE Program Advisor Email: <a href="mailto:kathy.roulet@mcgill.ca">kathy.roulet@mcgill.ca</a> Telephone: 514-398-4306	Professor Sylvie deBlois Email: <a href="mailto:sylvie.deblois@mcgill.ca">sylvie.deblois@mcgill.ca</a> Telephone: 514-398-7851

#### 33.10.6.1 Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) or Bachelor of Science (B.Sc.) - Major Environment - Renewable Resource Management (63 credits)

This Domain Rene

**Core: Required Courses (18 credits)**

Location Note: Core Required Courses for this program are taught at both McGill's downtown campus and at the Macdonald Campus in Ste. Anne de Bellevue. You should register in Section 001 of an ENVR course that you plan to take on the downtown campus, and in Section 051 of an ENVR course that you plan to take on the Macdonald campus.

ENVR 200	(3)	The Global Environment
ENVR 201	(3)	Society and Environment
ENVR 202	(3)	The Evolving Earth
ENVR 203	(3)	Knowledge, Ethics and Environment
ENVR 301	(3)	Environmental Research Design
ENVR 400	(3)	Environmental Thought

**Core: Complementary Course - Senior Research Pr**

one of:

AEMA 310	(3)	Statistical Methods 1
BIOL 373	(3)	Biometry

### **GIS Methods**

one of:

GEOG 201	(3)	Introductory Geo-Information Science
NRSC 430	(3)	GIS for Natural Resource Management

### **Advanced Ecosystem Components:**

6 credits of advanced ecosystem components selected from:

BIOL 553	(3)	Neotropical Environments
GEOG 372	(3)	Running Water Environments
PLNT 358	(3)	Flowering Plant Diversity
SOIL 326	(3)	Soils in a Changing Environment
WILD 307	(3)	Natural History of Vertebrates

### **Advanced Ecological Processes:**

6 credits of advanced ecological processes selected from:

\*Note: you may take BIOL 432 or ENVB 315 but not both; you can take BREE 217 or GEOG 322 but not both.

BIOL 432*	(3)	Limnology
BIOL 465	(3)	Conservation Biology
BREE 217*	(3)	Hydrology and Water Resources
ENVB 315*	(3)	Science of Inland Waters
ENVB 410	(3)	Ecosystem Ecology
GEOG 322*	(3)	Environmental Hydrology
MICR 331	(3)	Microbial Ecology
NRSC 333	(3)	Pollution and Bioremediation
PLNT 460	(3)	Plant Ecology
WILD 410	(3)	Wildlife Ecology

### **Social Processes:**

6 credits of social processes selected as follows:

\* If WILD 415 is taken, 1 additional credit of complementary courses must be taken for a total of 7 credits.

WILD 415\* (2) Conservation Law

**Ecosystem Components or Management of Ecosystems:**

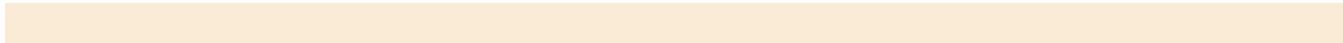
9 credits of ecosystem components or management of ecosystems selected from:

AGRI 435	(3)	Soil and Water Quality Management
AGRI 452	(3)	Water Resources in Barbados
AGRI 550	(3)	Sustained Tropical Agriculture
GEOG 302	(3)	Environmental Management 1
GEOG 380	(3)	Adaptive Environmental Management
GEOG 404	(3)	Environmental Management 2
NRSC 437	(3)	Assessing Environmental Impact
PLNT 300	(3)	Cropping Systems
SOIL 335	(3)	Soil Ecology and Management
WILD 401	(4)	Fisheries and Wildlife Management
WOOD 441	(3)	Integrated Forest Management

**33.10.7 Water Environments and Ecosystems Domain**

This domain is open only to students in the B.Sc.(Ag.Env.Sc.) Major Environment or B.Sc. Major Environment program.

**Water Environments and Ecosystems – Biological**





BIOL 308	(3)	Ecological Dynamics
ENVB 305	(3)	Population & Community Ecology

**Math and Statistics:**

one of:

\* Note: AEMA 310 or equivalent

AEMA 202	(3)	Intermediate Calculus
AEMA 310*	(3)	Statistical Methods 1
MATH 203	(3)	Principles of Statistics 1
MATH 222	(3)	Calculus 3

**Field Course:**

3 credits selected from the following courses or an equivalent aquatic field course:

AGRI 452	(3)	Water Resources in Barbados
BIOL 331	(3)	Ecology/Behaviour Field Course
GEOG 495	(3)	Field Studies - Physical Geography

**Social Sciences and Policy:**

one of:

AGEC 333	(3)	Resource Economics
ANTH 339	(3)	Ecological Anthropology
ANTH 418	(3)	Environment and Development
ECON 225	(3)	Economics of the Environment
ECON 326	(3)	Ecological Economics
GEOG 404	(3)	Environmental Management 2
GEOG 498	(3)	Humans in Tropical Environments
		International Organiz20 1 E73.766 310.8B.cal 0

BIOL 553	(3)	Neotropical Environments
BIOL 570	(3)	Advanced Seminar in Evolution
ENTO 535	(3)	Aquatic Entomology
ENVB 210*	(3)	The Biophysical Environment
ENVB 315	(3)	Science of Inland Waters
ENVR 540*	(3)	Ecology of Species Invasions
GEOG 305*	(3)	Soils and Environment
GEOG 350	(3)	Ecological Biogeography
MICR 331	(3)	Microbial Ecology
NRSC 333	(3)	Pollution and Bioremediation
PARA 410	(3)	Environment and Infection
WILD 401	(4)	Fisheries and Wildlife Management

### List B

6 - 9 credits chosen from:

\* Note: You may take ATOC 219 or CHEM 219 but not both; you may take ATOC 419 or CHEM 419 but not both; CHEM 287 and CHEM 297 must be taken together.

ATOC 219*	(3)	Introduction to Atmospheric Chemistry
ATOC 419*	(3)	Advances in Chemistry of Atmosphere
CHEM 219*	(3)	Introduction to Atmospheric Chemistry
CHEM 287*	(2)	Introductory Analytical Chemistry
CHEM 297*	(1)	Introductory Analytical Chemistry Laboratory
CHEM 419*	(3)	Advances in Chemistry of Atmosphere
EPSC 220	(3)	Principles of Geochemistry
GEOG 201	(3)	Introductory Geo-Information Science
GEOG 308	(3)	Principles of Remote Sensing
GEOG 372	(3)	Running Water Environments
GEOG 522	(3)	Advanced Environmental Hydrology
GEOG 537	(3)	Advanced Fluvial Geomorphology
GEOG 550	(3)	Historical Ecology Techniques
NRSC 430	(3)	GIS for Natural Resource Management

### 33.10.7.2 Bachelor of Science (Agricultural and Environmental Sciences) (B.Sc.(Ag.Env.Sc.)) or Bachelor of Science (B.Sc.) - Major Environment - Water Environments and Ecosystems - Physical (63 credits)

This concentration (60 credits including Core) is open only to students in the B.Sc.(Ag.Env.Sc.) Major in Environment or B.Sc. Major in Environment program.

To educate students in both the ecological and physical facets of the water environment, this Domain offers t4h-T.52 224.904stucmain of



For suggestions on courses to take in your first year (U1), you can consult the "MSE Student Handbook 2010-11" available on the MSE website (<http://www.mcgill.ca/mse>), or contact Ms. Kathy Roulet, the Program Advisor ([kathy.roulet@mcgill.ca](mailto:kathy.roulet@mcgill.ca)).

### **Program Requirements**

NOTE: Students are required to take a maximum of 30 credits at the 200-level and a minimum of 12 credits at the 400-level or higher in this program. This includes Core and Required courses.

Location Note: When planning your schedule and registering for courses, you should verify where each course is offered because courses for this program are taught at both McGill's downtown campus and at the Macdonald campus in Ste. Anne de Bellevue.

### **Core: Required Courses (18 credits)**

Location Note: Core Required courses for this program are taught at both McGill's downtown campus and at the Macdonald Campus in Ste. Anne de Bellevue. You should register in Section 001 of an ENVR course that you plan to take on the downtown campus, and in Section 051 of an ENVR course that you plan to take on the Macdonald campus.

ENVR 200	(3)	The Global Environment
ENVR 201	(3)	Society and Environment
ENVR 202	(3)	The Evolving Earth
ENVR 203	(3)	Knowledge, Ethics and Environment
ENVR 301	(3)	Environmental Research Design
ENVR 400	(3)	Environmental Thought

### **Core: Complementary Course - Senior Research Project (3 credits)**

Note: Only 3 credits will be applicable

and one of:

BIOL 308	(3)	Ecological Dynamics
ENVB 305	(3)	Population & Community Ecology

**Statistics or Calculus:**

one of:

\* Note: AEMA 310 or equivalent.

Note: Credit given for statistics courses is subject to certain restrictions. Students in Science should consult the "Course Overlap" information in the "Course Requirements" section for the Faculty of Science.

AEMA 202	(3)	Intermediate Calculus
AEMA 310*	(3)	Statistical Methods 1
MATH 203	(3)	Principles of Statistics 1
MATH 222	(3)	Calculus 3

**Field Course:**

3 credits selected from the following courses or an equivalent aquatic field course:

AGRI 452	(3)	Water Resources in Barbados
GEOG 495	(3)	Field Studies - Physical Geography

**List A:**

12 credits chosen from:

AGRI 435	(3)	Soil and Water Quality Management
ATOC 309	(3)	Weather Radars and Satellites
ATOC 568	(3)	Ocean Physics
BREE 416	(3)	Engineering for Land Development
CIVE 323	(3)	Hydrology and Water Resources
EPSC 549	(3)	Hydrogeology
GEOG 201	(3)	Introductory Geo-Information Science
GEOG 308	(3)	Principles of Remote Sensing
GEOG 537	(3)	Advanced Fluvial Geomorphology
NRSC 510	(3)	Agricultural Micrometeorology
URBP 520	(3)	Globalization: Planning and Change

and/or one of:

AEMA 305	(3)	Differential Equations
MATH 315	(3)	Ordinary Differential Equations

and/or one of:

BREE 506	(3)	Advances in Drainage Management
BREE 509	(3)	Hydrologic Systems and Modelling
GEOG 522	(3)	Advanced Environmental Hydrology

and/or one of:

ENVB 210	(3)	The Biophysical Environment
GEOG 305	(3)	Soils and Environment

and/or one of:

GEOG 306	(3)	Raster Geo-Information Science
NRSC 430	(3)	GIS for Natural Resource Management

**List B:**

6 credits chosen from:

BIOL 342	(3)	Marine Biology
BIOL 432	(3)	Limnology
BIOL 441	(3)	Biological Oceanography
BIOL 465	(3)	Conservation Biology
BIOL 553	(3)	Neotropical Environments
ENVB 315	(3)	Science of Inland Waters
GEOG 350	(3)	Ecological Biogeography
GEOG 505	(3)	Global Biogeochemistry
WILD 401	(4)	Fisheries and Wildlife Management

### 33.11 Major in Environment – B.Sc.

In addition to the Domains available to students in the Major program in either the Faculty of Science or the Faculty of Agricultural and Environmental Sciences, “Major in Environment - B.Sc.” students in the Faculty of Science can choose from one of the following two Domains:

- Atmospheric Environment and Air Quality, or
- Earth Sciences and Economics.

Refer to [section 33.10: Major in Environment – B.Sc.\(Ag.Env.Sc.\) and B.Sc.](#) for the general guidelines and regulations which apply to all Domains in the Major in Environment program.

#### 33.11.1 Atmospheric Environment and Air Quality Domain

This domain is open only to students in the B.Sc. Major in Environment program in the Faculty of Science.

Advisor	Mentor
Ms. Kathy Roulet Email: <a href="mailto:kathy.roulet@mcgill.ca">kathy.roulet@mcgill.ca</a> Telephone: 514-398-4306	Professor Frédéric Fabry Email: <a href="mailto:frederic.fabry@mcgill.ca">frederic.fabry@mcgill.ca</a> Telephone: 514-398-3652

##### 33.11.1.1 Bachelor of Science (B.Sc.) - Major Environment - Atmospheric Environment and Air Quality (60 credits)

The rapid expansion of industrialization has been accompanied with a host of environmental problems, many, if not most, involving the atmosphere. Some problems are of a local nature, such as air pollution in large urban centres, while others are global, or at least reach areas far removed from industrial activities.

The emphasis in this Domain is on the mechanisms of atmospheric flow and on atmospheric chemistry. Courses examine how the atmosphere transports pollution, lifting it to great heights into the stratosphere or keeping it trapped near the ground, moving it around the globe or imprisoning it locally, or how



**Analytical Chemistry/Calculus:**

one of:

AEMA 202	(3)	Intermediate Calculus
MATH 222	(3)	Calculus 3

and 3 credits from:

Note: CHEM 287 and CHEM 297 must be taken together.

CHEM 287	(2)	Introductory Analytical Chemistry
CHEM 297	(1)	Introductory Analytical Chemistry Laboratory
FDESC 213	(3)	Analytical Chemistry 1

**Statistics:**

3 credits of statistics courses or equivalent from:

AEMA 310	(3)	Statistical Methods 1
MATH 203	(3)	Principles of Statistics 1

**Math or Physical Science:**

9 credits of math or physical science (at least 6 credits of which are at the 300-level or above):

\* Note: you may take ATOC 419 or CHEM 419 but not both; you may take MATH 315 or AEMA 305 but not both.

AEMA 305*	(3)	Differential Equations
ATOC 309	(3)	Weather Radars and Satellites
ATOC 412	(3)	Atmospheric Dynamics
ATOC 419*	(3)	Advances in Chemistry of Atmosphere
ATOC 540	(3)	Synoptic Meteorology 1
CHEE 230	(3)	Environmental Aspects of Technology
CHEM 243	(2)	Introductory Physical Chemistry 2
CHEM 377	(3)	Instrumental Analysis 2
CHEM 419*	(3)	Advances in Chemistry of Atmosphere
CIVE 225	(4)	Environmental Engineering
COMP 208	(3)	Computers in Engineering
GEOG 505	(3)	Global Biogeochemistry
MATH 223	(3)	Linear Algebra
MATH 315*	(3)	Ordinary Differential Equations
NRSC 333	(3)	Pollution and Bioremediation
NRSC 510	(3)	Agricultural Micrometeorology

**Social Science:**

one of:

ANTH 206	(3)	Environment and Culture
ANTH 418	(3)	Environment and Development
ECON 225	(3)	Economics of the Environment

ECON 347	(3)	Economics of Climate Change
ENVR 465	(3)	Environment and Social Change
GEOG 302	(3)	Environmental Management 1
GEOG 380	(3)	Adaptive Environmental Management
GEOG 404	(3)	Environmental Management 2
GEOG 498	(3)	Humans in Tropical Environments
POLI 466	(3)	Public Policy Analysis
RELG 270	(3)	Religious Ethics and the Environment

### 33.11.2 Earth Sciences and Economics Domain

This domain is open only to students in the B.Sc. Major Environment program in the Faculty of Science.

Advisor	Mentor
Ms. Kathy Roulet Email: <a href="mailto:kathy.roulet@mcgill.ca">kathy.roulet@mcgill.ca</a> Telephone: 514-398-4306	Professor Jeanne Paquette Email: <a href="mailto:jeanne.paquette@mcgill.ca">jeanne.paquette@mcgill.ca</a> Telephone: 514-398-4402

#### 33.11.2.1 Bachelor of Science (B.Sc.) - Major Environment - Earth Sciences and Economics (66 credits)

The resources necessary for human society are extracted from the Earth, used as raw materials in our factories and refineries, and then returned to the Earth as waste. Geological processes produce resources humans depend on, and they also determine the fate of wastes in the environment. Understanding Earth's geologic processes provides us with the knowledge to mitigate many of our society's environmental impacts due to resource extraction and waste disposal. Additionally, economics frequently affects what energy sources power our society and how our wastes are treated. Earth sciences and economics are essential for our understanding of the many mechanisms, both physical and social, that affect Earth's environment.

This Domain includes the fundamentals of each discipline. Students learn of minerals, rocks, soils, and waters and how these materials interact with each other and with the atmosphere. Fundamental economic theory and the economic effects of public policy towards resource industries, methods of waste disposal, and the potential effects of global warming on the global economy are also explored.

#### Suggested First Year (U1) Courses

For suggestions on courses to take in your first year (U1), you can consult the "MSE Student Handbook 2010-11" available on the MSE website (<http://www.mcgill.ca/mse>), or contact Kathy Roulet, the Program Advisor ([kathy.roulet@mcgill.ca](mailto:kathy.roulet@mcgill.ca)).

#### Program Requirements

NOTE: Students are required to take a maximum of 34 credits at the 200-level and a minimum of 15 credits at the 400-level or higher in this program. This includes Core and Required courses.

Location Note: When planning your schedule and registering for courses, you should verify where each course is offered because courses for this program are taught at both McGill's downtown campus and at the Macdonald campus in Ste. Anne de Bellevue.

#### Core: Required Courses (18 credits)

Location Note: Core Required courses are taught at both McGill's downtown campus and at the Macdonald Campus in Ste. Anne de Bellevue. You should register in Section 001 of an ENVR course that you plan to take on the downtown campus, and in Section 051 of an ENVR course that you plan to take on the Macdonald campus.

ENVR 200	(3)	The Global Environment
ENVR 201	(3)	Society and Environment
ENVR 202	(3)	The Evolving Earth
ENVR 203	(3)	Knowledge, Ethics and Environment
ENVR 301	(3)	Environmental Research Design
ENVR 400	(3)	Environmental Thought

#### Core: Complementary Course - Senior Research Project (3 credits)

Only 3 credits will be applied to the program; extra credits will count as electives.

AGRI 519	(6)	Sustainable Development Plans
ENVR 401	(3)	Environmental Research
ENVR 451	(6)	Research in Panama

**Domain: Required Courses (21 credits)**

ECON 230D1	(3)	Microeconomic Theory
ECON 230D2	(3)	Microeconomic Theory
ECON 405	(3)	Natural Resource Economics
EPSC 210	(3)	Introductory Mineralogy
EPSC 212	(3)	Introductory Petrology
EPSC 220	(3)	Principles of Geochemistry
EPSC 455	(3)	Sedimentary Geology

**Domain: Complementary Courses (24 credits)**

24 credits of Complementary Courses are selected as follows:

3 credits - statistics courses

9 credits - List A

12 credits - List B

**Statistics:**

One of the following statistics courses or equivalent.

Note: Credit given for statistics courses is subject to certain restrictions. Students in Science should consult the "Course Overlap" information in the "Course Requirements" section for the Faculty of Science.

AEMA 310	(3)	Statistical Methods 1
GEOG 202	(3)	Statistics and Spatial Analysis
MATH 203	(3)	Principles of Statistics 1

**List A:**

9 credits from:

\*Note: you may take CHEE 430 or NRSC 437 but not both.

AGEC 333	(3)	Resource Economics
CHEE 430*	(3)	Technology Impact Assessment
ECON 326	(3)	Ecological Economics
ECON 347	(3)	Economics of Climate Change
ECON 416	(3)	Topics in Economic Development 2
ECON 525	(3)	Project Analysis
NRSC 437*	(3)	Assessing Environmental Impact

**List B:**

12 credits from:

AGRI 435	(3)	Soil and Water Quality Management
ANTH 339	(3)	Ecological Anthropology

BIOL 305	(3)	Animal Diversity
BIOL 553	(3)	Neotropical Environments
ECON 305	(3)	Industrial Organization
ECON 313	(3)	Economic Development 1
ECON 314	(3)	Economic Development 2
ECON 408	(3)	Public Sector Economics 1
ECON 409	(3)	Public Sector Economics 2
ECON 412	(3)	Topics in Economic Development 1
EPSC 312	(3)	Spectroscopy of Minerals
EPSC 331	(3)	Field School 2
EPSC 341	(3)	Field School 3
EPSC 425	(3)	Sediments to Sequences
EPSC 435	(3)	Applied Geophysics
EPSC 452	(3)	Mineral Deposits
EPSC 519	(3)	Isotope Geology
EPSC 542	(3)	Chemical Oceanography
EPSC 549	(3)	Hydrogeology
EPSC 580	(3)	Aqueous Geochemistry
EPSC 590	(3)	Applied Geochemistry Seminar
GEOG 302	(3)	Environmental Management 1
		Environmental HydrologyEPSC 590



4. Students are required to achieve a minimum overall CGPA of 3.0 at graduation, and a minimum Program GPA of 3.3 to obtain Honours.

5. Arts (B.A.) students in the Honours Environment program must also complete a Minor Concentration in an academic unit other than the McGill School of Environment. Please refer to the Faculty of Arts regulations on Honours programs found under "Faculty Degree Requirements", "About Program Requirements" and "Departmental Programs".

Students in the B.A. Honours programs complete the Core and Domain courses (54 credits) according to their chosen Domain as well as the 6 credits of Honours required courses.

At the completion of your Honours research, you are expected to present your results at an Honours Symposium, and are required to submit a copy of your final report to the MSE Program Advisor.

#### **Honours Required Courses (6 credits)**

Note: you take either ENVR 495D1 and ENVR 495D2 (6 credits over consecutive terms) or ENVR 495N1 and ENVR 495N2 (6 credits over non-consecutive terms).

ENVR 495D1	(3)	Honours Research
ENVR 495D2	(3)	Honours Research
ENVR 495N1	(3)	Honours Research
ENVR 495N2	(3)	Honours Research

### **33.12.2 Bachelor of Science (B.Sc.) - Honours Environment (72 credits)**

This Program is open only to students in the B.Sc. Major Environment. To be eligible for Honours, students must satisfy the requirements set by their B.Sc. degree.

In addition, students must satisfy the following:

1. Students apply for the Honours program in March of their U2 year. See the Program Advisor for details.
2. Applicants must have a minimum Program GPA (GPA of all required and complementary courses for the program in Environment taken at McGill) of 3.3 to enter the Honours program.
3. Students must earn a B grade (3.0) or higher for the Honours Research course (ENVR 495).
4. Students are required to achieve a minimum overall CGPA of 3.0 at graduation, and a minimum Program GPA of 3.3 to obtain Honours.

Students in the B.Sc. Honours programs complete the Core and Domain courses (60 to 66 credits) according to their chosen Domain as well as the 6 credits of Honours required courses.

At the completion of your Honours research, you are expected to present your results at an Honours Symposium, and are required to submit a copy of your final report to the MSE Program Advisor.

#### **Honours Required Courses (6 credits)**

Note: you take either ENVR 495D1 and ENVR 495D2 (6 credits over consecutive terms) or ENVR 495N1 and ENVR 495N2 (6 credits over non-consecutive terms).

ENVR 495D1	(3)	Honours Research
ENVR 495D2	(3)	Honours Research
ENVR 495N1	(3)	Honours Research
ENVR 495N2	(3)	Honours Research

### **33.12.3 Bachelor of Arts and Science (B.A. & Sc.) - Honours Environment (60 credits)**

This Program is open only to students in the B.A. & Sc. Interfaculty Program Environment.

To be eligible for Honours, students must satisfy the requirements set by their B.A. & Sc. degree.

In addition, students must satisfy the following:

1. Students apply for the Honours program in March of their U2 year. See the Program Advisor for details.
2. Applicants must have a minimum Program GPA (GPA of all required and complementary courses for the program in Environment taken at McGill) of 3.3 to enter the Honours program.
3. Students must earn a B grade (3.0) or higher for the Honours Research course (ENVR 495).
4. Students are required to achieve a minimum overall CGPA of 3.0 at graduation, and a minimum Program GPA of 3.3 to obtain Honours.



Students must have a grade of C or higher in all courses for the Diploma.

**Advising Note:**

Consultation with the Program Advisor for approval of course selection to meet program requirements is obligatory. Only courses at the 200-level and above will be approved.

**Location Note:**

When planning your schedule and registering for courses, you should verify where each course is offered because courses for this program are taught at both McGill's downtown campus and at the Macdonald campus in Ste. Anne de Bellevue.

**Required Courses (18 credits)**

Location Note: The ENVR courses are offered on both campuses. You should register in Section 001 of an ENVR course that you plan to take on the downtown campus, and in Section 051 of an ENVR course that you plan to take on the Macdonald campus.

ENVR 200	(3)	The Global Environment
ENVR 201	(3)	Society and Environment
ENVR 202	(3)	The Evolving Earth
ENVR 203	(3)	Knowledge, Ethics and Environment
ENVR 301	(3)	Environmental Research Design
ENVR 400	(3)	Environmental Thought

**Complementary Courses (12 credits)**

12 credits of Complementary Courses are selected as follows:

3 credits - must be taken with the approval of the Program Advisor in an area outside of the student's previous degree (e.g., those with a B.A. or equivalent degree must take at least 3 credits in the natural sciences; those with a B.Sc. or equivalent degree must take at least 3 credits in the social sciences). A list of Suggested Courses is given below.

9 credits - must be taken in an area of focus chosen by the student with the approval of the Program Advisor. At least 6 credits must be taken at the 400-level or higher. A list of Suggested Courses is given below.

**Sugg**

ECON 326	(3)	Ecological Economics
ECON 347	(3)	Economics of Climate Change
ECON 405	(3)	Natural Resource Economics
ENVR 201	(3)	Society and Environment
ENVR 203	(3)	Knowledge, Ethics and Environment
ENVR 400	(3)	Environmental Thought
GEOG 200	(3)	Geographical Perspectives: World Environmental Problems
GEOG 210	(3)	Global Places and Peoples
GEOG 216	(3)	Geography of the World Economy
GEOG 221	(3)	Environment and Health
GEOG 300	(3)	Human Ecology in Geography
GEOG 301	(3)	Geography of Nunavut
		En

SOCI 222	(3)	Urban Sociology
SOCI 234	(3)	Population and Society
SOCI 235	(3)	Technology and Society
SOCI 254	(3)	Development and Underdevelopment
SOCI 386	(3)	Contemporary Social Movements
URBP 201	(3)	Planning the 21st Century City
URBP 506	(3)	Environmental Policy and Planning
URBP 530	(3)	Urban Environmental Planning
WILD 415*	(2)	Conservation Law

### Natural Sciences and Technology

\* Note: you may take MIMM 211 or LSCI 230 but not both; you may take ENVB 315 or BIOL 432 but not both.

AGRI 340	(3)	Principles of Ecological Agriculture
AGRI 435	(3)	Soil and Water Quality Management
ANSC 326	(3)	Fundamentals of Population Genetics
ANTH 311	(3)	Primate Behaviour and Ecology
ARCH 375	(2)	Landscape
ARCH 377	(3)	Energy, Environment and Buildings
ARCH 378	(3)	Site Usage
ATOC 215	(3)	Oceans, Weather and Climate
BIOL 240	(3)	Monteregian Flora
BIOL 305	(3)	Animal Diversity
BIOL 308	(3)	Ecological Dynamics

(3)BIOL 2FreshwBIOL 243 682 1 643 631(BIOL 2ualitl 0 0 1 257.396 Tm3 643 631(BIOL 2 0 0 1 243.68232423343 631(BIOL 2erteb



SOIL 300	(3)	Geosystems
WILD 410	(3)	Wildlife Ecology

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### 34.3 African Field Study Semester

Website: [www.mcgill.ca/africa](http://www.mcgill.ca/africa)

**Students from other universities** are eligible to apply to the McGill CFSIA and must also meet the criteria for admission to McGill as a Visiting Student. Please see the AFSS website for details.

The AFSS comprises 15 credits of field study courses. Two courses (6 credits) in the natural and social sciences provide interdisciplinary academic context for field study.



Quebec residents may be eligible for a Mobility Award from the *Quebec Ministère de l'Éducation, du Loisir et du Sport* (MELS); see [du Sportce8.5SS8.56 Tm\(A\)Tj415.4750 1 67.52 71O\) ac Mobi; see](#)

### **African Field Study Semester - Required Courses**

6 credits

Students select one course titled "Research in Society and Development in Africa" and one course titled "Research in Ecology and Development in Africa" from the courses below.

ANTH 451	(3)	Research in Society and Development in Africa
BIOL 451	(3)	Research in Ecology and Development in Africa
GEOG 451	(3)	Research in Society and Development in Africa
NRSC 451	(3)	Research in Ecology and Development In Africa

### **African Field Study Semester - Complementary Courses**

9 credits from:

\*Note: Courses marked with an asterisk ("\*") are offered on a rotational basis, at least 3 credits annually.

ANTH 411	(3)	Primate Studies & Conservation
ANTH 416	(3)	Environment/Development: Africa
BIOL 428	(3)	Biological Diversity in Africa
BIOL 429	(3)	East African Ecology
GEOG 404*	(3)	Environmental Management 2 Geograph 404*

CIVE 519	(6)	Sustainable Development Plans
URBP 519	(6)	Sustainable Development Plans

### Barbados Interdisciplinary Tropical Studies Field Semester (15 credits)

The Barbados Interdisciplinary Tropical Studies (BITS) Field Semester is an activity-filled, hands-on, experience for students with an interest in international studies with a Caribbean flavour. The focus is on sustainable agri-food and energy production and nutrition on a tropical island with a tourist-based economy. It is offered annually (in the summer). It consists of three 2-hour orientation sessions conducted on the Macdonald Campus followed by three 3-credit and one 6-credit project course at Bellairs Research Institute in Barbados. This program integrates intensive course work with group project work and contributes to the formation of professionals with planning, managing, decision-making, and communication skills. The program addresses a global need for experienced professionals capable of interacting with various levels of government, non-governmental organizations, and the private sector.

### Barbados Interdisciplinary Tropical Studies Field Semester - Required Courses

15 credits

AEBI 421	(3)	Tropical Horticultural Ecology
AEBI 423	(3)	Sustainable Land Use
AEBI 425	(3)	Tropical Energy and Food
AEBI 427	(6)	Barbados Interdisciplinary Project

### Panama Field Study Semester (15 credits)

This program is offered in Panama with the support of the Smithsonian Tropical Research Institute (STRI).

Hands-on experience is gained through research projects organized around multidisciplinary environmental issues. The nature of these projects will centre on practical environmental problems/questions important for Panama. Students will form teams that will work with Panamanian institutions (NGO, governmental or research).

There is a one or two day period of transition and 13 weeks of course attendance in Panama. Field trips will be integrated into each of the courses offered.

### Panama Field Study Semester - Required Courses

9 credits

BIOL 553	(3)	Neotropical Environments
ENVR 451	(6)	Research in Panama

### Panama Field Study Semester - Complementary Courses

6 credits

Complementary courses change from year to year. Students will register for the 6 credits offered the winter of their participation in the field study semester.

Winter 2010 complementary courses:

AGRI 550	(3)	Sustained Tropical Agriculture
HIST 510	(3)	Environmental History of Latin America (Field)

Winter 2011 complementary courses:

GEOG 404	(3)	Environmental Management 2
GEOG 498	(3)	Humans in Tropical Environments

### Minor Field Studies - Complementary Course

In consultation with their departmental advisor and/or the Field study Minor Advisor, students who have completed one of the field study semesters described above may select a 3-credit complementary course to complete the requirements for the minor and ask for it to be added to their academic records.



The transfer of credits process must be initiated by the student immediately upon return from exchange with the faculty Student Affairs office, and be completed no later than four months after the exchange.

Before leaving the host institution, students should order two (2) copies of the official transcript for their files, and ensure that the institution sends an official version of the transcript to Student Exchanges and Study Abroad at McGill.

### **34.9.2 Universitas 21**

The Universitas 21 Consortium is an international network of leading research-intensive universities whose objective is to assist members' plans for internationalisation, particularly in facilitating student exchanges and short-term research visits. McGill University currently has bilateral student exchange agreements with the following institutions within the U21 Consortium:

- National University of Singapore
- Lund University
- University of Birmingham
- University of Auckland
- University of Edinburgh

**McGill Summer Cour**

### 34.12.2 Art History & Communication Studies

**Course:**

ARTH 367	(3)	Italian Renaissance Art 2
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**Not Offered:** Summer 2010

### 34.12.3 Biology

The Faculty of Science offers the following biology courses off-campus.

BIOL 240	(3)	Monteregian Flora
BIOL 331	(3)	Ecology/Behaviour Field Course
BIOL 334D1/D2	(3)	Applied Tropical Ecology
BIOL 335	(3)	Marine Mammals
BIOL 573	(3)	Vertebrate Palaeontology Field Course

### 34.12.4 Classics

**Course:**

CLAS 348	(3)	Greek and Roman Topography
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**Topic for Summer 2010:** Cicero's Footsteps. Marcus Cicero was one of ancient Rome's most famous statesman and prolific authors, who lived during a period when Roman society underwent dramatic change. We will examine Cicero's life and times by reading a selection of his writings and visiting ancient sites, some located in Rome, that featured prominently in his career. Topographical evidence will shed light on Cicero, his works, and the world in which he lived. For more detailed information about the course content, please consult Prof. M. Fronda, Department of History.

**Offered:** Section 001 (10-May-2010/04-June-2010)

**Location:** Florence, Italy

**Application Deadline:** April 1, 2010

**Application Details:** Applications and information are available at <http://www.florence.italian@mcgill.ca> or by email at [florence.italian@mcgill.ca](mailto:florence.italian@mcgill.ca). Prior to registration on Minerva, students must contact Dr. E. Quaroni or Ms. V. Fonsato at [florence.italian@mcgill.ca](mailto:florence.italian@mcgill.ca).

### 34.12.5 Earth & Planetary Sciences

Two-week field studies (May) in selected branches of the geosciences to examine processes in geology.

EPSC 231	(3)	Field School 1
EPSC 331	(3)	Field School 2
EPSC 341	(3)	Field School 3

### 34.12.6 Geography

The Faculty of Science offers the following geography courses off-campus.

**Courses:**

ITAL 206	(6)	Beginners' Italian Intensive
ITAL 216	(6)	Intermediate Italian Intensive
ITAL 306	(6)	Advanced Reading and Composition
ITAL 307*	(3)	Topics in Italian Culture
ITAL 308 [Not offered Summer 2010]	(3)	Business Italian 1
ITAL 309**	(3)	Perspectives on Italy

\* **Topic for May 2010:** Landscapes of Struggle: The City



# COURSE INFORMATION, REGULATIONS AND DESCRIPTIONS

## 1 Search Tools

Go to [www.mcgill.ca/study/courses/search](http://www.mcgill.ca/study/courses/search) to search for courses.

Go to the **Minerva Class Schedule** ([https://banweb.mcgill.ca/mcgp/bwckschd.p\\_disp\\_dyn\\_sched](https://banweb.mcgill.ca/mcgp/bwckschd.p_disp_dyn_sched)) to search for course sections offered. This includes class times, locations and instructors.

the only difference being the scheduling, and students cannot obtain credit for more than one version.

**Courses with numbers ending in D1 and D2** are taught in two consecutive terms (most commonly Fall and Winter). Students must register for the same section of both the D1 and D2 components. When registering for a Fall term D1 course on Minerva, the student will automatically be registered for the Winter term D2 por-

## 2 Course Information and Regulations

Students are advised to refer also to the *University Regulations and General Information > Registration and University Regulations and General Information > Student Records* sections of this publication.

The University reserves the right to make changes without prior notice to the information contained in this publication, including the revision or cancellation of particular courses or programs.

At the time this Calendar was published, new courses and modifications to some existing courses were under consideration. Students preparing to register are advised to consult the **Minerva Class Schedule** ([https://banweb.mcgill.ca/mcgp/bwckschd.p\\_disp\\_dyn\\_sched](https://banweb.mcgill.ca/mcgp/bwckschd.p_disp_dyn_sched)) for the most up-to-date information on courses to be offered in 2010-11.

**Not all courses listed are offered every year.**

### 2.1 Course Numbering

Each McGill course is assigned a unique seven-character course "number".

**The first four characters (Subject Code)** refer to the unit offering the course.

These codes were implemented in September 2002, replacing the three-number Teaching Unit Codes previously used. A complete list of Teaching Unit Codes and their Subject Code equivalents can be found at [www.mcgill.ca/student-records/transcripts](http://www.mcgill.ca/student-records/transcripts).

**The three numbers following the Subject Code** refer to the course itself, with the first of these indicating the level of the course.

- Courses numbered at the 100, 200, 300, and 400 levels are intended for undergraduate students. In most programs courses at the 300 level and 400 level are normally taken in the student's last two years.
- Courses at the 500 level are intended for graduate students, but may also be open to qualified senior undergraduate students.
- Courses at the 600 and 700 level are intended for graduate students only.

**Two additional characters (D1, D2, N1, N2, J1, J2, J3) at the end of the seven-character course number identifies multi-term courses.**

### 2.2 Multi-term Courses

Most courses at McGill are single term (Fall or Winter or Summer) courses with final grades issued and any credits earned recorded at the end of that term. Single term courses are identified by a seven-character course number.

A unit may, however, decide that the material to be presented cannot be divided into single term courses or it is preferable that the work to be done is carried out over two, or three, terms. Under such circumstances, courses are identified by a two-character extension of the course number.

In some cases, the same course may be offered in various ways: as a single term and/or in one or more multi-term versions. The course content and credit weight is equivalent in all modes,

# COURSE INFORMATION, REGULATIONS AND DESCRIPTIONS

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subject to the conditions and/or restrictions of the program in which they are registered. Students may take only one FYS.

FYS classes are limited to a maximum of 25 students and are designed to provide closer interaction between students and faculty.

FYS 101/102/103/104/105/106/107/108/109/110/111/112/113/114/115/116/117/118/119/120/121/122/123/124/125/126/127/128/129/130/131/132/133/134/135/136/137/138/139/140/141/142/143/144/145/146/147/148/149/150/151/152/153/154/155/156/157/158/159/160/161/162/163/164/165/166/167/168/169/170/171/172/173/174/175/176/177/178/179/180/181/182/183/184/185/186/187/188/189/190/191/192/193/194/195/196/197/198/199/200

ENGL-English .....	C-48
ESLN-English as a Second Language.....	C-54
FILM-World Cinemas.....	C-54
FREN-French .....	C-55
FRSL-French as a Second Language.....	C-57
GERM-German .....	C-59
HISP-Hispanic Studies .....	C-61
HIST-History.....	C-64
HPSC-Hist & Phil of Science.....	C-75
HSEL-Health Science Electives.....	C-75
INTD-International Development.....	C-75
ISLA-Islamic Studies.....	C-76
ITAL-Italian .....	C-78
JWST-Jewish Studies.....	C-80
LACS-Latin American & Caribbean St.....	C-85
LING-Linguistics.....	C-85
MEST-Middle East Studies.....	C-86
MUAR-Music-Arts Faculty.....	C-87
NAST-North American Studies.....	C-87
PHIL-Philosophy.....	C-88
PHWR-Philosophy & Western Religions.....	C-92
PLAI-Public Life of Arts & Ideas.....	C-92
POLI-Political Science.....	C-92
QCST-Quebec Studies.....	C-98
RUSS-Russian .....	C-98
SDST-Sexual Diversity Studies.....	C-100
SOCI-Sociology .....	C-100
SWRK-Social Work.....	C-105
WMST-Women's Studies.....	C-108

### Interfaculty, B.A. & Sc., page C-109

BASC-Arts & Science.....	C-109
COGS-Cognitive Science.....	C-109

### Post Graduate Dentistry, page C-110

DENT-Dentistry.....	C-110
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EDER-Religious Studies.....	C-116
EDES-Secondary Education.....	C-117
EDET-Vocational Education.....	C-117
EDFC-Bachelor of Ed Core Program.....	C-118
EDFE-Student Teaching.....	C-118
EDFM-Education Field Montreal.....	C-119
EDKP-Kinesiology&Physical Education.....	C-119
EDPC-Ed Psych & Couns (Counselling).....	C-122

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ANTH-Anthropology.....	C-27
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ARTH-Art History.....	C-32
CANS-Canadian Studies.....	C-35
CATH-Catholic Studies.....	C-36
CLAS-Classics.....	C-37
COMS-Communication Studies.....	C-38
EAPR-English for Academic Purposes.....	C-40
EAST-Asian Language & Literature.....	C-40
ECON-Economics .....	C-44



**Always check at [www.mcgill.ca/study/](http://www.mcgill.ca/study/) for the most up-to-date information on whether a course is offered.**

\* Denotes courses taught only in alternate years.

‡ Professional Practice (Stage) in Dietetics involving special prerequisites

◆ Indicates that departmental approval/permission must be obtained by a student prior to registration.

† Denotes courses not available as Education electives.

□ Denotes courses with limited enrolment.

● Denotes courses not offered by the Faculty of Arts or Faculty of Science in 2010-11.

▲ Denotes courses offered by the Faculty of Education which, if appropriate to the student's program, may be included in the academic concentration.

\* Denotes courses which, because they are scheduled around practice teaching, are open only to Bachelor of Education students.

EDPE-Ed Psych & Couns (Psychology).....	C-123
EDPI-Ed Psych & Couns (Inclusive).....	C-124
EDPT-Ed Psych & Couns (Media).....	C-125
EDSL-Education in Second Languages.....	C-125
EDUM-Education University of MTL.....	C-127

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BMDE-Biomedical Engineering.....	C-132
CHEE-Chemical Engineering.....	C-132
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MECH-Mechanical Engineering.....	C-146
MIME-Mining & Materials Engineering.....	C-150
MPMC-McGill/Poly Mining Coop.....	C-154
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**McGill School of Environment, page C-156**

ENVR-Environment.....	C-156
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**Desautels Faculty of Management, page C-158**

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INSY-Information Systems.....	C-161
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MGPO-Management Policy.....	C-163
MGSC-Management Science.....	C-163
MRKT-Marketing.....	C-164
ORGB-Organizational Behaviour.....	C-165

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MUCO-Composition.....	C-166
MUCT-Choral Techniques.....	C-166

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by Subject Code



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# Agricultural and Environmental Sciences

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## **AEBI-Biology**

Offered by: Bioresource Engineering, Plant Science,  
Natural Resource Sciences

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### **AEBI 120 General Biology.**

(3) (Fall) (2 lectures and one 3-hour lab) (Restriction: Not open to students who have passed CEGEP objective 00UK or equivalent (formerly Biology 301)) An introduction to the

**AECH 111 General Chemistry 2.**

(4) (Winter) (3 lectures, one 3 hour lab, and one tutorial hour)

(Prerequisite(s): FDSC 110 or AECH 110) (Restriction:





**\*AGEC 330 Agriculture and Food Markets.**

(3) (Fall) (Prerequisite: AGEC 200 or equivalent)

(Restriction: Not open to students who have taken AGEC 440)

Nature and organization of agricultural and food markets as economic institutions, including the application of economic theory to problems within the agri-food marketing chain. Spatial and temporal price relationships, and the role of market structure.

**AGEC 332 Farm Management and Finance.**

(3) (Fall) (Prerequisite: AGEC 200 or equivalent)

(Restriction: Not open to students who have taken AGEC 331)



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## **ANSC-Animal Science**

Offered by: Animal Science

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### **ANSC 234 Biochemistry 2.**

(3) (Winter) (3 lectures and one 3-hour lab) (Prerequisite: FDSC 211 or LSCI 211) Metabolism in humans and domestic animals. The chemistry of alimentary digestion, absorption, transport, intermediary metabolism and excretion.

and artificial selection.

**ANSC 506 Advanced Animal Biotechnology.**

(3) (Fall) (Prerequisites: AEBI 202 or LSCI 202 and ANSC 400.) New concepts and applications of animal biotechnology in agriculture, biomedicine, environmental preservation.

**ANSC 508 Tools in Animal Biotechnology.**

(3) (Fall) (Restriction: Permission of instructor.) Essential laboratory techniques in animal biotechnology: extraction of nucleic acids, PCR technology, gel electrophoresis, construction of gene expression vectors, transformation of bacterial and mammalian cells and monitoring gene expression using reporter genes.

**ANSC 530 Experimental Techniques in Nutrition.**

(3) (Fall) (1 lecture, 1 lab) (Restriction: Not open to students who have taken ANSC 630.) Design and conduction of animal studies, selection of experimental animals, chemical and biological assays, statistical analysis, interpretation of data and preparation of technical reports.

**★ ANSC 551 Carbohydrate and Lipid Metabolism.**

(3) (Winter) (3 lectures) Comparative aspects of nutrition and metabolism of carbohydrate and lipid from the cellular level through the multi-organ of the whole organism. Main topics will include biothermodynamics, calorimetry, cellular metabolism and functions of carbohydrate and lipid, digestion, absorption and utilization of dietary carbohydrate and lipid.

**ANSC 552 Protein Metabolism and Nutrition.**

(3) (Fall) (3 lectures) Comparative aspects of nutrition and metabolism of amino acids and proteins from the cellular level on through the multisystem operation of the whole organism. Main topics include cellular metabolism and functions of amino acids and proteins, digestion, absorption and utilization of dietary protein. Comparison between farm animals and humans.

**ANSC 560 Biology of Lactation.**

(3) (Winter) (Restriction: Not open to students who have taken ANSC 460.) An interdisciplinary approach to the study of mammary development, the onset of lactation and its cessation, comparing the differences in mammalian species in mammary development from embryological, pre- and post-pubertal and pre- and post-partum aspects. Lactation at the cellular and biochemical levels.

**ANSC 565 Applied Information Systems.**

(3) (Winter) (3 lectures and one 2-hour lab) Introduction to concepts of an Information System and subsequent application to various scenarios in agriculture. Industry analysis in terms of users, goals, available data/information, communication, delivery structure, decision making, feedback, exploitation of technology and possible improvements using the Internet. Individual case studies and familiarisation with cutting-edge computer applications.

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## **BINF-Bioinformatics**

Offered by: Parasitology, Plant Science

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**BINF 301 Introduction to Bioinformatics.**

(3) (Prerequisite(s): LSCI 202 or LSCI 204, and ANSC 326) (Restriction: Not open to students who have taken BTEC 501.) Introduces analysis of DNA, RNA and protein sequences using computer software. Emphasis on implementation of molecular evolution theory for algorithms to make predictions of sequence function and infer the evolutionary history of sequences. Assessing analysis reliability and methods to improve efficiency of computer algorithms and their implications are discussed.

**BREE 217 Hydrology and Water Resources.**

(3) (3 lectures, one 2 hour lab) (Restriction: Not open to students who have taken ABEN 217.) Measurements and analysis of components of the water cycle. Precipitation, evaporation, infiltration and groundwater. Analysis of hydrologic data. Hydrograph theory. Hydrologic estimations for design of water control projects; flood control and reservoir routing. Integrated watershed management and water conservation. Water management systems for environmental protection.

**BREE 252 Computing for Engineers.**

(3) (3 lectures and one 2-hour lab) (Restriction: Not open to students who have taken ABEN 252.) A user level computer programming course in Fortran-90 language. The pros and cons of computerization, differences between mainframe and microcomputers, network basics, discussion of the use of Fortran-90 and C languages to solve engineering problems, electronic spreadsheet analysis and the use of other software packages will be studied from an engineering point of view.

**BREE 301 Biothermodynamics.**

(3) (3 lectures and one 2-hour lab) (Restriction: Not open to students who have taken ABEN 301.) Classical thermodynamic analysis of pure and simple compressible systems. The course covers the first and second laws of thermodynamics. It deals with basic concepts of thermodynamics and thermochemistry in biological systems.

**BREE 305 Fluid Mechanics.**

(3) (3 lectures and one 2-hour lab or problems) (Prerequisites: BREE 210, AEMA 202) (Restriction: Not open to students who have taken ABEN 305.) Properties of fluids; fluid statics; principles of flow of incompressible and compressible fluids; dimensional analysis boundary layers; conduit and open channel systems; simple applications to turbo machinery.

**BREE 481 Undergraduate Seminar 1.**

(0.5) (Restrictions: Not open to students who have taken ABEN 491D/N or ABEN 481.) Attendance and participation in

**BREE 520 Food, Fibre and Fuel Elements.**

(3) (Prerequisite: BREE 327) Analysis and design incorporating the four elements required by organisms and biomass for food, fibre and fuel production (air, earth, energy, and water). Special emphasis will be placed on the demands and requirements of engineering systems to control these elements and allow optimal growth in semi-controlled and completely controlled environments.

**BREE 525 Climate Control for Buildings.**

(3) (3 lectures and one 3-hour lab) (Prerequisite: BREE 301 (formerly ABEN 301)) (Restriction: U3 students or above. Not open to students who have taken ABEN 525.) The analyses of heat and water vapour transfer through the structure of buildings are used to design heating, ventilation and refrigeration systems. Heat conduction and convection as well as radiation are included in the analysis of heat transfer. Ventilation systems are designed for livestock shelters, produce storages and greenhouses.

**BREE 530 Fermentation Engineering.**

(3) (3 lectures and one 3-hour lab) (Prerequisite (Undergraduate): BREE 325 (formerly ABEN 325) or equivalent) (Graduate courses available to senior undergraduates with permission of the instructor) (Restriction: Not open to students who have taken ABEN 530.) Advanced topics in food and fermentation engineering are covered, including brewing, bioreactor design and control and microbial kinetics.

**BREE 531 Post-Harvest Drying.**

(3) (Restrictions: U3 students or above. Not open to students who have taken ABEN 621 or ABEN 531.) Heat and moisture transfer with respect to drying of agricultural commodities; techniques of enhancement of heat and mass transfer; drying efficiency and scale-up problems.

**BREE 532 Post-Harvest Storage.**

(3) (Restrictions: Not open to students who have taken ABEN 622 or ABEN 532.) Active, semi-passive and passive storage systems; environmental control systems; post-harvest physiology and pathogenicity; quality assessment and control methodology; economic aspects of long-term storage.

**BREE 533 Water Quality Management.**

(3) (Restriction: Not open to students who have taken BREE 625 (formerly ABEN 625).) Management of water quality for sustainability. Cause of soil degradation, surface and groundwater contamination by agricultural chemicals and toxic pollutants. Screening and mechanistic models. Human health and safety concerns. Water table management. Soil and water conservation techniques will be examined with an emphasis on methods of prediction and best management practices.





**FDSC 233 Physical Chemistry.**

(3) (Winter) (3 lectures) Introduction to kinetic theory, thermodynamics, properties of liquids and solids, chemical equilibrium and the law of mass action, phase rule, properties of solutions, chemical kinetics.

**FDSC 251 Food Chemistry 1.**

(3) (Winter) (3 lectures and one 3-hour lab) (Prerequisite: FDSC 211 or LSCI 211) A study of the chemistry and functionality of the major components comprising food systems, such as water, proteins, carbohydrates and lipids. The relationship of these components to food stability will be studied in terms of degradative reactions and processing.

**FDSC 300 Principles of Food Analysis 1.**

(3) (Fall) (3 lectures and one 3-hour lab) (Prerequisite: FDSC 251 or permission of instructor.) (Corequisite: FDSC 251 or permission of instructor.) The fundamentals of food analysis are presented with the emphasis on the major components of foods. Topics include: food components, sampling, method selection, official methods, proximate analysis, moisture, protein, fat, ash, fiber, carbohydrates, vitamins and nutraceutical compounds.

**FDSC 305 Food Chemistry 2.**

(3) (Fall) (3 lectures and one 3-hour lab) (Prerequisite: FDSC 251) A study of the chemistry and functionality of the minor components comprising food systems, such as enzymes, anthocyanins, carotenoids, additives, vitamins and essential oils. The relationship of these components to food stability in terms of degradative reactions and processing.

**FDSC 310 Post Harvest Fruit and Vegetable Technology.**

(3) (Fall) (3 lectures and one 3-hour lab) The post harvest chemistry and physiology of horticultural crops as they affect quality and marketability, handling methods pre and post harvest, principles and practices in cooling, storage, transportation and packaging.

**FDSC 315 Separation Techniques in Food Analysis 1.**

(3) (Winter) (3 lectures and one 3-hour lab) (Prerequisite: FDSC 300 or permission of instructor.) A detailed treatment on the principal chromatographic and electrophoretic techniques that are associated with the analysis of carbohydrate, lipid, protein constituents of food.

**FDSC 319 Food Commodities.**

(3) (Winter) (3 lectures and one 3-hour lab) (Prerequisite: FDSC 251 or permission of instructor) The relationship between the chemistry of food constituents present in common commodities, such as milk, meat, eggs, cereals, oilseeds etc. and the common processing technologies associated with their transformation into stable food products.

**FDSC 330 Food Processing.**

(3) (Winter) (3 lectures and one 3-hour lab) (Prerequisite: FDSC 251) The principles and practices of food processing with an emphasis on canning, freezing, and dehydration. A survey of the newer methods of food preservation such as irradiation, reverse osmosis etc.

**FDSC 334 Analysis of Food Toxins and Toxicants.**

(3) (Winter) (3 lectures and one 3-hour lab) (Prerequisite: FDSC 213 or permission of instructor.) Toxins and toxicant residues in food including heavy metals, persistent organic pollutants (POPS) and microbial toxins are explored from an analytical perspective; new methods and strategies of analysis are emphasized.

**FDSC 400 Food Packaging.**

(3) (Fall) (3 lectures and one 3-hour lab) (Prerequisite: FDSC 305) An integrated approach to the materials used for the packaging of food products, considering the physical, chemical and functional characteristics of such materials and their utility, relative to the chemistry of the food system they are designed to enclose and preserve.

**◆FDSC 405 Product Development.**

(3) (Winter) (3 lectures and one 3-hour lab) (Pre-/Co-requisite: FDSC 305) The chemical, technological and procedural aspects of product development. An understanding of the role and functionality of food ingredients such as acidulants, phosphates, modified starches, gums, emulsifiers, food additives and other functional components in relation to the formulation of food products.

**FDSC 410 Flavour Chemistry.**

(3) (Winter) (3 lectures) (Prerequisite: FDSC 305) The chemistry of the flavour constituents of foods, synthesis, modification, extraction and use.

**FDSC 425 Principles of Quality Assurance.**

(3) (Winter) (3 lectures) (Prerequisite: AEMA 310) The

principles and practices of quality assurance in food processing.

✦ FDSC 519 Advanced Food Processing.

**★MICR 450 Environmental Microbiology.**

(3) (Winter) (Prerequisites: MICR 230 or LSCI 230) Focus on microbes in the environment. Topics include extreme environments, polar microbiology, biotechnology and bioremediation. Emphasis will be on population studies based upon molecular biological methods.

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## **NRSC-Natural Resource Sciences**

Offered by: Natural Resource Sciences

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**★NRSC 221 Environment and Health.**

(3) (Restriction: Not open to students who are taking or have taken GEOG 221.) (Note: This course is also offered as GEOG 221. Students enrolled in main campus programs register as GEOG 221; students enrolled in Macdonald campus programs register as NRSC 221.) Introduction to physical and social environments as factors contributing to the production of human health, with emphasis on the physical properties of the atmospheric environment as they interact with diverse human populations in urban settings.

**NRSC 333 Pollution and Bioremediation.**

(3) (Fall) (3 lectures) (Restriction: Not open to students who have taken WILD 333) The environmental contaminants which cause pollution; sources, amounts and transport of pollutants in water, air and soil; waste management.

**★NRSC 340 Global Perspectives on Food.**

(3) (Winter) (3 lectures) (Prerequisite: A 200-level course in food science, food resources or dietetics, or permission of instructor.) Issues of community and global change in relation to environment and the production of food. Contrasts between developed and developing countries will highlight impacts of colonialism, political structures, and cultural systems related to gender, class and ethnicity.

**NRSC 370 Special Topics 01.**

(1) (Fall and Winter) (Restriction: Departmental approval required.) Students will pursue topics that are not otherwise available in formal courses. An individualized course of studies will be followed under the supervision of a member of staff qualified in the appropriate discipline or area.

**NRSC 371 Special Topics 02.**

(1) (Fall and Winter) (Restriction: Departmental approval required.) Students will pursue topics that are not otherwise available in formal courses. An individualized course of studies will be followed under the supervision of a member of staff qualified in the appropriate discipline or area.

**NRSC 372 Special Topics 03.**

(2) (Fall and Winter) (Restriction: Departmental approval required.) Students will pursue topics that are not otherwise available in formal courses. An individualized course of studies will be followed under the supervision of a member of staff qualified in the appropriate discipline or area.

**NRSC 373 Special Topics 04.**

(2) (Fall and Winter) (Restriction: Departmental approval required.) Students will pursue topics that are not otherwise available in formal courses. An individualized course of studies will be followed under the supervision of a member of staff qualified in the appropriate discipline or area.

**NRSC 374 Special Topics 05.**

(3) (Fall and Winter) (Restriction: Departmental approval required.) Students will pursue topics that are not otherwise available in formal courses. An individualized course of studies will be followed under the supervision of a member of staff qualified in the appropriate discipline or area.

**NRSC 375 Special Topics 06.**

(3) (Fall and Winter) (Restriction: Departmental approval required.) Students will pursue topics that are not otherwise available in formal courses. An individualized course of studies will be followed under the supervision of a member of staff qualified in the appropriate discipline or area.

**NRSC 405 Natural History of East Africa.**

(3) (Corequisite(s): ANTH/GEOG 451, NRSC/BIOL 452) (Restriction(s): Not open to students who have taken NRSC 300 or GEOG 300. Not open to students taking REDM 405.) Integrated study of African landforms, geologic history, climate, environments, biota, water resources and human

influences, fostering a thorough understanding of the East African landscape and its inhabitants. Lectures, discussions on selected topics, use of museum resources and field studies will develop powers of observation, identification and enquiry.

**NRSC 430 GIS for Natural Resource Management.**

(3) (Fall) (Prerequisites: At least one environmental science course and one ecology course or permission of instructor) (Restriction: U2 students and above. Not open to students who have taken GEOG 201, 306 or 307 or BREE/ABEN 430. Limited to 32 students.) Applications of Geographic Information Systems (GIS) and spatial analysis techniques to the presentation and analysis of ecological information, including sources and capture of spatial data; characterizing, transforming, displaying spatial data; and spatial analysis to solve resource management problems.

**NRSC 437 Assessing Environmental Impact.**

(3) (Winter) (2 lectures) (Restriction: Not open to students who have taken WILD 437) (Restrictions: U2 students and above) Theories and procedures of assessing environmental impact. An examination of the environmental impact of existing programs and projects to examine their accuracy in predicting consequences and attenuating undesirable effects.

**★NRSC 451 Research in Ecology and Development In Africa.**



**NUTR 344 Clinical Nutrition 1.**

(4) (Winter) (Two 2-hour lectures) (Prerequisites: ANSC 234 or BIOC 311, and ANSC 323, plus ANSC 330 or NUTR 307.) (Corequisites: NUTR 337 and ANSC 424.)

Clinical nutrition assessment and dietary modification of pathological conditions including hypertension, lipid disorders and cardiovascular disease, obesity, diverticulosis, cancer, COPD, anorexia nervosa and bulimia.

**NUTR 345 Food Service Systems Management.**

(3) (Fall) (Prerequisite: NUTR 209.) An introductory course applying the principles of organizational management within the healthcare foodservice industry. Emphasis on understanding standards of quality control, customer relations and sanitation. Budget preparation, scheduling and cost control as well as menu preparation, recipe standardization and costing.

**NUTR 346 Quantity Food Production.**

(2) (Winter) (Prerequisite: NUTR 345) (NUTR 346 includes a fee of \$250 for the Hazard Analysis Critical Control Points (HACCP) online course, the Canadian Food Safety Certification Advanced.fst book and examination and for a laboratory manual and supplies. The fee is refundable if the course is dropped before the add/drop deadline.) Quantity food planning, costing, and evaluation. Laboratory experience with quantity food production following principles of food sanitation and safety, food quality and cost-evaluation.

**NUTR 403 Nutrition in Society.**

(3) (Fall) (3 hour conference) (Prerequisite: NUTR 337) Sociocultural and economic influences on food choice and behaviour; health promotion and disease prevention through nutrition, particularly in high risk populations; the interaction of changing environment, food availability and quality as they affect health.

**‡ NUTR 408 Professional Practice Stage 3A.**

(1) (Prerequisite: NUTR 311) (Corequisite: NUTR 409) Orientation and educational topics linking theory to practice for field placements in the clinical setting.

**‡ NUTR 409 Professional Practice Stage 3B.**

(8) (Winter: 10 weeks) (Prerequisites: NUTR 311, NUTR 403, NUTR 446, NUTR 450, NUTR 545.) (The course NUTR 409 includes a 75\$ fee for the Level III manual. The fee is refundable until the end of the add/drop period as long as the manual is intact.) Four interrelated modules of directed experience in clinical nutrition, foodservice management, normal nutrition education and community nutrition, in health care settings and the private sector.

**NUTR 420 Toxicology and Health Risks.**

(3) (Fall) (3 lectures) (Prerequisites: FDSC 211 or LSCI 211, BIOL 201 or BIOC 212) (Restriction: This course is not open to students who have taken NUTR 361) Basic principles of toxicology, health effects of exposure to environmental contaminants such as heavy metals, pesticides and radionuclides and ingestion of food toxicants such as food additives and preservatives; natural toxins in plants and marine foods, human health, ecosystem health, safety evaluation, risk assessment, and current Canadian regulations.

**NUTR 430 Directed Studies: Dietetics and Nutrition 1.**

(3) (Fall and Winter) An individualized course of study in dietetics/human nutrition under the supervision of a staff member with expertise on a topic not otherwise available in a formal course. A written agreement between student and staff member must be made before registration and filed with the Program Coordinator.

**NUTR 431 Directed Studies: Dietetics and Nutrition 2.**

(3) (Fall or Winter) An individualized course of study in dietetics/human nutrition under the supervision of a staff member with expertise on a topic not otherwise available in a formal course. A written agreement between student and staff member must be made before registration and filed with the Program Coordinator.

**NUTR 431D1 (1.5), NUTR 431D2 (1.5) Directed Studies:****Dietetics and Nutrition 2.**

(Students must register for both NUTR 431D1 and NUTR 431D2.) (No credit will be given for this course unless both NUTR 431D1 and NUTR 431D2 are successfully completed in consecutive terms) (NUTR 431D1 and NUTR 431D2 together are equivalent to NUTR 431) An individualized course of study in dietetics/human nutrition under the supervision of a staff member with expertise on a topic not otherwise available in a formal course. A written agreement between student and staff member must be made before registration and filed with the Program Coordinator.

**NUTR 432 Directed Studies: Dietetics and Nutrition 3.**

(3) (Fall and Winter) An individualized course of study in dietetics/human nutrition under the supervision of a staff



feed in terms of nutritional composition and role in environmental conservation.

**PLNT 304 Biology of Fungi.**

(3) (3 lectures and one 3-hour lab) This course describes the various groups of fungi and explores in depth their biology and physiology, their ecological niches and the role in various ecosystems and their benefits and uses in industry and biotechnology.

**PLNT 305 Plant Pathology.**

(3) (3 lectures and one 3-hour lab) The theory and concepts of plant pathology, including the disease cycle, infection, symptoms, resistance, epidemiology and control. The biology and taxonomy of pathogens will be studied, including fungi, bacteria, viruses and nematodes. Techniques of inoculation, isolation of pathogens from diseased plants, disease diagnosis and pathogen identification will be demonstrated.

**PLNT 307 Vegetable Production.**

(3) (Prerequisites: PLNT 201 or AEBI 210, PLNT 300) (Restrictions: Not open to students who have taken PLNT 341, PLNT 342, PLNT 343, PLNT 344, PLNT 345 or PLNT 348.) Vegetable production with emphasis on cultural considerations, harvest, and handling of selected vegetable crops; integrates principles of plant growth and vegetable physiology into conventional and ecological vegetable production schemes.

**PLNT 310 Plant Propagation.**

(3) (3 lectures and one 3-hour lab) Principles and practical aspects of plant propagation are examined. The course consists of two parts. The first third deals with sexual propagation; the production, processing storage certification and analysis of seeds. The remaining two-thirds deals with vegetative propagation; cutting, budding, grafting, layering, and tissue culture.

**\*PLNT 312 Urban Horticulture.**

(3) Selection, use and care of plants in urban environments for the benefit of urban populations: landscape design, turf and green space management, green roofs, design and management of community gardens.

**\*PLNT 315 Herbs and Medicinal Plants.**

(3) (Prerequisite: AEBI 210 or PLNT 201 or permission of instructor.) Biochemistry and ecophysiology of the active ingredients in medicinal plants. Links between cultivation practices and plant compounds. The effect of propagation and environmental factors on active compounds are examined using greenhouse experiments, followed by quantification of active ingredients by analytical techniques and analysis of bioactivity.

**\*PLNT 321 Fruit Production.**

(3) (3 credits; 3 lectures and 1 3-hr lab) (Prerequisite: AEBI 210 or PLNT 211 and PLNT 300) Botany, physiology and management practices of the major temperate-zone fruit crops. Includes field work, laboratory experimentation and field trips.

**\*PLNT 322 Greenhouse Management.**

(3) (3 lectures and one 3-hour lab) Greenhouse design and operation, including environmental regulation, fertilization and pest management. Focus will be on the production of major floricultural and vegetable crops.

**PLNT 331 Grains and Biofuel Crops.**

(3) (3 lectures and one 3-hour lab period) (Prerequisite: PLNT 211 or AEBI 210, and PLNT 300) A study of economically important crops produced for dietary or biofuel utilization; historical development, botany, distribution and adaptation, cultural practices and factors that affect the utilization of crop products. Laboratories emphasize morphological study of major energy producing field crop species

**PLNT 353 Plant Structure and Function.**

(3) (Fall) (2 lectures and one 3-hour lab) (Prerequisites: PLNT 201 or AEBI 210 and FDSC 211 or LSCI 211) The general anatomy and physiology of vascular plants with emphasis on the cells, tissues, organs, chemical components of plants and the physiological processes associated with their function.

**PLNT 358 Flowering Plant Diversity.**

(3) (2 lectures, one 3-hour lab, plus a 4-day field week held the week preceding the start of classes) (A \$50 fee is charged to all students registered in this course, which has a fieldwork component prior to the beginning of classes in August. This fee is used to support the cost of excursions, a hand lens, instructional handouts and identification aids. Students who have already received a hand lens may request a reimbursement of a portion of this charge through their department.)

(Prerequisites: PLNT 201 or AEBI 210 or ENVR 202 or permission of instructor) Principles of classification and identification of flowering plants and ferns, with emphasis on 35 major families of flowering plants and the habitats in which they grow.

**\*PLNT 424 Cellular Regulation.**

(3) (Prerequisites: FDSC 211 or LSCI 211, AEBI 202 or LSCI 202 or permission of the instructor.) An overview of the cellular mechanisms used by prokaryotes and eukaryotes to regulate biosynthetic pathways. Topics covered range from control of gene transcription to the regulation of enzyme activity to the role of signal transduction pathways in the control of metabolic flux through cellular pathways.

**\*PLNT 426 Plant Ecophysiology.**

(3) Investigates of the complex interactions between plants and their environment, focusing on the mechanisms underlying plant physiological processes. Plasticity of plants to their ecological environment; topics include phytoremediation, plant stress responses, plant-symbiosis and plant-insect interactions.

**PLNT 430 Plant Disease Epidemiology.**

(3) (Prerequisite(s): PLNT 305 or equivalent) (Restriction(s): Not recommended for U1 students) (Graduate students registering for PLNT 636 will attend theory classes of PLNT430 and in addition they will participate in a journal club.) Concepts and systems approach to plant disease epidemiology. Factors influencing pathogen development in





**WILD 420 Ornithology.**

(3) (Fall and Winter) (3 lectures and occasional field trips)  
(Prerequisite: WILD 307 (formerly ZOOL 307) or permission of instructor) (This course is scheduled for video-conferencing.) Taxonomic relationships and evolution of birds are outlined. Reproduction, migration and population processes of North American birds are examined.

**WILD 421 Wildlife Conservation.**

(3) (Winter) (3 lectures) (Restriction: Not open to students who have taken NRSC 421.) Study of current controversial issues focusing on wildlife conservation. Topics include: animal rights, exotic species, ecotourism, urban wildlife, multi-use of national parks, harvesting of wildlife, biological controls, and endangered species.

**WILD 424 Parasitology.**

(3) (Winter) (2 lectures and one 3-hour lab) (Restriction: Not open to students who have taken WILD 424 (formerly ZOOL 424).) Systematics, morphology, biology and ecology of parasitic protozoa, flatworms, roundworms and arthropods with emphasis on economically and medically important species.

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conflict avoidance and resolution, peace-making and -keeping.

**ANTH 222 Legal Anthropology.**

(3) (Winter) Exploration of dispute resolutions and means of social cohesion in various societies of the world. Themes: dichotomy between law and custom, local definitions of justice and rights, forms of conflict resolution, access to justice, gender and law, universality of human rights, legal pluralism.

**ANTH 227 Medical Anthropology.**

(3) (Fall) Beliefs and practices concerning sickness and healing are examined in a variety of Western and non-Western settings. Special attention is given to cultural constructions of the body and to theories of disease causation and healing efficacy. Topics include international health, medical pluralism, transcultural psychiatry, and demography.

●**ANTH 301 Nomadic Pastoralists.**

(3) (Fall) (Prerequisite: ANTH 202, or ANTH 205, or ANTH 206, or ANTH 212) Variations in herding systems over a wide range of habitats and involving a variety of species of domestic livestock. Comparative perspectives on the prehistory of pastoral systems, on the ideologies, cultures, and social and economic systems of nomadic pastoralists. Relations with non-pastoralists and the effects of change and development will also be examined.

**ANTH 302 New Horizons in Medical Anthropology.**

(3) (Winter) (Prerequisite: ANTH 227) (Restriction: Anthropology program students.) Using recent ethnographies as textual material, this course will cover theoretical and methodological developments in medical anthropology since the early 1990's. Topics include a reconsideration of the relationship between culture and biology, medical pluralism revisited, globalization and health and disease, and social implications of new biomedical technologies.

**ANTH 303 Ethnographies of Post-socialism.**

(3) (Winter) (Prerequisites: ANTH 202 and one other 200-level anthropology course, U2 standing or above, or permission of instructor.) Understanding postsocialism through engagement with ethnography that explores how markets interact with political rule, social forms, and the production of cultural values across different geographies and histories. This course focuses primarily on the former Soviet Union, East Germany, and China.

**ANTH 304 Chinese Culture in Ethnography and Film.**

(3) (Fall) (Prerequisites: ANTH 202 or 204 or 209 and another 200 level anthro course, U2 standing or above, or permission of the instructor.) (Restriction: U2 standing or above.) breakdown of room requirements: 1st day- class for 40 with VDP for films plus same room for 1.5 hours that nite. 2nd day- need 2 rooms for 20 to split the class in half for discussions (need rooms in same building). See CRNs 11397 and 11496. Uses both ethnography and film to examine 20th century Chinese society and popular culture in the context of the revolution and its aftermath.

●**ANTH 305 Arctic Prehistory.**

(3) (Prerequisite: ANTH 201.) (Restriction: Not open to students who have taken ANTH 319.) Comparative study of prehistoric Arctic hunter-gatherer cultures in Northern Canada, Alaska, Greenland and eastern Siberia. Emphasis will be placed on interpretation of cultural continuity and change in the context of contemporary hunter-gatherer theory.

●**ANTH 306 Native Peoples' History in Canada.**

(3) (Prerequisites: HIST 202 or HIST 203 or ANTH 202 or ANTH 205 or ANTH 206, or permission of instructor) A survey of the Canadian policies that impinged on native societies from the fur trade to W.W. II, and the native peoples' responses, looking at their involvement in the fur trade, the emergence of the Métis, types of resistance, economic diversification, development of associations, and cultural distinctiveness.

**ANTH 307 Andean Prehistory.**

(3) (Fall) (Prerequisites: ANTH 201 and 1 other course in Social/Cultural Anthropology or permission of instructor) (Restriction: Students must be U2 or U3 standing.) Questions related to social inequality, ritual practice, monumental space, and urban landscapes within the context of the Pre-Columbian Andes and sections on the Inkas, as well as earlier groups,

such as the Nazca, Wari, Moche, Tiwanaku, and Chimu.

●**ANTH 308 Political Anthropology 01.**

(3) (Fall) (Prerequisite: ANTH 202, or ANTH 205, or ANTH 206, or ANTH 212, or permission of instructor) The study of political systems and political processes. Conflict and its resolution. The emphasis of the course will be on local-level politics and non-industrial societies.

●**ANTH 309 Prehistory of Northern Europe.**

(3) (Fall) (Prerequisite: ANTH 201.) Survey of the prehistory of northern Europe from the end of the last glaciation to the early iron age.

●**ANTH 311 Primate Behaviour and Ecology.**

(3) (Fall) (Prerequisite: Any 200 level course in a social or biological science.) Critical evaluation of theories concerning primate behaviour with emphasis on the importance of ecological factors in framing behaviour, including mating behaviour, parent care, social structures, communication, as well as various forms of social interaction such as dominance, territoriality and aggressive expression.

**ANTH 320 Social Evolution.**

(3) (Fall) (Prerequisites: ANTH 202, or ANTH 205, or ANTH 206, or ANTH 208, and Honours/Major/Minor status in Anthropology, or permission of instructor.) The evolution of human social organization, with a focus on pre-industrial societies (hunter-gatherers, small-scale sedentary societies, complex chiefdoms and small scale states).

**ANTH 322 Social Change in Modern Africa.**

(3) (Winter) (Prerequisite: ANTH 202, or ANTH 204, or ANTH 205, or ANTH 206, or ANTH 209, or ANTH 212, or ANTH 227 or permission of instructor) The impact of colonialism on African societies; changing families, religion, arts; political and economic transformation; migration, urbanization, new social categories; social stratification; the social setting of independence and neo-colonialism; continuity, stagnation, and progressive change.

**● ANTH 323 Anthropology of Things.**

(3) (Fall) (Prerequisite(s): any 200-level anthropology course or permission of instructor.) The study of material culture and the ethnography of objects and technologies. Commodity fetishism, semiotics, anthropology of sensory perception. Ethnographies of things, machines and other apparatus.

**ANTH 326 Anthropology of Latin America.**

(3) (Fall) (Prerequisite: ANTH 202 or 204 or 205 or 206 or 212 or permission of instructor) Central themes in the anthropology of Latin America, including colonialism, religiosity, sexuality and gender, indigeneity, social movements, and transnationalism.

**● ANTH 327 Peoples of South Asia.**

(3) (Fall) (Prerequisite: ANTH 202, or ANTH 205, or ANTH 206, or ANTH 212, or permission of instructor) An exploration of the dominant social institutions, cultural themes and perspectives, and psychological patterns found in India and greater South Asia.

**● ANTH 329 Modern Chinese Society and Change.**

(3) (Winter) (Prerequisites: ANTH 202, or ANTH 205, or ANTH 206, or ANTH 212, or East Asian Studies Honours/Major, or permission of instructor) 20th and 21st century Chinese economic, social and cultural changes and continuities. Topics include rural development, revolution and reform policies, gender and households, family planning, minorities, urbanization, and human rights.

**ANTH 330 Traditional Whaling Societies.**

(3) (Winter) (Prerequisite(s): ANTH201 or ANTH202 or ANTH 203 or permission of instructor) (Restriction(s): Restricted to Anthropology Honours, Major and Minor Program students.) The investigation of similarities and diversity of prehistoric and historic small-scale whaling societies. Examples will be drawn from throughout the world, including, but not limited to, East Asia, Northwest Coast, Arctic, North Atlantic and Northern Europe societies.

**● ANTH 331 Prehistory of East Asia.**

(3) (Fall) (Prerequisite: ANTH 201 or permission of instructor) Comparative study of prehistoric hunting and gathering cultures in China, Japan, Korea, Mongolia and Eastern Siberia; origins and dispersal of food production; cultural processes leading to the rise of literate civilizations in certain regions of East Asia.

**● ANTH 333 Class and Ethnicity.**

(3) (Prerequisite: ANTH 202, or ANTH 205, or ANTH 206, or ANTH 212, or permission of instructor) Social, economic, political, symbolic and ideological aspects of ethnicity. Development of ethnic groups. Interplay between social class and ethnicity.

**● ANTH 335 Ancient Egyptian Civilization.**

(3) (Winter) (Prerequisite: ANTH 201, or ANTH 202, or permission of instructor) A study of changing ecological, economic, social, political, and religious factors influencing the development of ancient Egyptian civilization from prehistoric times to the early Christian era. The unique characteristics of Egyptian civilization are compared to the structural features common to all early civilizations.

**ANTH 338 Native Peoples of North America.**

(3) (Winter) (Prerequisite: ANTH 202, or ANTH 204, or ANTH 205, or ANTH 206, or ANTH 209, or ANTH 212, or GEOG 336, or permission of instructor) Ethnographic survey of Native cultures in North America. Conditions arising from European colonization and their social, economic and political impact. Contemporary situation of indigenous peoples.

**ANTH 339 Ecological Anthropology.**

(3) (Winter) (Prerequisite: ANTH 204, or ANTH 206, or SOCI 328, or GEOG 300 or ENVR 201, or ENVR 203, or permission of instructor) Intensive study of theories and cases in ecological anthropology. Theories are examined and tested through comparative case-study analysis. Cultural constructions of "nature" and "environment" are compared and analyzed. Systems of resource management and conflicts over the use of resources are studied in depth.

**ANTH 340 Middle Eastern Society and Culture.**

(3) (Winter) (Prerequisite: U2 or U3 standing; and ANTH 202, or ANTH 204, or ANTH 205, or ANTH 206, or ANTH 209, or ANTH 212, or ANTH 227, or permission of instructor.) Exploration of daily life, culture and society in the Middle East, through examination of ethnographic accounts.

**● ANTH 341 Women in Cross-cultural Perspective.**

(3) (Fall) (Prerequisites: ANTH 202 or ANTH 205, or ANTH 206, or ANTH 342, or Women's Studies Minor, or permission of instructor) A wide range of anthropological studies are examined and compared, along with theoretical models regarding changes in women's positions. The impact of colonialism, women and social change, and problems of women in developing societies are examined.

**● ANTH 342 Gender, Inequality and the State.**

(3) (Winter) (Prerequisite: ANTH 202, or ANTH 205, or ANTH 206, or ANTH 341, or Women's Studies Minor, or permission of instructor) Comparative studies of gender in stratified societies: Asia, the Mid-East, Latin and North America. Economic, political and social manifestations of gender inequality. Oppressive and egalitarian ideologies. State and institutional policies on gender, and male-female strategies. Sexual apartheid and integration.

**● ANTH 344 Quantitative Approaches to Anthropology.**

(3) (Fall) (Prerequisite: ANTH 201 or ANTH 202 or ANTH 205 or permission of instructor.) (Restriction: Limited to students in Anthropology programs.) A non-statistics course designed to understand and critically evaluate quantitatively based arguments encountered in the literature of all branches of Anthropology.

**● ANTH 345 Prehistory of Africa.**

(3) (Winter) Open only to students in the African field study semester, Archaeological evidence for the evolution of culture in Africa from the beginning of the Paleolithic through the Iron Age, including changes in economic, social and political organization as reflected in selected archaeological sites.



● **ANTH 348 Early Prehistory: New World.**

(3) (Winter) (Prerequisite: ANTH 201 or ANTH 203, or permission of instructor) Consideration of major issues regarding the initial arrival(s) of human groups in the New World, and their subsequent adaptation to the changing environmental conditions at the end of the Ice Age.

**ANTH 352 History of Anthropological Theory.**

(3) (Fall) (Prerequisites: one 200-level anthropology course and one other anthropology course at any level) (Restriction: Honours, Joint Honours, Major and Minor students in Anthropology, U2 standing or above) Exploration in the history of anthropological theory; schools, controversies, intellectual history, sociology of knowledge.

**ANTH 355 Theories of Culture and Society.**

(3) (Winter) (Prerequisites: one 200-level anthropology course and one other anthropology course at any level) (Restriction: Honours, Joint Honours, Major and Minor students in Anthropology, U2 standing or above) Contributions to contemporary anthropological theory; theoretical paradigms and debates; forms of anthropological explanation; the role of theory in the practice of anthropology; concepts of society, culture and structure; cultural evolution and relativity; interpretive anthropology, post-modernism.

**ANTH 357 Archaeological Methods.**

(3) (Winter) (Prerequisite: ANTH 201 and one other course in archaeology) (Restriction: Honours, Joint Honours and Major students in Anthropology, U2 standing or above) The collection of materials in field investigations and their analysis to yield cultural information. The processes of inference and reconstruction in archaeological interpretation.

**ANTH 358 The Process of Anthropological Research.**

(3) (Fall) (Prerequisites: one 200-level anthropology course and one other anthropology course at any level) (Restriction: Honours, Joint Honours, Major and Minor students in Anthropology, U2 standing or above) The nature of anthropological research as evidenced in monographs and articles; processes of concept formation and interpretation of data; the problem of objectivity.

**ANTH 359 History of Archaeological Theory.**

(3) (Winter) (Prerequisite: ANTH 201 or ANTH 203, and one additional course in archaeology, or permission of instructor) A systematic investigation of the theories that have guided the interpretation of prehistoric archaeological data since the Middle Ages; the relationship between these theories and theoretical developments in the other social sciences.

**ANTH 380 Special Topic 1.**

(3) (Fall) (Prerequisite: Permission of instructor) Supervised reading in special topics under the direction of a member of the staff.

**ANTH 381 Special Topic 2.**

(3) (Winter) (Prerequisite: Permission of instructor) Supervised reading in special topics under the direction of a member of the staff.

**ANTH 382 Special Topic 3.**

(3) (Fall) (Prerequisite: Permission of instructor) Supervised reading in special topics under the direction of a member of the staff.

**ANTH 383 Special Topic 4.**

(3) (Winter) (Prerequisite: Permission of instructor) Supervised reading in special topics under the direction of a member of the staff.

**ANTH 401 Comparative Anthropology.**

(3) (Fall) (Prerequisite: Two 300-level anthropology courses or permission of instructor) (Restriction: U3 students in Anthropology) Past use of comparative anthropology and potential future use.

● **ANTH 402 Topics in Ethnography 1.**

(3) (Fall) (Restriction: U3 students in Anthropology or permission of instructor) An exploration of selected ethnographic case material. Investigation of a regional literature or survey of significant contributions to ethnography or examination of an ethnological issue.

● **ANTH 403 Current Issues in Archaeology.**

(3) (Winter) (Prerequisite: ANTH 357 or preferably ANTH 359, or permission of instructor) Current issues in archaeological interpretation, in particular, those relating to processual and postprocessual archaeology.

● **ANTH 420 Lithic Technology and Analysis.**

(3) (Winter) A survey of current literature on the analysis of stone tools and laboratory sessions illustrating how they were produced and used. Topics to be covered include: fracture mechanics; manufacturing techniques; typological systems; experimental replication; identification of tool functions through microscopic analysis of use-wear.

**ANTH 422 Contemporary Latin American Culture & Society.**

(3) (Winter) (Prerequisites: ANTH 355, or ANTH 352, or HISP 226, or permission of the instructor.) (Restriction: U3 students.) Themes central to the culture and society of contemporary Latin America and the Caribbean, including globalization, questions of race and ethnicity, (post)modernity, social movements, constructions of gender and sexuality, and national and diasporic identities.

**ANTH 423 Mind, Brain and Psychopathology.**

(3) (Fall) (Prerequisites: ANTH 227 and Honours/Major/Minor status in Anthropology or Minor Concentration in Social Studies of Medicine or permission of instructor) (Restrictions: U3 students. Not open to students who have taken ANTH 443 under this topic.) Evolutionary origins of the human mind and the 'social brain', and the psychopathologies that are said to provide access to this evolutionary history, through the perspective of the anthropology of science and psychiatry.

● **ANTH 430 Symbolic Anthropology 01.**

(3) (Fall) (Prerequisite: ANTH 204, or ANTH 355, or permission of instructor) Advanced topics in the use of symbolic theory within anthropology, including culturology and structuralism; the use of semiotic models of society, the relation of structure to process, culture to praxis, and ideology to society; the relevance of epistemology, phenomenology and linguistic philosophy for the study of socio-cultural phenomena.

● **ANTH 431 Problems in East Asian Archaeology.**

(3) (Prerequisite: ANTH 331 or permission of instructor) Critical examination of major issues in East Asian archaeology. Focus may change from year to year. Possible topics include: origins and evolution of Asian population; processes of plant domestication; development of complex societies based on hunting-gathering-fishing; and rise of civilizations and state formation in China, Japan, and Korea.

**ANTH 436 North American Native Peoples.**

(3) (Winter) (Prerequisite: ANTH 338, or ANTH 336, or permission of instructor) A detailed examination of selected contemporary problems.

**ANTH 438 Topics in Medical Anthropology.**

(3) (Fall) (Prerequisite(s): ANTH 227 and Honours/Major/Minor status in Anthropology or Minor Concentration in Social Studies of Medicine or permission of instructor.) Conceptions of health and illness and the form and meaning that illness take are reflections of a particular social and cultural context. Examination of the metaphoric use of the body, comparative approaches to healing, and the relationship of healing systems to the political and economic order and to development.

**ANTH 440 Cognitive Anthropology.**

(3) (Fall) (Prerequisite, two of the following: ANTH 204, ANTH 314, ANTH 352, ANTH 355, or ANTH 430, or permission of instructor.) The problem of knowledge; the nature of perception; the concept of mind; the relation between thought and language. The concept of meaning: communication, interpretation and symbolism. Social aspects of cognition; ideology.

● **ANTH 443 Medical Anthropological Theory.**

(3) (Fall) (Prerequisites: ANTH 227 and Honours/Major/Minor status in Anthropology or permission of instructor.) This course is intended to provide a comprehensive survey of the literature that constitutes the theoretical and conceptual core of medical anthropology. Emphasis is given to (1) the ethnographic sources of these ideas, (2) their epistemology, and (3) their methodological implications.

● **ANTH 451 Research in Society and Development in Africa.**

(3) (Winter) (Prerequisite: Open to U2 or later students in the AFSS.) (Corequisite: NRSC 452.) (Restriction: Open only to AFSS students during the year of participation in the field. Not open to students who have taken GEOG 451.) Instruction focuses on three goals: 1) existing research in selected core thematic areas, 2) participating in interdisciplinary team research, 3) developing powers of





●**ARTH 199 FYS: Themes in Art History.**

(3) (Topics will vary from year to year.) (Restriction: Open only to students in U0 or U1. Students may take only one First Year Seminar.) An introduction to a selected theme in art history.

●**ARTH 201 Introduction to Art History 2.**

(3) (Restriction: Not open to students in Art History programs; or students who have taken ARTH 200 prior to Fall 1991.) An introductory survey of the major figures, monuments and movements in Western painting, sculpture and architecture from the 15th century to the present. The underlying goal of course is to develop the student's awareness of the relation of form to content in a work of art.

**ARTH 204 Introduction to Medieval Art and Architecture.**

(3) Surveys the arts from late Antiquity to the fourteenth century in Western Europe. Focuses on the body and space to introduce artistic and architectural concepts, practices, and styles from the late Roman, Byzantine and Carolingian empires to monastic and royal patronage of the French Kings.

**ARTH 205 Introduction to Modern Art.**

(3) (Restriction: Not open to students who have taken ARTH 337 or ARTH 338) The course is an introduction to the modern period in art history which begins around 1750. It examines the development in both painting and sculpture and relates to changes in the social and political climate of the times.

**ARTH 207 Early Modern Art (1400-1700).**

(3) Survey of the visual culture of early modern Europe (1400-1700), including selected works in their historical context and explore the uses of visual forms in the formation of identities across various social spheres and geographical locations.

**ARTH 209 Introduction to Ancient Art and Architecture.**

(3) Survey of ancient art and architecture: pre-historic Europe, ancient Egypt, Greece and Rome. Focus is on issues of political power, gender, sexuality, race, the formation of individual and group identities, and the relation between the body and social space.

●**ARTH 215 Introduction to East Asian Art.**

(3) (Restriction: Not open to students taking or who have taken EAST 215.) Introductory survey of some of the major developments in the visual arts of Japan, China, and Korea. Emphasis will be placed on the diversity of artistic traditions in East Asia and the intersections among these traditions.

**ARTH 223 Introduction to Italian Renaissance Art.**

(3) Surveys artistic production in Italy from the new urban institutions of the communes to the demise of the Florentine republic (c. 1250-1512). Introduces art historical concepts through an exploration of the uses of visual imagery to forge civic, religious, political, and social identities. •

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**● ARTH 406 German Architecture.**

(3) (Prerequisite: At least one 300-level course in architectural history.) (Restriction: Not open to students who have taken ARTH 345.) The German architectural tradition from the early Middle Ages to the present, the impact neighbouring countries had on its development, and the influence it exercised on them. The construction of an imperial tradition, and its use (and abuse) by different political systems.

**● ARTH 415 Late Medieval & Renaissance Architecture in Northern Europe.**

(3) This course is to show the diversity of architectural practice in France, England, Germany and Central Europe from 1400 to 1600, covering ecclesiastical and secular architecture. The stylistic spectrum ranges from late Gothic over the reception of forms of the Italian Renaissance, to the revival of late Gothic forms, reaching its climax around 1600.

**ARTH 420 Selected Topics in Art and Architecture 1.**

(3) An advanced study of selected topics in the History of Art and Architecture.

**ARTH 421 Selected Topics in Art and Architecture 2.**

(3) Topic W2011 Arts of the Medieval Spain

**● ARTH 422 Selected Topics in Art and Architecture 3.**

(3)

**ARTH 435 Early Modern Visual Culture.**

(3) (Prerequisite: one 300-level Art History course recommended, or by permission of the instructor.) Topic for F2010 Globalization Selected topics in early modern visual culture (c. 1500-1750).

**ARTH 447 Independent Research Course.**

(3) (Prerequisite: permission of instructor.)

**● ARTH 457 Brushwork in Chinese Painting.**

(3) (Prerequisite: At least one EAST or ARTH course or permission of instructor.) (Restriction: Not open to students taking or who have taken EAST 457.) The seminar takes an in-depth look at the function and meaning of the brushwork in traditional Chinese painting. Analysis of paintings will be combined to close readings of theoretical texts in translation.

**ARTH 473 Studies in 17th and Early 18th Century Art 04.**

(3) Topic W2011: Early Modern Art and Science

**● ARTH 474 Studies in Later 18th and 19th Century Art 03.**

(3)

**ARTH 479 Studies: Modern Art and Theoretical Problems 04.**

(3)

**ARTH 490 Museum Internship.**

(3) The Museum Internship is intended to provide direct exposure to museum collections and practical experience in the museum setting for students interested in museum professions. Individually designed in consultation with the professor in charge of internships and the appropriate personnel at one of the Montreal museums.

**CANS-Canadian Studies**

Offered by: Institute for Study of Canada

**CANS 200 Introduction to the Study of Canada.**

(3) Course features guest lecturers. An overview of approaches to the study of Canada, including economic, political, historical and cultural dimensions.

**CANS 202 Canadian Cultures: Context and Issues.**

(3) (Prerequisite: ability to read French) A survey course which traces the history of Canadian cultures from the middle of the 19th century to the present. It surveys the diversity of Canadian cultural identities through literature, drama, art and the mass media. The course features guest lecturers. Some course material will be in French.

**CANS 300 Topics in Canadian Studies 1.**

(3) (Prerequisite: CANS 200 or permission of instructor) Topic is Buddhism in Canada. The Winter 2011 topic is Science and Medicine in Canada An interdisciplinary course on a Canadian Studies topic.

**CANS 301 Topics in Canadian Studies 2.**

(3) (Prerequisite: CANS 200 or permission of instructor) Fall 2010 topic is Indigenous Women of the North. The focus will be on the issues and the impact of Indigenous in different northern industrialized countries. Winter 2011 topic is: Provinces in Canada. The effect of regional and provincial culture on the operation of political parties and the institutions of government; the effect of modernization on provincial governments; the role of provincial sub-systems within the Canadian political system. An interdisciplinary course on a Canadian Studies topic.

**CANS 303 Topics in Canadian Studies 3.**

(3) (Prerequisite: CANS 200 or permission of instructor) Fall 2010 topic is Canadian Film and Television. The course explores how Canada's media products and policy speak to Canadian cultural issues. The course and its required assignments combine textual, historical and industrial analysis and introduces some key institutions and trends that comprise the Canadian media system. Winter 2011 topic is the Geography of Canada. An A comprehensive geographical interpretation of Canada's salient physical and human characteristics, including landscapes and their evolution, climate, vegetation, society/land relationship and socioeconomic attributes of the population. An interdisciplinary course on a Canadian Studies topic.

**● CANS 304 Nationalism in Canada.**

(3) (Restriction: Not open to students who have taken or are taking CANS 300, CANS 301, or CANS 303.) Canadian experience of nationalism over the past two centuries.

**● CANS 305 Canadian Modernity.**

(3) Forms of modernity in Canada, including modern technology, communications, and aesthetics, and their convergence with nationalism.

**CANS 306 Issues in Native Studies.**

(3) (Restriction: Not open to students who have taken Issues in Native Studies as a CANS topics course.) Past and present achievements and concerns within Native societies across Canada.

**● CANS 307 Canada in the World.**

(3) Canada's interaction with other countries and regions.

**● CANS 308 Sex and Gender in Canada.**

(3) Sex and gender in Canada in the past and the present.

**● CANS 401 Canadian Studies Seminar 1.**

(3) (Topic will vary from year to year depending on staff interests.) (Prerequisite: CANS 200 or permission of instructor) An interdisciplinary seminar on a Canadian Studies topic.

**● CANS 402 Canadian Studies Seminar 2.**

(3) (Prerequisite: CANS 200 or permission of instructor) An interdisciplinary seminar on a Canadian Studies topic.



**Always check at [www.mcgill.ca/study/](http://www.mcgill.ca/study/) for the most up-to-date information on whether a course is offered.**

\* Denotes courses taught only in alternate years.

‡ Professional Practice (Stage) in Dietetics involving special prerequisites

◆ Indicates that departmental approval/permission must be obtained by a student prior to registration.

† Denotes courses not available as Education electives.

□ Denotes courses with limited enrolment.

● Denotes courses not offered by the Faculty of Arts or Faculty of Science in 2010-11.

▲ Denotes courses offered by the Faculty of Education which, if appropriate to the student's program, may be included in the academic concentration.

\* Denotes courses which, because they are scheduled around practice teaching, are open only to Bachelor of Education students.



international order, Christian Democracy and the relationship between Catholicism, liberalism and communitarianism.

**CATH 370 Topics in Catholic Studies.**

(3) Winter 2011 seminar topic will be announced at a later date.

●**CATH 460 Catholic Studies Seminar.**

(3) (Prerequisite: CATH 200, or permission of instructor) A research seminar on a major theme and/or thinker. The seminar will evolve around primary source materials.

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## **CLAS-Classics**

Offered by: History

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**CLAS 200 Introduction to Ancient Greek Literature.**

(3) Survey of ancient Greek literature in translation from Homer to Second Sophistic, covering the key genres and texts of the Archaic, Classical, Hellenistic and Imperial eras. The material to be discussed includes Archaic epic, lyric and elegy; Classical tragedy, comedy and historiography; Hellenistic poetry, and literature of the Roman Imperial period.

●**CLAS 202 Greek Civilization: Classical.**

(3) The civilization of the Golden Age of Greece and the formation of the Classical Tradition, with some attention to its transmission to the Romans. Texts will be read in translation.

**CLAS 203 Greek Mythology.**

(3) A survey of the myths and legends of Ancient Greece.

●**CLAS 206 Classics in Modern Media.**

(3) Receptions of the classical paradigm of Ancient Greece and Rome in modern media, the classical tradition and current scholarship.

●**CLAS 208 Roman Literature and Society.**

(3) Life and society in the Roman Empire as reflected in contemporary authors of varying genres (epic, history, philosophy, satire and the novel).

●**CLAS 210 Introductory Latin 1.**

(6) A course for beginners.

**CLAS 210D1 (3), CLAS 210D2 (3) Introductory Latin 1.**

(Students must register for both CLAS 210D1 and CLAS 210D2) (No credit will be given for this course unless both CLAS 210D1 and CLAS 210D2 are successfully completed in consecutive terms) (CLAS 210D1 and CLAS 210D2 together are equivalent to CLAS 210) A course for beginners.

**CLAS 212 Introductory Latin 2.**

(3) (Winter) (Restriction: Permission of instructor required) A refresher course. Review of grammar and syntax; reading of simple sentences and connected passages.

**CLAS 220D1 (3), CLAS 220D2 (3) Introductory Ancient Greek.**

(Students must register for both CLAS 220D1 and CLAS 220D2.) (No credit will be given for this course unless both CLAS 220D1 and CLAS 220D2 are successfully completed in consecutive terms) A course for beginners.

**CLAS 230D1 (3), CLAS 230D2 (3) Introductory Modern Greek.**

(Restriction: Not open to students who have taken CLAS 236, CLAS 237 or CLAS 238.) (Students must register for both CLAS 230D1 and CLAS 230D2.) (No credit will be given for this course unless both CLAS 230D1 and CLAS 230D2 are successfully completed in consecutive terms) A course for beginners.

●**CLAS 300 Greek Drama and the Theatre.**

(3) A study of the Greek dramatists, both tragic and comic, in the light of their plays, with special emphasis on the theatrical techniques of the authors and the means of production in the Greek theatre.





**COMS 497 Independent Study.**

(3) (3 credits at the 200-level and 3 credits at the 300-level in COMS courses and permission of the instructor)  
Independent study of a particular topic in communication studies taken under the supervision of an instructor with relevant expertise in the area.

**COMS 510 Canadian Broadcasting Policy.**

(3) (Course intended for senior undergraduates and graduate students with a specialized interest in Canadian broadcasting policy.) (Prerequisites: 3 credits of COMS coursework at the 200-level, 3 credits of COMS coursework at the 300 or 400-level, or permission of instructor.) Key issues in the history and evolution of radio, television and new media in Canada. The legislative and regulatory framework of Canadian broadcasting, the relationship between public and privately-owned media, the emergence of new media, and the efforts of interest groups to influence the direction of the Canadian media system.

**●COMS 521 Communications in History.**

(3) North American communication studies have undergone five discernible changes in the definition and focus of the field. The major "schools" of thought to be covered are the Chicago and Lazarsfeld heritages, the institutionalization of communication science in the academy, and the post-modern period.

**●COMS 541 Cultural Industries.**

(3) The convergence of computerized technologies and cultural industries and how these have produced entire new forms of cultural expression in film, TV, and the Internet.

**●COMS 560 Communications and Development.**

(3)

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**EAPR-English for Academic Purposes**

Offered by: English&French Language Centre

**★EAPR 250 Research Essay & Rhetoric.**

(3) (3 hours) (Intended for native speakers of English. For students in all years and faculties.) (Entrance test: Short essay first day of class.) (Restrictions: Not open to students who have taken or are taking ESLN 500. Not open to students who have taken EFRL 250.) (Students who complete EAPR 250 may not subsequently take for credit an Effective Communication course offered by the Faculty of Education) Principles and use of academic research and genres, rhetorical strategies, and general editing skills.

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**EAST-Asian Language & Literature**

Offered by: East Asian Studies

**EAST 199 FYS: East Asian Culture.**

(3) (Restriction(s): Open only to newly admitted students in UO or U1, who may take only one FYS.) (Note: Enrollment limit 25. Students who register for more than one FYS will be obliged to withdraw from all but one of them.) (Note: Language of instruction is English.) An introduction to East Asian culture based on close examination of primary and secondary texts as well as visual materials.

**EAST 211 Introduction: East Asian Culture: China.**

(3) This course provides a critical introduction to central themes in Chinese culture. The course will also examine the changing representations of the Chinese cultural tradition in the West. Readings will include original sources in translation from the fields of literature, philosophy, religion, and cultural history.

**EAST 212 Introduction: East Asian Culture: Japan.**

(3) An introduction to Japan which presents various aspects of Japanese literature, culture, history, religions, philosophy and society.

**EAST 213 Introduction: East Asian Culture: Korea.**

(3) This course provides a critical introduction to central themes in Korean culture, including Korean literature, religions, philosophy, and socio-economic formations.

**EAST 214 Japanese Animation & New Media.**

(3) Animation and new media in Japan, with an emphasis on postwar developments.

**●EAST 215 Introduction to East Asian Art.**

(3) (Restriction: Not open to students taking or who have taken ARTH 215.) Introductory survey of some of the major developments in the visual arts of Japan, China, and Korea. Emphasis will be placed on the diversity of artistic traditions in East Asia and the intersections among these traditions.

**EAST 216 Chinese Action Film.**

(3) (Note: Course is given in English.) The study of the Chinese-language action film, with an emphasis on Mainland, Hong Kong and Taiwan cinemas. Topics will include: the historical development of martial arts film, the relation between traditional Chinese art forms and action film, and the formation of transnational cinemas and audiences.

**●EAST 220 First Level Korean.**

(9) (Summer) Introduction to the basic structures of the standard Korean language. The aim of this course is to give students a basic knowledge of the Korean language. Special emphasis is put on handling everyday conversation, reading and writing short texts, and mastering basic grammar rules.

**EAST 220D1 (4.5), EAST 220D2 (4.5) First Level Korean.**

(Students must register for both EAST 220D1 and EAST 220D2.) (No credit will be given for this course unless both EAST 220D1 and EAST 220D2 are successfully completed in consecutive terms) (EAST 220D1 and EAST 220D2 together are equivalent to EAST 220) Introduction to the basic structures of the standard Korean language. The aim of this course is to give students a basic knowledge of the Korean language. Special emphasis is put on handling everyday conversation, reading and writing short texts, and mastering basic grammar rules.

**●EAST 230 First Level Chinese.**

(9) (Requires departmental approval.) Introduction to the basic structures of Mandarin Chinese, Pin-yin romanization and 750 characters for reading and writing. Emphasis on developing aural and oral skills through communication games and interaction



**EAST 304 Current Topics: Chinese Studies 2.**

(3) (Winter) (Restriction: Departmental approval required)  
Consideration of important issues in Chinese Studies. Content of the course will vary from year to year.

●**EAST 305 Current Topics: Japanese Studies 1.**

(3) (Fall) (Restriction: Departmental approval required)  
Consideration of important issues in Japanese studies. The content of the course will vary from year to year.

**EAST 306 Current Topics: Japanese Studies 2.**

(3) (Winter) (Restriction: Departmental approval required)  
Consideration of important issues in Japanese studies. The content of the course will vary from year to year.

●**EAST 307 Topics: Chinese Language and Literature 1.**

(3) (Fall) (Prerequisite: EAST 211 or permission of instructor) (Restriction: Departmental approval required)  
Consideration of selected topics and aspects of Chinese literature and/or language. The content of the course may vary from year to year.

●**EAST 308 Topics: Chinese Language and Literature 2.**

(3) (Winter) (Prerequisite: EAST 211 or permission of instructor) (Restriction: Departmental approval required)  
Consideration of selected topics and aspects of Chinese literature and/or language. The content of the course may vary from year to year.

**EAST 313 Current Topics: Korean Studies 1.**

(3) (Fall) (Restriction: Departmental approval required.)  
Consideration of important issues in Korean Studies. Content of the course will vary from year to year.

the development of literati aesthetics and its intersections with the arts of the court, the temple, and the marketplace.

**EAST 362 Japanese Cinema.**

(3) This course will study the development of film in Japan during the 20th century with a particular focus on the analysis of film form, genres and history.

●**EAST 363 Aesthetics and Politics of Vision Premodern Japan.**

(3) (Prerequisite: EAST 212 or permission of instructor) This course examines cultural production in early and medieval Japan, focusing on calligraphy, painting, picture scrolls, gestures and their relation to textual production. Readings explore various classic texts, taboos against seeing and narrative modes of cognition.

**EAST 364 Mass Culture and Postwar Japan.**

(3) (Prerequisite: Any introductory course in literature or cultural studies, or permission of instructor) This course addresses a number of analytic approaches to mass culture in order to examine the culture industry of post-war Japan. Emphasis on narrative strategies in popular or consumer fiction and on the problems of marginalized writers.

●**EAST 370 History of Sexuality in Japan.**

(3) Social and cultural history of sexuality in Japan. Possible topics include pre-modern sexuality and relations to court, religion and anthropology; pre-modern sex and gender relations; modern sexuality and gender identities; sexuality and the rise of science; relation to nationalism; feminism and queer movements.

●**EAST 385 Society and Community in Korea.**

(3) This course will analyze topics in colonial and contemporary Korean life with a focus on the social institutions of family, school and workplace.

**EAST 390 The Chinese Family in History.**

(3) (Prerequisite: EAST 211 or HIST 208 or HIST 218 or permission of the instructor.) Exploration of the Chinese family in history both as an institution - in its religious, legal, economic, political aspects - and as a lived reality.

●**EAST 420 Third Level Korean 1.**

(3) (Restriction: Not open to students who have taken or are taking EAST 420D1/D2.) grammar, enhancing written and oral comprehension and improving writing and speaking skills.

●**EAST 421 Third Level Korean 2.**

(3) (Prerequisite: EAST 420 or equivalent or permission of instructor.) (Restriction: Not open to students who have taken or are taking EAST 420D1/D2.) Advanced grammar, enhancing written and oral comprehension and improving writing and speaking skills.

●**EAST 430 Third Level Chinese.**

(6) (Summer) (Prerequisite: EAST 330 or equivalent or permission of instructor) A communicative approach will be used to provide students with skills to communicate in various situations, express their ideas and feelings, and discuss various aspects of culture and life in China and in Canada. Teaching materials include Chinese movies on videotape and slides depicting Chinese life and culture.

**EAST 430D1 (3), EAST 430D2 (3) Third Level Chinese.**

(Prerequisite: EAST 330 or equivalent or permission of instructor) (Students must register for both EAST 430D1 and EAST 430D2.) (No credit will be given for this course unless both EAST 430D1 and EAST 430D2 are successfully completed in consecutive terms) (EAST 430D1 and EAST 430D2 together are equivalent to EAST 430) A communicative approach will be used to provide students with skills to communicate in various situations, express their ideas and feelings, and discuss various aspects of culture and life in China and in Canada. Teaching materials include Chinese movies on videotape and slides depicting Chinese life and culture.

●**EAST 440 Third Level Japanese.**

(6) More advanced study of the Japanese language. Emphasis will be placed on reading.

**EAST 440D1 (3), EAST 440D2 (3) Third Level Japanese.**

(Prerequisite: EAST 340 or equivalent or permission of instructor) (Students must register for both EAST 440D1 and EAST 440D2.) (No credit will be given for this course unless both EAST 440D1 and EAST 440D2 are successfully completed in consecutive terms) More advanced study of the

Japanese language. Emphasis will be placed on reading.

**EAST 453 Topics: Chinese Literature.**

(3) (Prerequisite: A 300-level course in any literature.) Advanced seminar in selected genres, themes and issues in Chinese literature.

●**EAST 454 Topics: Chinese Cinema.**

(3) (Prerequisites: EAST 353, a 300-level film studies course, or permission of the instructor.) Advanced seminar in selected themes and issues in Chinese film.

●**EAST 456 Chinese Drama and Popular Culture.**

(3) (Prerequisite: EAST 211 or permission of instructor) This course will examine the regional background of popular culture in Late Imperial China, focusing on the development of distinct traditions of regional drama. The levels of texts and audiences and the social and ritual contexts of theatrical performance in pre-modern China will also be considered.

●**EAST 457 Brushwork in Chinese Painting.**

(3) (Prerequisite: At least one EAST or ARTH course or permission of instructor.) (Restriction: Not open to students taking or who have taken ARTH 457.) The seminar takes an in-depth look at the function and meaning of the brushwork in traditional Chinese painting. Analysis of paintings will be combined to close readings of theoretical texts in translation.

**EAST 461 Inventing Modern Japanese Novel.**

(3) (Prerequisite: Any course in literature or cultural studies above the introductory level, or permission of instructor) An examination of the modern Japanese novel as a form which both

●EAST 494 Special Topics: East Asian Studies 2.





**ECON 305 Industrial Organization.**

(3) (Prerequisites: ECON 208 and ECON 209 or those listed under Prerequisites above) (Restriction: Not open to students who have taken ECON 305) The course analyzes the structure, conduct, and performance of industries, particularly but not exclusively in Canada. Topics include effects of mergers, barriers to entry, product line and promotion policies, vertical integration, and R & D policies of firms.

**ECON 306D1 (3), ECON 306D2 (3) Labour Economics and Institutions.**

(Prerequisites: ECON 208 and ECON 209 or those listed under Prerequisites above) (Students must register for both ECON 306D1 and ECON 306D2.) (No credit will be given for this course unless both ECON 306D1 and ECON 306D2 are successfully completed in consecutive terms) Key features of the Canadian labour sector effects and its historical development are described. Economists' ideas about the labour sector are sketched. The labour sector of various public programs, unemployment, and the labour movement are examined. Much attention is given to the status of women in the labour sector.

**●ECON 308 Governmental Policy Towards Business.**

(3) (Prerequisites: ECON 208 and ECON 209 or those listed under Prerequisites above) (Restriction: Not open to students who have taken 154-305D) Covers the major public policies toward business in Canada, such as competition policy, regulation, public ownership and privatization, industrial policies, and trade policies. Includes comparison with policies of other countries, especially the U.S. Readings will include some legal decisions.

**ECON 310 Introduction to Behavioural Economics.**

(3) (Prerequisites: ECON 208 and a statistics course or permission of the instructor.) An introduction to economic decision-making in markets and strategic environments, including bounded rationality, individual decision-making under uncertainty, and behavioural game theory.

**●ECON 311 United States Economic Development.**

(3) (Prerequisites: ECON 208 and ECON 209 or those listed under Prerequisites above) A survey of economic growth and institutional change in the United States. Emphasis will be placed on the use of analytical methods and categories and theories economists have developed for such studies.

**ECON 313 Economic Development 1.**

(3) (Prerequisite: ECON 208 and either ECON 209 or one development course.) (Restriction: Not open to students who have taken 154-313D.) Microeconomic theories of economic development and empirical evidence on population, labour, firms, poverty.

**ECON 347 Economics of Climate Change.**

(3) (Prerequisites: ECON 208 and ECON 209 or those listed under Prerequisites above) The course focuses on the economic implications of, and problems posed by, predictions of global warming due to anthropogenic emissions of greenhouse gases. Attention is given to economic policies such as carbon taxes and tradeable emission permits and to the problems of displacing fossil fuels with new energy technologies.

**●ECON 348 Urban Economics.**

(3) (Prerequisite: ECON 208.) (Restriction: For U2 or U3 students only.) Economic explanations for the rise of cities; their economic benefits and externalities. Economic challenges to cities in the modern context. Examination of municipal policies and of economic, legal and political constraints on cities.

**ECON 352D1 (3), ECON 352D2 (3) Macroeconomics-Honours.**

(Prerequisite: ECON 250D1/ECON 250D2) (Corequisite: ECON 257D1) (Students must register for both ECON 352D1 and ECON 352D2) (No credit will be given for this course unless both ECON 352D1 and ECON 352D2 are successfully completed in consecutive terms) Basic macroeconomic theory, emphasizing the Classical and Keynesian ideas for the short-run determination of output, employment, interest rates and prices in the economy. Elements of international economics, money and banking and growth theory. The structure of the Canadian economy.

**ECON 399 Internship: Economics.**

(3) (Restriction: Open to U2 and U3 students with a minimum CGPA of 3.0 and permission of the departmental Internship Advisor. This course will not normally fulfill program requirements for honours, major or minor programs. A letter from a supervisor at the institution must attest to the successful completion of the student's tenure. The topic must fall within the student's program in economics and have the prior approval of a faculty member in the department.) Internship with an approved host institution or organization.

**ECON 405 Natural Resource Economics.**

(3) (Prerequisite: ECON 230 or ECON 250) Topics include: Malthusian and Ricardian Scarcity; optimal depletion of renewable and non-renewable resources; exploration, risk and industry structure, and current resources, rent and taxation. Current public policies applied to the resource industries, particularly those of a regulatory nature.

**ECON 406 Topics in Economic Policy.**

(3) (Prerequisites: ECON 230 or ECON 250 and one of ECON 227, ECON 257) Selected policy issues are investigated using economic theory. For details on topics covered in the current year, consult the instructor.

**ECON 408 Public Sector Economics 1.**

(3) (Prerequisite: ECON 230D1/D2 or 250D1/D2 or permission of the instructor.) (Not open to students who have already completed ECON 408D1/D2.) Theoretical and empirical economic analysis of the public sector with an emphasis on public goods and government spending. Study of Canadian institutions in international perspective.

**ECON 409 Public Sector Economics 2.**

(3) (Prerequisite: Econ 408 or permission of the instructor) (Restriction: Not open to students who have taken ECON 408 D1/D2) Theoretical and empirical economic analysis of the public sector with an emphasis on taxation. Study of Canadian institutions in international perspective.

**ECON 411 Economic Development: A World Area.**

(3) (Prerequisites: ECON 230 or ECON 250 and one semester of economic development) An advanced course in the economic development of a pre-designated underdeveloped country or a group of countries.

**●ECON 416 Topics in Economic Development 2.**

(3) (Prerequisite: ECON 230 or ECON 250 or permission of the instructor) This course gives students a broad overview of the economics of developing countries. The course covers micro and macro topics, with particular emphasis on the economic analysis at the micro level.

**●ECON 420 Topics in Economic Theory.**

**ECON 451 Seminar in Economic History.**

(3) (Prerequisites: one of ECON 227, ECON 317, ECON 257 or ECON 357 and either ECON 330 or ECON 352)

In this course economic theory is explicitly employed to elucidate issues in economic history. The topics will be announced at the beginning of the academic year.

**●ECON 453D1 (3), ECON 453D2 (3) International Economics - Honours.**

(Prerequisites: ECON 250D1/ECON 250D2 and ECON 352D1/ECON 352D2) (Students must register for both ECON 453D1 and ECON 453D2.) (No credit will be given for this course unless both ECON 453D1 and ECON 453D2 are successfully completed in consecutive terms) The pure theory of trade; Ricardian, Heckscher-Ohlin-Samuelson models; tariff theory and policy; the Canadian balance of payments; balance of payments disequilibrium analysis and policy; the exchange rate, international monetary economics, international policy coordination.

**ECON 459 Topics in Monetary Economics - Honours.**

(3) (Prerequisite: ECON 230 or ECON 250, and knowledge of calculus.) (Restriction: For Honours in Economics)

(Restriction: Not open to students who have taken ECON 458)

An advanced treatment of selected topics in monetary economics, including the theory and practice of monetary policy.

**ECON 460 History of Thought 1 - Honours.**

(3) (Prerequisite: ECON 250.) (Corequisite: ECON 352)

The evolution of economic thought prior to the close of the 19th century, as reflected in the writings of prominent economists from the time of Adam Smith to the emergence of marginalism and neoclassical economics.

**●ECON 461 History of Thought 2 - Honours.**

(3) (Prerequisite: ECON 250.) (Corequisite: ECON 352)

The evolution of economic thought in the 20th century, as reflected in the writings of prominent economists on equilibrium, dynamics, games, expectations, econometrics, industrial structure, economic policy and other primary areas of interest.

**ECON 468 Econometrics 1 - Honours.**

(3) (Prerequisite(s): ECON 257D1/D2 or permission of the instructor.) (Restriction(s): Not open to students who have taken or are taking ECON 467D1/D2) The statistical basis of econometric modelling and treatment of the linear regression model; simple time series models; procedures for inference in linear cases; an introduction to methods for dealing with endogeneity and non-constant variance.

**ECON 469 Econometrics 2 - Honours.**

(3) (Prerequisite: ECON 468) (Restriction(s): Not open to students who have taken or are taking ECON 467D1/D2)

Treatment of asymptotic theory and classical inferential procedures, an introduction to the bootstrap, maximum likelihood, non-linear models, mis-specification testing, non-stationarity and limited dependent variable models.

**●ECON 473 Income Distribution.**

(3) (Prerequisite: ECON 230 or ECON 250. Equivalent of a full year course in statistics as the requirement applicable to Majors and Honours in economics, and calculus 1 and 2) Theory and measurement of income distribution, disparities and poverty. The course examines intertemporal dynamics affecting individuals and socioeconomic groups. The incidence of (costs and benefits from) fiscal and restrictive programmes, inflation and unemployment is evaluated.

**ECON 480 Research Project.**

(3) (Restrictions: Open to U3 students only. Students must complete a Research Project Registration Form, have it signed by the professor who has agreed to supervise the research project, countersigned by an advisor, and submit it to the Department Office in Leacock 443 prior to registering in this course. A student cannot take this course more than once for credit.) In this course students must undertake a research project under close supervision. They must also do such special reading and research as their advisers direct.

**ECON 481 Research Project.**

(3) (Restrictions: Open to U3 students only. Students must complete a Research Project Registration Form, have it signed by



●ENGL 204 English Literature and the Bible.

(3) This course will examine the literary dimensions of the Bible including structure, style, and meaning as well as its status as Sacred Book. The influence of the Bible-as-metatext on the secular literature of the West will be the focus of the discussion.

●ENGL 215 Introduction to Shakespeare.

(3) (Fall) A study of a selection of plays, in their intellectual and theatrical context, with an emphasis on the interplay of text and performance.

★ ENGL 225 American Literature 1.

(3) (Fall) A study of the literary works of earlier American writers.

★ ● ENGL 226 American Literature 2.

(3) (Winter) A study of the literary works of later American writers.

●ENGL 227 American Literature 3.

(3) A study of literary works which may be thematic or may deal with a special group of authors.

★ ● ENGL 228 Canadian Literature 1.

(3) (Fall) A chronological survey of Canadian literature, Part 1.

ENGL 229 Canadian Literature 2.

(3) (Fall) A chronological survey of Canadian literature, Part 2. A continuation of ENGL 228.

ENGL 230 Introduction to Theatre Studies.

(3) (Fall) An introduction to dramatic literature, text analysis, textual and performance theory, and theatre history.

ENGL 237 Introduction to Study of a Literary Form.

(3) (Winter) (In 2010-2011): The Novel: From Romance to Magic Realism An introduction to literary study through a survey of a literary genre, mode, or form.

ENGL 269 Introduction to Performance.

(3) (Winter) (Restriction: Permission of instructor required.) (Open to Drama and Theatre Majors) The focus of this course is on the actor as communicator, and on those things (material, physical, and textual) which are inescapably central to the theatrical performance.

ENGL 275 Introduction to Cultural Studies.

(3) (Fall) (Required of all U1 Cultural Studies students) A survey of cultural studies, its history and subject matter, presenting key interpretive and analytic concepts, the aesthetic and political issues involved in the construction of sign systems, definitions of culture and cultural values conceptualized both as a way of life and as a set of actual practices and products.

ENGL 276 Methods of Cultural Analysis.

(3) (Winter) (Prerequisite: ENGL 275) A study of basic methodologies found in cultural studies, such as forms of historicism, Marxism, psychoanalysis, philosophical materialism, feminism, gender theory. Topics such as aesthetics and film theory, authorship and spectatorship, modernism and postmodernism will be considered. Examples to be drawn from film, television, popular culture, and traditional literature.

ENGL 277 Introduction to Film Studies.

(3) (Fall) (Restriction: Cultural Studies Major and Honours program students.) An introduction to key concepts in film studies. Exemplary works from the history of film will be studied to introduce students to such topics as the aesthetics of film; sound's production of meaning; film as narrative; film and genre; period and national cinemas; film's role in culture.

●ENGL 279 Introduction to Film as Art.

(3) An introduction to film aesthetics, with emphasis on narrative, style and genre throughout the history of cinema.

●ENGL 280 Introduction to Film as Mass Medium.

(3) (Students will be required to pay a screening fee.) An introduction to film's social, historical, and technological contexts, including its relationships to other mass media.

●ENGL 297 Special Topics of Literary Study.

(3) .

ENGL 301 Earlier 18th Century Novel.

(3) (Fall) Study of the English novel to c. 1750.

★ ● ENGL 302 Restoration and 18th C. English Literature 1.

(3) (Winter) A study of the major writers of the late 17th and earlier 18th centuries.

★ ● ENGL 303 Restoration and 18th C. English Literature 2.

(3) A study of the major writers of the later 18th century.

ENGL 304 Later Eighteenth Century Novel.

(3) (Winter)

ENGL 305 Renaissance English Literature 1.

(3) (Winter) (In 2010-2011): 16th-Century Nondramatic Literary Culture A study of major non-dramatic works of the earlier Renaissance in England.

●ENGL 306 Theatre History: Medieval and Early Modern.

(3) A survey of the dramatic forms and theatrical practices of late medieval and early modern theatre.

●ENGL 307 Renaissance English Literature 2.

(3) (Winter) A study of major non-dramatic works of the later Renaissance in England.

●ENGL 308 English Renaissance Drama 1.

(3) An overview of some major authors and issues in English Renaissance Drama.

●ENGL 309 English Renaissance Drama 2.

(3) (Winter) An overview of some major authors and issues in English Renaissance Drama.

ENGL 310 Restoration and 18th Century Drama.

(3) (Fall) (In 2010-2011): Restoration Comedy

ENGL 273 a Q Betics.

(3) (Fall) (Restriction: Limited to students in English Major Concentration, Literature Option.) Discussion and application of basic critical tools for analysis of literature. Study of such features of poetry and prose fiction as prosody, d 1 0 0 ENofin finalysis9s0 0 1 21.6 1 q Q B

● **ENGL 319 Theory of English Studies 3.**

(3) (Restriction: Limited to students in English Major and Honours Programs) Issues in interpretation: authorship, performance, reception.

● **ENGL 320 Postcolonial Literature.**

(3) (Fall) (In 2010-2011): Familiar & Unknown Landscapes

● **ENGL 321 Caribbean Fiction.**

(3)

● **ENGL 322 Theories of the Text.**

(3) (Fall) (Restriction: Limited to students in English Major and Honours Programs.) A course focusing on textuality (as

**ENGL 360 Literary Criticism.**

(3) (Fall) (Prerequisite: at least 3 credits of ENGL 200, ENGL 201, ENGL 202, ENGL 203. Pre-/Co-requisite: ENGL 311. Required for but not restricted to Literature Honours students) Principles of literary criticism.

**ENGL 361 Poetry of the 20th Century 1.**

(3) (Fall) A critical survey of major British and North American poetry, c. 1890 - 1940.

**●ENGL 362 Poetry of the 20th Century 2.**

(3) (Prerequisite: ENGL 311) A critical survey of contemporary British and North American poetry, c. 1930 - 1980.

**●ENGL 363 Studies in the History of Film 3.**

(3) Developments in post-1958 cinema, from the European New Waves to contemporary global and independent cinemas.

**●ENGL 364 Creative Writing: Fiction 2.**

(3) (Restriction: Permission of instructor required.) Advanced seminar on writing prose fiction; admission subject to application, with writing sample.

**ENGL 365 Costuming for the Theatre 1.**

(3) (Fall) (Restriction: Permission of instructor required.) (Restriction: Not open to students enrolled in ENGL 368) Introduction to costume-making for the theatre, covering fabrics, textiles and costume decoration.

**●ENGL 366 Film Genre.**

(3) A discussion of an individual genre of cinema; concept of genre.

**●ENGL 367 Acting 2.**

(3) (Fall) (Prerequisite: ENGL 260 and permission of instructor.) (Restriction: Not open to students who have taken 110-469D) The actor as analyzer of scripts and characters; textual analysis, practice in character development through improvisations, mask work and physical training.

**ENGL 368 Stage Scenery and Lighting 1.**

(3) (Fall) (Restriction: Permission of instructor required.)

(Restriction: Not open to students enrolled in ENGL 365) An introduction to the technical aspects of stage settings and theatrical lighting.

**●ENGL 369 Creative Writing: Playwriting.**

(3) (Restriction: Permission of instructor required.)

**ENGL 370 Theatre History: The Long Eighteenth Century.**

(3) (Winter) (In 2010-2011): The Long 18th Century A survey of dramatic forms and genres and theatrical practices from the Restoration through the 18th century to the Romantic period.

**●ENGL 371 Theatre History: 19th to 21st Centuries.**

(3) (Winter) History of predominantly Western theatre practices from circa 1830 to the present.

**ENGL 372 Stage Scenery and Lighting 2.**

(3) (Winter) (Restriction: Not open to students enrolled in ENGL 377.)

**●ENGL 373 Voice and Speech 2.**

(3)

**●ENGL 374 Film Movement or Period.**

(3) Study of a significant movement or period in film history.

**ENGL 375 Interpretation Dramatic Text.**

(3) (Fall) (Prerequisites: ENGL 230 and ENGL 269 or permission of the instructor) A study of the dramatic text as literature, and as a basis for theatre production. Emphasis on character and character development, on structure and motivational units, and on the visualization of the play in

● **ENGL 394 Popular Literary Forms.**

(3) A popular literary author or genre, such as the romance novel, science fiction, the graphic novel, or cyberpunk.

● **ENGL 395 Cultural and Theatre Studies.**

(3) (Prerequisite: ENGL 275) The relationships between theatre and forms of popular culture, including but not limited to cinematic and televisual adaptations of theatrical works.

● **ENGL 397 Feminist Approaches to Cultural Studies.**

(3) Primarily European and North American feminist cultural theories and their application to the study of different textual and cultural practices; feminist critiques which investigate questions of voice, authorship, discourse, power, language, and the media.

● **ENGL 398 Psychoanalytic Approaches to Cultural Studies.**

(3) Various psychoanalytic approaches to cultural production and reception.

**ENGL 400 Earlier English Renaissance.**

(3) (Winter) (In 2010-2011): Marlowe and Jonson

● **ENGL 401 Studies in the 17th Century.**

(3)

● **ENGL 403 Studies in the 18th Century.**

(3)

● **ENGL 404 Studies in 19th Century Literature 1.**

(3) (Winter)

**ENGL 405 Studies in 19th Century Literature 2.**

(3) (Fall) (In 2010-2011): The Victorian Sensation Novel

**ENGL 407 The 20th Century.**

(3) (Winter) (In 2010-2011): Counter-Current at the Margins

**ENGL 408 The 20th Century.**

(3) (Winter) (In 2010-2011): The 20th C Writes Back

● **ENGL 409 Studies in a Canadian Author.**

(3) (Winter) (Prerequisite: previous work in Canadian Literature) Advanced study of a significant author in Canadian literature.

●ENGL 465D1 (4.5), ENGL 465D2 (4.5) Theatre Laboratory.  
(Prerequisites: ENGL 230, ENGL 269 and ENGL 367 or

**ENGL 500 Middle English.**

(3) (Fall) (In 2010-2011): Women's Lives, Women's Bodies

**ENGL 501 16th Century.**

(3) (Fall) (In 2010-2011): Sex Differences & Sexual  
Dissidence in Early Modern Culture: Literary & Social Context

● **ENGL 502 17th Century.**

(3)

**ENGL 503 18th Century.**

(3) (Winter)

● **ENGL 504 19th Century.**

(3)

**ENGL 505 20th Century.**

(3) (Winter)

**ENGL 516 Shakespeare.**

(3) (Fall) (In 2010-2011): Shakespeare, Theatre and Mass  
Media

● **ENGL 525 American Literature.**

(3)

**ENGL 527 Canadian Literature.**

**FILM 279 Introduction to Film History.**

(3) (Expected enrollment: 175 students. Language of instruction: English.) An introduction to representative periods, movements and styles in the history of cinema, as well as questions of film historiography.

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**FREN-French**

Offered by: French Language & Literature

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**FREN 198 FYS: Introduction to French and Québec Literature.**

(3) (Course given in English. Students may take only one First Year Seminar. Students who register for more than one will be removed from all but one of them.) (Restriction: Open only to newly admitted students in U0 or U1.) Introduction to French and Québec literature in English translation.

**FREN 199 FYS: Littérature française.**

(3) (Restriction: Ouvert aux seuls nouveaux étudiants de U0 ou de U1, qui ne peuvent s'inscrire qu'à un seul séminaire de première année (FYS). Les étudiants qui s'inscriraient à plus d'un de ces séminaires devront se retirer pour n'en conserver qu'un seul.) (Maximum de 25 étudiants) Étude d'une problématique littéraire à travers quelques textes importants de la francophonie.

**◆FREN 201 Composition 1.**

(3) (Fall) (Préalable : test. Effectifs contingentés. Autorisation départementale requise.) Révision grammaticale et enrichissement des moyens d'expression par la composition et l'étude de textes littéraires.

**◆FREN 203 Composition 2.**

(3) (Winter) (Préalable: FREN 201 ou test. Effectifs contingentés. Autorisation départementale requise) Enrichissement de la langue, délimitation des faits d'expression; étude systématique des ressources expressives du français. Rédactions.

**◆FREN 222 Introduction aux études littéraires.**

(3) (Restriction: Cours réservé aux étudiants inscrits à un programme du Département de langue et littérature françaises. Autorisation départementale requise.) Présentation d'un aperçu global de la littérature de langue française, de ses enjeux et des grandes préoccupations qui y ont cours. Initiation aux grands principes de la lecture littéraire et à l'utilisation des principaux outils de consultation et de recherche.

**FREN 360 La littérature du 19e siècle 1.**

(3) Étude d'oeuvres, d'auteurs ou de courants de la littérature française du 19e siècle.

**●FREN 362 La littérature du 17e siècle 1.**

(3) Étude d'oeuvres, d'auteurs ou de courants de la littérature française du 17e siècle.

**FREN 364 La littérature du 18e siècle 1.**

(3) Étude d'oeuvres, d'auteurs ou de courants de la littérature française du 18e siècle.

**●FREN 366 Littérature de la Renaissance 1.**

(3) Étude d'oeuvres, d'auteurs ou de courants de la littérature française du 16e siècle.

**●FREN 372 Littérature québécoise 1.**

(3) Étude d'oeuvres, d'auteurs ou de courants de la littérature québécoise des origines à nos jours.

**●FREN 375 Théâtre québécois.**

(3) Survol de l'activité théâtrale au Canada français depuis les origines. Étude de la production québécoise depuis 1945. Analyse formelle et socio-historique des oeuvres.

**FREN 376 Correction et révision.**

(3) Principes et pratiques de la révision et de la correction de textes en vue de la publication.

**●FREN 377 Pratiques de l'édition littéraire.**

(3) Initiation aux techniques et aux règles de l'édition de textes littéraires.

**●FREN 380 Littérature de la francophonie.**

(3) Étude d'oeuvres, d'auteurs ou de thèmes importants de la littérature de langue française à l'extérieur de la France et du Québec.

**FREN 382 Littérature québécoise 2.**

(3) Étude d'oeuvres, d'auteurs ou de courants de la littérature québécoise.

**●FREN 384 Le récit bref.**

(3) Analyse des techniques de composition des récits et des recueils. Étude de recueils de nouvelles d'expression française aux 19e et 20e siècles.

**●FREN 391 Doctrines et idées littéraires 1.**

(3) Études des doctrines et des idées ayant orienté la littérature française du moyen âge au 18e siècle.

**●FREN 394 Théorie de la traduction.**

(3) Survol des conceptions de la traduction depuis les «Belles Infidèles». Étude des principales théories qui ont marqué l'activité traduisante au 20e siècle. Étude des liens entre la théorie et la pratique. Lecture de textes et discussions.

**◆ ● FREN 431 Traduction 4.**

(3) (Fall) (Restriction : Cours réservé aux étudiants des programmes de spécialisation, de double-spécialisation et de concentration majeure du DLLF.) (Préalable : FREN 349 ou test. Autorisation départementale requise.) Révision de textes, principes et pratiques de la révision unilingue et bilingue. Initiation au contrôle de la qualité. La profession de réviseur. Travaux pratiques.

**●FREN 433 Sémantique et lexicologie.**

(3) (Préalable : FREN 231 ou permission du professeur.) Théories contemporaines de sémantique et de lexicologie. Notions de lexicographie. Changements sémantiques, idiotismes, néologismes, etc.

**FREN 434 Sociolinguistique du français.**

(3) Éléments de sociolinguistique et leur application aux pays francophones. Rapports entre les aspects phonologiques, grammaticaux et lexicologiques du parler et le milieu social. Langues en contact, planification linguistique.

**●FREN 440 Atelier d'écriture dramatique.**

(3) (Effectifs contingentés.) Pratique des formes et des techniques de la création théâtrale et cinématographique.

**FREN 441 Traduction français-anglais.**

(3) (Préalable : FREN 244 ou permission du professeur.) Traduction de textes généraux du français vers l'anglais.

**FREN 443 Traduction littéraire.**

(3) (Préalable : FREN 431 ou permission du professeur.) Étude des problèmes pratiques que pose la transposition en français de qualité d'un texte originellement rédigé en anglais littéraire. Traduction de textes et discussion.

**FREN 444 Thème de littérature moderne.**

(3) (Préalable : FREN 222) ens end C



● **FREN 482 La littérature du 19e siècle 2.**

(3) Étude d'oeuvres, d'auteurs ou de courants de la littérature française du 19e siècle.

● **FREN 483 Le roman depuis Sartre.**

(3) Le roman d'après-guerre. Techniques de composition; relations entre l'univers imaginaire des romanciers et leur époque.

● **FREN 484 La littérature du 19e siècle 3.**

(3) (Restriction: Permission du professeur.) Étude, à travers tout le 19e siècle, de thèmes ou de questions d'esthétique parmi les plus importants dans le développement de la littérature moderne.

**FREN 485 Littérature française contemporaine.**

(3) Études d'oeuvres, d'auteurs ou de thèmes importants de la littérature française récente et actuelle.

● **FREN 486 L'Institution littéraire.**

(3) Introduction à la nouvelle histoire littéraire, ce cours explore les conditions socioculturelles qui rendent possibles le « champ littéraire » et la littérature dans une société. Le processus d'institutionnalisation inclut l'étude de la production de la littérature, sa diffusion, sa consommation, sa réception et ses formes de consécration.

● **FREN 487 L'essai québécois.**

(3) Étude du genre et de sa spécificité en regard de la littérature personnelle et du pamphlet. Analyse des aspects formels de l'essai et du contenu traité comme trajectoire de l'histoire des idées de 1840 à nos jours.

**FREN 490 Théorie littéraire contemporaine.**

(3) (Winter) (Cours réservé aux étudiants de U2 et U3.) Étude des grands courants critiques et théoriques actuels et récents.

● **FREN 492 Histoire de la traduction.**

(3) Histoire des pratiques et des théories de la traduction de l'Antiquité à nos jours.

● **FREN 493 Critique et théorie 2.**

(3) (Fall) (Restriction : Cours réservé aux étudiants du Département.) (Préalables : Option Lettres : FREN 374, FREN 252, FREN 397; FREN 490, FREN 497; Option Lettres et traduction : FREN 374, FREN 252, FREN 490.) (Note: Not open to students who are taking or have taken FREN 493 prior to Fall 2006.) Étude de l'évolution récente de la critique et de la théorie.

**FREN 494 Traduction spécialisée.**

(3) (Préalable : FREN 431 ou permission du professeur.) Ce séminaire a pour but d'approfondir les connaissances dans une perspective d'exercice pratique de la traduction. Il

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Not open to student who have grade 10 French or higher in Canada or equivalent (unless special permission is granted.) Refresher course for students who have had fewer than 80 hours of previous French instruction or who have had lower than Grade 10 in French in Canada (or equivalent). Instructions in basic vocabulary and grammar applied to oral/written French. Cultural texts, short essay, and practice of basic speech patterns.

**FRSL 104 Corrective French Pronunciation.**

(3) (Prerequisite: Placement test or Instructor's recommendation.) (Restrictions: Not open to students above Elementary level French. Not open to students with no previous knowledge of French.) (Note: 2 hours of oral work, 1 hour of language lab. The course may be taken concurrently with FRSL 101, 105, 206 / 207 / 208.) Introduction to French phonetics. Course designed for students who have some previous knowledge of French at a Beginner/Elementary level and need to work on pronunciation, auditory discrimination and oral expression in order to continue developing their French skills. Corrective phonetics. Intensive oral practice. Guided work in language lab.

**FRSL 105 Intensive Beginners' French.**

(6) (Fall) (6 hours, plus language laboratory and oral practice with a French monitor) (Prerequisite: Placement test) (Restriction: Not open to students who have taken FRSL 201 or FRSL 205 or FRSL 101) A comprehensive introduction to basic vocabulary, grammatical structures and speech patterns of written and oral French for students in any degree program having no previous knowledge of French. Learning to communicate at a functional level in a French social milieu, short essays, cultural readings, mandatory lab practice and conversation class.

**FRSL 206 Elementary French.**

(3) (Fall) (3 hours, plus language laboratory) (Prerequisite: Placement test) Equivalent to FRSL 207D1. Only with special permission of the Department.

●**FRSL 207 Elementary French 01.**

(6) (Language laboratory) (Prerequisite: Placement test) (Restriction: Not open to students who have taken Grade 12 or 13 French in Canada, or equivalent) Review and further training in basic structures, with emphasis on oral expression and listening comprehension. Awareness of French culture developed through audio-visual material and selected readings.

**FRSL 207D1 (3), FRSL 207D2 (3) Elementary French 01.**

(3 hours, plus language laboratory) (Prerequisite: Placement test) (Restriction: Not open to students who have taken Grade 12 or 13 French in Canada, or equivalent) (Students must register for both FRSL 207D1 and FRSL 207D2.) (No credit will be given for this course unless both FRSL 207D1 and FRSL 207D2 are successfully completed in consecutive terms) (FRSL 207D1 and FRSL 207D2 together are equivalent to FRSL 207) Review and further training in basic structures, with emphasis on oral expression and listening comprehension. Awareness of French culture developed through audio-visual material and selected readings.

**FRSL 208 Intensive Elementary French.**

(6) (6 hours, plus language laboratory) (Prerequisite: Placement test) (Restriction: Not open to students who have taken Grade 12 or 13 French in Canada, or equivalent or FRSL 207) Review and further training in basic structures, with emphasis on oral expression and listening comprehension.

●**FRSL 211 Oral and Written French 1.**

(6) (Language laboratory) (Prerequisite: Placement test. Open to students in any degree program having an elementary knowledge of French and to those who have completed FRSL 207) (Restriction: Not open to students from Québec) Language lab attendance required. Grammar review, comprehension, vocabulary development, selected readings and group discussions.

**FRSL 211D1 (3), FRSL 211D2 (3) Oral and Written French 1.**

(3 hours, plus language laboratory) (Prerequisite: Placement test. Open to students in any degree program having an elementary knowledge of French and to those who have completed FRSL 207) (Restriction: Not open to students from Québec) (Students must register for both FRSL 211D1 and FRSL 211D2.) (No credit will be given for this course unless both FRSL 211D1 and FRSL 211D2 are successfully completed in

consecutive terms) (FRSL 211D1 and FRSL 211D2 together are equivalent to FRSL 211) Language lab attendance required. Grammar review, comprehension, vocabulary development, selected readings and group discussions.

**FRSL 212 Oral and Written French 1.**

(3) (Fall) (3 hours, plus language laboratory) (Prerequisite: Placement test) Equivalent to the first half of FRSL 211. Only with special permission of the Department.

**FRSL 215 Oral and Written French 1 - Intensive.**

(6) (Fall) (6 hours, plus language laboratory) (Prerequisite: Placement test. Open to students in any degree program having an elementary knowledge of French and to those who have completed FRSL 207) (Restriction: Not open to students from Québec) Language lab attendance required. Grammar review, comprehension, vocabulary development, selected readings and group discussions.

●**FRSL 216 Découvrons Montréal en français.**

(3) (3 hours) (Prerequisite: Placement test. Priority given to Freshman students) The course introduces students to various aspects of the French culture of the Montreal area through the exploration of pre-selected sites on the Internet. Students will



**GERM 300 German Language Intensive Intermediate.**

(6) (Fall) (6 hours, plus 1 hour laboratory) (Prerequisite: GERM 200 or GERM 202, 202D1/D2 or equivalent, or permission of Department) (Required for program students) Continuation of GERM 200; covers the second level (GERM 307D1/GERM 307D2) in one term.

● **GERM 307 German Language - Intermediate.**

(6) (6 hours) (Prerequisite: GERM 202 or GERM 200, or equivalent, or permission of Department) Review of grammar, further development of basic skills; literary and cultural readings.

**GERM 307D1 (3), GERM 307D2 (3) German Language - Intermediate.**

(Fall, Winter) (Prerequisite: GERM 200 or GERM 202, 202D1/D2, or equivalent, or permission of Department.) (Students must register for both GERM 307D1 and GERM 307D2.) (No credit will be given for this course unless both GERM 307D1 and GERM 307D2 are successfully completed in consecutive terms) Review of grammar, further development of basic skills; literary and cultural readings.

**GERM 325 German Language - Intensive Advanced.**

(6) (Fall or Winter) (6 hours) (Prerequisite: GERM 300 or GERM 307D1/D2, or equivalent, or permission of Department.) (Required for program students.) This course aims at developing post-intermediate proficiency in listening, speaking, reading, and writing skills, with emphasis on oral and written expression. Special attention is given to word formation and to the proper choice of grammatical structures, vocabulary, and phraseology.

● **GERM 330 Landeskunde.**

(3) (Winter) (Given in German) (Prerequisite: GERM 325 or equivalent, or permission of Department.) Introduction to images of modern Germany, perceptions and conceptions of Germany since the Second World War.

● **GERM 331 Germany after Reunification.**

(3) (Winter) (Given in German) (Prerequisite: GERM 325 or equivalent, or permission of the Department) The events which led to the fall of the Berlin Wall, the reunification of Germany in 1990 and the changing cultural, social, political and economic landscape of the 'New Germany'. Highlighting issues of cultural and social politics, texts discussed include historical, literary and film material.

**GERM 336 German Language, Media and Culture.**

(3) (Winter) (Course taught entirely in German.) (Prerequisite: GERM 307 or equivalent; GERM 325 may be taken concurrently) (Restriction: Not open to students who have taken GERM 336 prior to September 2009.) Introduction to German culture through literary and non-literary texts, film, multimedia, commercials, painting and photography. By learning how to read these cultural productions, students will refine their communication skills, expand reading strategies, build vocabulary, and review selective grammatical structures.

● **GERM 341 Essay Writing.**

(3) (Fall) (Given in German) (Prerequisite: GERM 325 or

● **GERM 362 20th Century Literature Topics.**

(3) (Fall) (Given in German) (Prerequisite: Germ 325 or equivalent) Introduction to selected topics and genres in

workse.

) Winter Taught in Spanish (Prerequisite: HISP

HISP 43 Survey of Spanish-American literature 1'

HISP301e Hispanic literature - English Translation 1'

**●HISP 202D1 (3), HISP 202D2 (3) Portuguese Language: Beginners'.**

(Fall, Winter) (4 hours weekly, including laboratory)  
 (Restriction: Departmental approval required) (Restriction: beginners only) (Students must register for both HISP 202D1 and HISP 202D2.) (No credit will be given for this course unless both HISP 202D1 and HISP 202D2 are successfully completed in consecutive terms) A comprehensive first-year course in speaking, reading and writing. Selected readings in Portuguese and Brazilian literature.

**●HISP 204D1 (3), HISP 204D2 (3) Portuguese Language: Intermediate.**

(Fall, Winter) (Prerequisite: HISP 202D1/HISP 202D2 or equivalent) (Restriction: Departmental approval required) (Students must register for both HISP 204D1 and HISP 204D2.) (No credit will be given for this course unless both HISP 204D1 and HISP 204D2 are successfully completed in consecutive terms) Review of grammar. Practice in speaking and writing. Composition. Selected readings in Portuguese and Brazilian literature.

**●HISP 210 Spanish Language: Beginners'.**

(6) A comprehensive first-level course focusing on all oral and written skills. An introduction to the fundamentals of Spanish grammar and syntax and to Hispanic culture.

**HISP 210D1 (3), HISP 210D2 (3) Spanish Language: Beginners'.**

(Fall, Winter) (4 hours weekly, including laboratory)  
 (Restriction: Not open to students who have taken HISP 218 or equivalent. Preference will be given to students in their first year of university study. Students in or entering U3 may not pre-register for this course but will be admitted, as space allows, during the Fall registration period.) (Students must register for both HISP 210D1 and HISP 210D2.) (No credit will be given for this course unless both HISP 210D1 and HISP 210D2 are successfully completed in consecutive terms) (HISP 210D1 and HISP 210D2 together are equivalent to HISP 210) A comprehensive first-level course focusing on all oral and written skills. An introduction to the fundamentals of Spanish grammar and syntax and to Hispanic culture.

**HISP 218 Spanish Language Intensive - Elementary.**

(6) (Fall or Winter) (7 hours weekly, including laboratory)  
 (Restriction: Not open to students who have taken HISP 210 or 210D1/D2 or equivalent.) (Preference will be given to students in their first year of university study. Students in or entering U3 may not pre-register for this course but will be admitted, as space allows, during the Fall registration period) A comprehensive first-level course focusing upon all oral and written skills. An introduction to the fundamentals of Spanish grammar and syntax and to Hispanic culture.

**HISP 219 Spanish Language Intensive - Intermediate.**

(6) (Fall or Winter) (7 hours weekly, including laboratory)  
 (Prerequisite: HISP 210 or 210D1/D2 or HISP 218 or equivalent.) (Restriction: Departmental approval required) (Preference will be given to students in their first year of university study) (Restriction: Not open to students who have taken HISP 220D1/HISP 220D2 or equivalent) A thorough review of Spanish grammar with emphasis upon current usage.

● **HISP 333 Spanish-American Drama.**

(3) (Fall) (Prerequisite: Successful completion of any Survey of Literature (HISP 241, HISP 242, HISP 243, HISP 244) or permission of the instructor. Note: Course taught in Spanish.) A study of the outstanding works of the theatre from the colonial period to the present, including pre-Columbian works.

● **HISP 350 The Generation of 1898.**

(3) (Fall) (Prerequisite: Successful completion of any Survey of Literature (HISP 241, HISP 242, HISP 243, HISP 244) or permission of the instructor. Note: Course taught in Spanish.) (Restriction: Not open to students who have taken HISP 349 or HISP 350 (prior to January 2005).) An examination of the cultural background of genre developments in prose, fiction, drama, and poetry by representative authors of the Generation of 1898 in Spain.

● **HISP 351 Spanish-American Novel 1.**

(3) (Winter) (Prerequisite: Successful completion of any Survey of Literature (HISP 241, HISP 242, HISP 243, HISP 244) or permission of the instructor. Note: Course taught in Spanish.) Critical reading and discussion of 20th century Spanish-American fiction writers.

● **HISP 352 Spanish-American Novel 2.**

(3) (Winter) (Prerequisite: Successful completion of any Survey of Literature (HISP 241, HISP 242, HISP 243, HISP 244) or permission of the instructor. Note: Course taught in Spanish.) Critical reading and discussion of contemporary Spanish-American fiction writers.

**HISP 356 Spanish-American Short Story.**

(3) (Fall) (Prerequisite: Successful completion of any Survey of Literature (HISP 241, HISP 242, HISP 243, HISP 244) or permission of the instructor. Note: Course taught in Spanish.) Study of style, tendencies and types as reflected in the evolution of this genre, and seen against the background of a developing continent.

● **HISP 358 Women Writers Fiction Spanish-America.**

(3) (Winter) (Prerequisite: Successful completion of any Survey of Literature (HISP 241, HISP 242, HISP 243, HISP 244) or permission of the instructor. Note: Course taught in Spanish.) Social movements and literary tendencies, as reflected 8 0 g1P

**HISP 470 Tutorial 01.**

(3) (Fall)

**HISP 471 Tutorial 02.**

(3) (Winter)

**HISP 490 Honours Thesis.**

(6) (Fall or Winter) (Restriction: Reserved for Honours and Joint Honours students who will present their honours thesis on a theme in Hispanic Studies written under the direction of a member of staff during their final year of study) .

**HISP 490D1 (3), HISP 490D2 (3) Honours Thesis.**

(Fall, Winter) (Students must register for both HISP 490D1 and HISP 490D2.) (No credit will be given for this course unless both HISP 490D1 and HISP 490D2 are successfully completed in consecutive terms) (HISP 490D1 and HISP 490D2 together are equivalent to HISP 490)

**HISP 499 Internship: Hispanic Studies.**

(3) (Fall or Winter) (Prerequisite: Permission of the departmental Internship Advisor.) (Restriction: Open to U2 and U3 students after completing 30 credits of a 90 credit degree program or 45 credits of a 69-120 credit program, a minimum CGPA of 2.7, and permission of the departmental Internship Advisor. This course will normally not fulfill program requirements for seminar or 400- level courses. Spanish language proficiency required.) Internship with an approved host institution or organization.

**●HISP 501 History of the Spanish Language.**

(3) (Taught in Spanish) (Prerequisite: Permission of the instructor) The development of Spanish from its beginnings to the Modern Period, including usage in Spanish America and Judeo-Spanish.

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**HIST-History**

Offered by: History

**●HIST 193 FYS: Topics in History.**

(3) (Students who register for more than one FYS will be obliged to withdraw from all but one. Maximum of 25.) (Restriction: Open only to newly admitted students in U0 or U1 who may take only one FYS.) An introduction to the discipline of history through an in-depth look at a topic.

**●HIST 194 FYS: Jewish Concepts of Others.**

(3) (Restriction: Open only to newly admitted students in U0 or U1, who may take only one FYS. Students who register for more than one will be obliged to withdraw from all but one of them.) (Maximum 25.) (For first year students only.) A survey, using translated primary and selected secondary sources, of the ways in which Jews represented Christians from late antiquity to the present. Legal, liturgical, literary and other sources are examined with the focus on the Medieval and Early Modern periods.

**HIST 195 FYS: Sources of World History.**

(3) (Restriction: Open only to newly admitted students in U0 or U1, who may take only one FYS. Students who register for more than one will be obliged to withdraw from all but one of them.) (Maximum 25) (Restriction: For first year students only) An introduction to the constitutive intellectual traditions of world history.

**HIST 197 FYS: Race in Latin America.**

(3) (Restriction: Open only to newly admitted students in U0 or U1, who may take only one FYS. Students who register for more than one will be obliged to withdraw from all but one of them.) (Maximum 25) This seminar explores what it meant to be native, black, or white in Latin America from the colonial period to the present. It explores how conceptualisations of race and ethnicity shaped colonialism, social organisation, opportunities for mobility, visions of nationhood, and social movements.

**●HIST 198 FYS: Nation Building and Nationalism**

(3) (Restriction: Open only to newly admitted students in U0 or U1, who may take only one FYS. Students who register for more than one will be obliged to withdraw from all but one of them.) (Maximum 25) An introduction to some of the major theories of nationalism; an exploration of the many varieties of nationalism and forms of nation-building; a particular focus on the historical background to three case studies of current

interest: Yugoslavia, Ireland and Québec.

**●HIST 199 FYS: Medieval Women and Men.**

(3) (Restriction: Open only to newly admitted students in U0 or U1, who may take only one FYS. Students who register for more than one will be obliged to withdraw from all but one of them.) (Maximum 25) This course examines the life choices available to women and men of the Middle Ages: how opportunities and restrictions of medieval society affected personal autonomy, careers, and relations between the sexes. Topics include: sexuality, religious life, marriage, work. Emphasis on learning techniques for reading and writing about primary sources (in translation).

**HIST 200 Introduction to African History.**

(3) (Restriction: Not open to students who have taken 101-200D) This course stresses the interactions of the peoples of Africa with each other and with the worlds of Europe and Islam from the Iron Age to the European Conquest in 1880.

**HIST 201 Modern African History.**

(3) (Restriction: Not open to students who have taken 101-200D) While covering the general political history of Africa in the twentieth century, this course also explores such themes as health and disease, gender, and urbanization.

**HIST 202 Survey: Canada to 1867.**

(3) (Fall) A survey of early Canada, from periods known mainly through archaeological records to the Confederation era. Social, cultural, economic and political themes will be examined.

**HIST 203 Survey: Canada since 1867.**

(3) A survey of the development of Canada from Confederation to the present day. Social, economic and political history will be examined in a general way.

**●HIST 204 History of Great Britain to 1688.**

(3) A survey of the development of Britain from the Middle Ages to the Glorious Revolution. Emphasis on political changes, seen in relation to the economic, social and intellectual background.

**HIST 205 Ancient Mediterranean History.**

(3) (Restriction: Not open to students who have taken HIST 209 prior to September 2006.) A survey of Mediterranean history from the Bronze Age until the 6th century AD, focusing on Greek and Roman civilization.

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political opposition; culture; and the revolutions of 1989.

●**HIST 307 Jews in Poland.**

(3) (Prerequisite: any course in Jewish history or East European History) (Restriction: Not open to students who have taken 101-307D) Analyses of primary sources (in translation) related to the social, economic and institutional history of the Jews in Poland and their place in the East European Jewish community. Topics include: the Jews during "The Flood" (1648 - 1667), the communal crisis of the late 17th century, the Frankist movement, and Hasidism.

●**HIST 308 Formation of Chinese Tradition.**

(3) (Restriction: Not open to students who have taken 101-308D) An examination of the multiple sources of the Chinese imperial system from the period of the neolithic culture interaction sphere to the fall of the Han dynasty in 220 C.E. Special attention is paid to socio-economic developments as well as to the evolution of philosophy, ideology, and social practice. The sequel to this course is HIST 358.

**HIST 309 History of Latin America to 1825.**

(3) (Fall) The social, cultural, and economic aspects of Latin America and the Caribbean in the colonial period. Topics include: pre-Columbian and hispanic cultures in conflict, plantation empires, and the transition to independence. The sequel to this course is HIST 360.

●**HIST 310 Knowledge and Atlantic Empire.**

(3) (Prerequisites: HIST 211 or permission of instructor.) The role of knowledge in British colonization and imperialism in the early modern Atlantic world. Explores the notion of an Atlantic "information order" (and its problems) by examining the politics of knowledge from England and Ireland to British America, and ultimately the early United States and British India.

●**HIST 311 The Gilded Age and The Progressive Era.**

(3) (Prerequisite: any course in U.S. history or consent of instructor) The social, economic, and political consequences of industrialization in the history of the United States between

● **HIST 330 Science in the Medieval West.**

(3) (Prerequisite: HIST 214 or HIST 380 or permission of instructor.) (Restriction: Not open to students who have taken HIST 356 prior to W06.) The history of ideas about the physical world and its content, the nature of scientific thinking, and the possibilities of human intervention in the natural world held in Western Europe in the Middle Ages (ca. AD300-1500), with particular attention to their social, intellectual, cultural and religious context.

● **HIST 331 The United States Between the Wars.**

(3) (Prerequisite: A course in U.S. history or permission of instructor.) The history of the United States from the Great War to the end of the 1940s. Social change and conflict, political conservatism, economic prosperity and the culture of consumption during the 1920s; the consequences of the Great Depression and the New Deal.

**HIST 332 Women in Europe, 1350-1700.**

(3) (Prerequisite: HIST 214 or permission of instructor) An introduction to concepts of women and the realities of women's lives in western Europe from the Black Death to ca. 1700. Topics will include marriage and the family, female education and literacy, varieties of spirituality and the emergence of a proto-feminism during the Renaissance.

**HIST 333 Natives and French.**

(3) (Prerequisite: Any course in history or permission of instructor) Encounters between indigenous peoples and French newcomers in Canada and other parts of North America, 16th - 18th century. Through an examination of exploration, Catholic missions, trade, military alliances and colonization, the course focuses on the motives, outlooks and actions of both natives and Europeans.

● **HIST 334 History of New France.**

(3) (Prerequisite: Any history course or permission of instructor) Social, political, and cultural history of France's ancien régime settlement colonies in North America. Topics include the nature of the absolutist colonial state and French imperialism; society; family; the Church; gender; and religion.

**HIST 335 Science and Medicine in Canada.**

(3) (Restriction: Not open to students who have taken HIST 212) The social and intellectual history of science and medicine in Canada, from early exploration, through the rise of learned societies, universities and professional organizations, to World War II.

● **HIST 336 France, 1789 to 1914.**

(3) (Prerequisite: HIST 214 and HIST 215) A study of the history of France from the Revolution to World War I.

● **HIST 337 Japanese Intellectual History 1.**

(3) (Restriction: Not open to students who have taken 101-337D) An overview of the history of Japanese thought and mentality from earliest times to 1700. By examining not only texts of representative thinkers but also other (especially literary) materials, it aims at elucidating changing and continuing characteristics of the Japanese intellectual history. The sequel to this course is HIST 352.

**HIST 338 Twentieth-Century China.**

(3) (Prerequisite: one previous course in Chinese or Asian history or permission of instructor) Examines 20th Century China

**HIST 351 Themes in U.S. History since 1865.**

(3) (Prerequisite: any course in U.S. history or consent of instructor) Aspects of American history from the gilded Age through the Cold War era.

**●HIST 352 Japanese Intellectual History 2.**

(3) (Prerequisite: one previous course in East Asian history, including Japanese history and Chinese history, or permission of instructor) (Restriction: Not open to students who have taken 101-337D) An overview of the history of Japanese thought and mentality from 1700 to the present. By examining not only texts of representative thinkers but also other (especially literary) materials, it aims at elucidating changing and continuing characteristics of the Japanese intellectual history.

**●HIST 353 History of Montreal.**

(3) (Prerequisite: HIST 202 or HIST 203 or permission of the instructor.) The history of Montreal from its beginnings to the present day. Montreal's economic, social, cultural and political role within the French and British empires, North America, Canada, and Quebec; the city's linguistic and ethnic diversity.

**●HIST 354 Women in Europe 1700-2000.**

(3) (Prerequisites: One course in European history or permission of Instructor) An overview of the history of women in modern continental Europe, focusing on women's changing roles in the family and society at large, in the context of work, family life, education, and culture, and the changing notions of citizenship, femininity, and masculinity.

**●HIST 355 Topics in German History.**

(3) (Prerequisite: HIST 234 and HIST 235 or a European survey course or consent of the instructor) (Restriction: Not open to students who have taken HIST 354 and HIST 355 prior to 200609.) Topics in German history from the confederation of two German Great Powers through revolution, confrontation, separation and consolidation to the destruction of the Dual Monarchy.

**●HIST 356 Medicine in the Medieval West.**

(3) (Winter) (Prerequisites: HIST 214 or HIST 249 or HIST 380 or permission of instructor.) The history of ideas about the human body, disease and therapeutics and the diverse practices of medicine in western Europe in the Middle Ages (ca. AD 300-1500), with particular attention to their social, intellectual, cultural and religious context.

**●HIST 357 Religion and Canadian Society in Historical Perspective.**

(3) (Prerequisite: HIST 202 and HIST 203) (Restriction: Not open to students who have taken 101-469) This course explores religious history of French and English Canada. The growth of various denominations, popular religion, Church/State relations, sectarian education, Protestant and Catholic cultures, missions among the Natives, forces of secularization. A reading knowledge of French is recommended.

**●HIST 358 Medieval to Early Modern China.**

(3) (Prerequisite: HIST 208 or permission of instructor)

● **HIST 372 The Low Countries: 14th - 17th Century.**

(3) (Prerequisite: HIST 214 or consent of the instructor)

This course will study the Low Countries from their unification under the Valois Dukes of Burgundy until Holland's "Golden Age" in the 17th century. Topics include: relations with France and England during the Valois period; the Burgundian court; the Reformation; the Dutch Revolt; Dutch economy and culture.



**HIST 396 Disease in Africa Since 1960.**

(3) (Prerequisite: HIST 200 and HIST 201 or HIST 349 or permission of the instructor) This course examines the negatives and positives of African health since independence: the rise of new pathogens, especially HIV/AIDS, and the revitalization of old ones, such as drug resistant tuberculosis and malaria. Also examined are the growth of health infrastructure, and international successes such as the eradication of smallpox.

●**HIST 397 Canada: Ethnicity, Migration.**

(3) (Prerequisite: HIST 202 and HIST 203 or permission of the instructor) (Restriction: Not open to students who have taken HIST 423) Immigration, ethnicity and race in Canada in the nineteenth and twentieth centuries. Topics will include the migration process, government policy and legislation, urban and rural migration, acculturation, nativism and multiculturalism.

●**HIST 398 Topics in Italian History.**

(3) (Prerequisite: HIST 214)



● HIST 445 Late Imperial China.



● **HIST 470D1 (3), HIST 470D2 (3) Topics: Historical Interpretation.**

(Students must register for both HIST 470D1 and HIST 470D2.) (No credit will be given for this course unless both HIST 470D1 and HIST 470D2 are successfully completed in consecutive terms)

● **HIST 471D1 (3), HIST 471D2 (3) Canadian Immigration History.**

(Prerequisite: HIST 203 or permission of instructor) (Students must register for both HIST 471D1 and HIST 471D2.) (No credit will be given for this course unless both HIST 471D1 and HIST 471D2 are successfully completed in consecutive terms)

● **HIST 474 History of the GULAG 1918-1991.**

(3) (Prerequisites: A 200- or 300-level course in Russian or East European history or permission of instructor.) The Soviet concentration camps, set up as a system of repression after the 1917 October Revolution, lasted until the collapse of the USSR.

● **HIST 476D1 (3), HIST 476D2 (3) Seminar: Topics in Russian History.**

(Students must register for both HIST 476D1 and HIST 476D2.) (No credit will be given for this course unless both HIST 476D1 and HIST 476D2 are successfully completed in consecutive terms)

● **HIST 477D1 (3), HIST 477D2 (3) Seminar in Jewish History.**

(Students must register for both HIST 477D1 and HIST 477D2.) (No credit will be given for this course unless both HIST 477D1 and HIST 477D2 are successfully completed in consecutive terms) TOPIC 2010-2011: Messianic Movements 700BC - 2000

● **HIST 478 Pre-modern Chinese Law and Society.**

(3) (Prerequisite: Any 300-level course in Chinese history or permission of the instructor.) The history of Chinese law and society from early pre-imperial to late imperial times. Themes include the philosophical basis of Chinese law; development of different forms of legislation; practice of pre-modern law; law and social and political change; military law; legal cases translated from primary sources.

● **HIST 482D1 (3), HIST 482D2 (3) Seminar: Antiquity to Reformation.**

(Students must register for both HIST 482D1 and HIST 482D2.) (No credit will be given for this course unless both HIST 482D1 and HIST 482D2 are successfully completed in consecutive terms)

● **HIST 483D1 (3), HIST 483D2 (3) History of Montreal.**

(Prerequisite: HIST 202 and HIST 203 and other courses on French Canada or consent of instructor) (Students must register for both HIST 483D1 and HIST 483D2.) (No credit will be given for this course unless both HIST 483D1 and HIST 483D2 are successfully completed in consecutive terms)

● **HIST 485D1 (3), HIST 485D2 (3) Seminar in Japanese History.**

(Prerequisite: HIST 208 or HIST 218 or consent of instructor) (Students must register for both HIST 485D1 and HIST 485D2.) (No credit will be given for this course unless both HIST 485D1 and HIST 485D2 are successfully completed in consecutive terms) Particular attention will be paid to Japanese responses to the impact of Western culture from the sixteenth century, and to aspects of Japanese intellectual history.

● **HIST 486D1 (3), HIST 486D2 (3) Topics: African Social History.**

(Prerequisite: HIST 200 or consent of instructor) (Students must register for both HIST 486D1 and HIST 486D2.) (No credit will be given for this course unless both HIST 486D1 and HIST 486D2 are successfully completed in consecutive terms)

knowledge.

**HIST 525 Women, Work and Family in Global History.**

(3) (Prerequisite: A 300 or 400-level course in women's history or labour history or permission of instructor.) (Restriction: Restricted to students in History and Women's Studies.) The shifting historical context of female labour and family in selected western and non-western countries; the interaction between labour and gender relations with special focus on women's experiences on the shop floor and in the family.

●**HIST 526 Women and War.**

(3) (Prerequisite(s): A 300 or 400-level course in women's history or permission of instructor) Examines the impact of war on individuals, families and societies. Studies the experiences of women and children in exile, mass persecutions, and punishments associated with social unrest, revolution or wars during twentieth century.

**HIST 527 Topics: Indian Ocean World History.**

(3) (Prerequisite: Any 200 or 300 level history course or any course on Africa, Asia, global or labour studies or permission of instructor) This course studies pivotal topics in Indian Ocean World (IOW) history. Topics may include (i) the rise and development of the IOW global economy; (ii) The Swahili Civilisation and the IOW; (iii) Islam and the IOW; (iv) Imperialism in the IOW; (v) IOW Slavery and Slave Trades; (vi) History of Madagascar.

●**HIST 528 Indian Ocean World Slave Trade.**

(3) (Prerequisites: HIST 200 or HIST 213 or permission of instructor.) (Restriction: Not open to students who have taken HIST 467.) The origins, structure and impact of the Indian Ocean World slave trade from early times to the present day. Enslavement, the trading structure, slave functions, reactions to slavery, emancipation and 'slave' diaspora. Comparisons will be made to the Atlantic slave system.

●**HIST 530 U.S. Foreign Relations.**

(3) (Prerequisite: one course in U.S. history or permission of instructor.) (Restriction: Enrolment limit 25.) The history and historiography, approaches and interpretations, of American foreign relations from the pre-Revolutionary era to the present.



staff member.

● **INTD 492N1 (3), INTD 492N2 (3) Honours Thesis with Field Research.**

(Requirements consist of previously approved project proposal, field component (usually carried out during the summer), and research thesis based on field work to be completed upon return.) (Students must also register for INTD 492N2.) (No credit will be given for this course unless both INTD 492N1 and INTD 492N2 are successfully completed in a twelve month period.) (INTD 492N1 and INTD 492N2 together are equivalent to INTD 492.) (Restriction: Open only to U3 Honours and Joint Honours students.) Supervised reading, field work and research and preparation of an undergraduate thesis under the direction of a staff member.

**INTD 497 Research Seminar on International Development.**

(3) (Restriction: Open only to students in final year of an IDS Concentration) An interdisciplinary research seminar on topics of common interest to staff and students of the International Development Studies programs. See [www.mcgill.ca/ids/courseinfo/intd497](http://www.mcgill.ca/ids/courseinfo/intd497)

● **INTD 499 Internship: International Development Studies.**

(3) (Restriction: Open to U2 and U3 students with a minimum CGPA of 2.7, and permission of the departmental Internship Adviser. This course will not normally fulfill program requirements for seminar or 400-level courses. A letter from a supervisor at the institution must attest to successful completion of the student's tenure.) Internship with an approved host institution or organization.

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## ISLA-Islamic Studies

Offered by: Islamic Studies

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**ISLA 199 FYS: Narrations of the Middle East.**

(3) (Fall) (Restriction(s): Only open to newly-admitted students in U0 or U1, who may take only one FYS.) (Note: Enrollment limit 25. Students who register for more than one FYS will be obliged to withdraw from all but one of them.) (Note: Language of instruction is English.) An introduction to competing narratives about crucial moments in the history and culture of the Middle East. Reading and discussion of texts drawn from a variety of perspectives and genres, including historical accounts, poetry, fiction, memoir and others.

**ISLA 200 Islamic Civilization.**

(3) (Winter) (Note: All readings are in English.) An introduction to, and survey of, the religious, literary, artistic, legal, philosophical and scientific traditions that constituted Islamic civilization from the 7th Century until the mid-19th Century.

**ISLA 210 Muslim Societies.**

(3) (Fall) An introduction to the different, often disparate, ways in which Muslims live and think in the modern world (19th-21 centuries). Muslim social contexts across the globe and cyberspace.

**ISLA 345 Science and Civilization in Islam.**

(3) (Winter) (Prerequisite: ISLA 200 or permission of the instructor.) (Note: All readings are in English.) History of scientific traditions and ideas in Islamic civilization, from the origins of Islam to the early modern period. Emphasis is on the derivation, development and transmissions of Islamic science, as well as on the assimilation and influence of science within Islamic culture.

● **ISLA 350 From Tribe to Dynasty.**

(3) (Prerequisite: ISLA 200 or permission of instructor.) (Restriction: Not open to U0 or U1 students.) The political and intellectual developments shaping Arab and Persian societies from the rise of Islam in the 7th century until the early mid 8th century, including the major social changes, political revolts, religious schisms, and the consolidation of lasting cultural institutions.

**ISLA 355 Modern History of the Middle East.**

(3) (Winter) (Prerequisite: ISLA 210 or permission of instructor.) Assessment of the historical transformation of the modern Middle East concentrating on its internal socio-economic changes, as well as the colonial experience and encounters with the West since the early 19th century. Examination of the

historical conditions that led to the rise of nationalism, the nation-state, the Arab-Israeli conflict.

● **ISLA 360 Islam and Politics.**

(3) (Fall) (Prerequisite: ISLA 210 or permission of instructor.) Assessment of the relationship between Islam and politics in the contemporary Middle East and Africa through various analytic themes, including political economy, social movement and gendered analysis.

● **ISLA 365 Middle East Since the 1970's.**

(3) (Prerequisite: ISLA 210 or permission of instructor.) Changes that have occurred in the Middle East since the 1970's, viewed through the lens of themes such as migration, consumerism, war, communications, and ideology.

**ISLA 380 Islamic Philosophy and Theology.**

(3) (Fall) (Prerequisite: ISLA 200 or permission of instructor.) (Restriction: Not open to U0 or U1 students.) (Note: Reading and discussion in English.) A survey of the most important philosophers and theologians in Islamic intellectual history, with a focus on the theories they articulated and the movements they engendered. The impact of European thought on 19th and 20th century Islamic intellectual history is also examined.

**ISLA 383 Central Questions in Islamic Law.**

(3) (Winter) (Prerequisite: ISLA 200 or permission of instructor.) An integrative view of Islamic law in the past and present, including landmarks in Islamic legal history (e.g., sources of law; early formation; intellectual make-up; the workings of court; legal change; legal effects of colonialism; modernity and legal reform) and a structured definition of what it was/is.

● **ISLA 385 Poetics & Politics in Arabic Literature.**

(3) (Prerequisite: ISLA 210 or permission of instructor.) (Restriction: Not open to U0 or U1 students.) (Note: Reading and discussion in English.) Major issues in classical and modern Arabic literature; how poetics and politics interact in classical and modern, popular folktales and high literature, novels and poetry. The politics of translation from Arabic into English.

**ISLA 388 Persian Literature.**

(3) (Fall) (Prerequisite: ISLA 200 or permission of instructor.) (Note: Readings in English.) Persian Literature in Translation Examination of literature produced in the Persian-speaking world from the mid 10th to the late 20th century C.E. A broad selection of texts (prose and poetry) will be studied in translation.

● **ISLA 392 Arabic Literature as World Literature.**

(3) (Prerequisite: ISLA 210 or permission of instructor.) Consideration of Arabic literature as part of world literature, including exploration of tensions between reading Arabic literature as local, discrete and self-contained and as part of ntekuerglobal apenmenta

● **ISLA 421 Islam in South Asia: 1757 to Present.**

(3) (Winter) (Prerequisite: ISLA 420 or permission of instructor.) Pre-colonial eighteenth century; colonial disruption: "ulama" and litterateurs as reformers, protagonists of modernism and traditionalism, and social activists; the challenges of modernity and search for Islamic solutions; minority identity and political separatism; Pakistan, Bangladesh, and Indian Muslims.

● **ISLA 501 The Qur'an: Text and History.**

● **ISLA 585 Arab Women's Literature.**

(3) (Prerequisite: ISLA 392 or permission of instructor.)

(Note: Readings in English translation.) Explorations of writings by Arab women. Issues include: translation/reception, gender and genre, categories of knowledge about Arab women, feminist and post-colonial theories/methodologies.

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**ITAL-Italian**

Offered by: Italian Studies

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● **ITAL 199 FYS: Italy's Literature in Context.**

(3) (Fall) (Restriction: Open only to newly admitted students in

● **ITAL 309 Perspectives on Italy.**

(3) Course is given in Florence, Italy, as part of McGill's Summer Study in Italy program. A study of various topics relating to the perception of Italy, the country, its people and their culture as seen by foreign and/or Italian writers. Course to be taught in English.

**ITAL 327 A Literary Map of Italy.**

(3) (Fall) (Given in Italian) (Prerequisite: ITAL 210,215,216, or permission of instructor) Italian literature from the perspective of Italy's marked regional divisions. Works studied may range from Medieval to contemporary.

● **ITAL 329 Contemporary Italian Cinema.**

(3) (Winter) (Prerequisite: ITAL 210, 215 or ITAL 216.) (Note: Course taught in Italian.) Contemporary Italian films in original language. Films are examined from a wide historical and cultural perspective. Introduction to issues and preoccupations central to contemporary Italy and rooted in the Italian cultural tradition.

● **ITAL 341 The Art of Essay Writing.**

(3) (Fall) (Given in Italian) (Prerequisites: ITAL 300 or permission of the Department) Word formation in the Italian language. Syntactic and stylistic aspects of texts by Italian essayists.

**ITAL 355 Dante and the Middle Ages.**

(3) (Fall) (Given in English) An introduction to the work of Dante Alighieri, a pillar of medieval European literature. The times in which he lived, the institutions and cultural shifts of that era, the influence exercised by Dante's work, as well as how it has been perceived in our time.

**ITAL 356 Medieval Discourses on Love.**

(3) (Winter) (Given in Italian) (Prerequisite: ITAL 215D1/ITAL 215D2, ITAL 216, or equivalent) Medieval ideas, attitudes and behaviour surrounding love as represented in literature: readings will include excerpts from early Italian love lyrics, Dante's Vita Nuova, Petrarch's Canzoniere, Boccaccio's Decameron.

● **ITAL 416 The Twentieth Century.**

(3) (Given in English.) Topics in twentieth-century Italian literary and cultural history. The focus may be on a movement, a theme, a genre, a specific writer, or a specific period.

● **ITAL 420 Leopardi and Italian Romanticism.**

(3) (Fall) (Given in Italian) (Prerequisite: ITAL 215, ITAL 216, or equivalent) The major early 19th century poets in the context of Italian and European Romanticism.

● **ITAL 435 Ariosto's "Orlando Furioso".**

(3) (Fall) (Given in Italian) (Prerequisite: ITAL 215D1/ITAL 215D2, ITAL 216, or equivalent) Ariosto's chivalresque poem in the context of the Italian Renaissance.

● **ITAL 436 Tasso's "Gerusalemme Liberata".**

(3) (Winter) (Given in Italian) (Prerequisite: ITAL 215D1/ITAL 215D2) A study of Tasso's poem in the context of the Counter Reformation.

**ITAL 444 Individual Reading Course.**

● (3) (Fall and Winter) (Prerequisite: ITAL 215D1/ITAL 215D2, ITAL 216, or equivalent) In exceptional circumstances, this course may be used to meet special interests of students or to assist them in meeting the standard requirements) (PreSDeardtents



● **JWST 226 Contemporary Israeli Fiction.**

(3) Study of selected themes in literary works by Israeli authors.

● **JWST 240 The Holocaust.**

(3) (Restriction: Not open to students who have taken JWST 252 "The Holocaust") Consideration of the history of the Holocaust and the literary, theological and cultural responses to the destruction of European Jewry.

**JWST 252 Interdisciplinary Lectures.**

(3) Jewish Life Through Music.

**JWST 254 The Jewish Holy Days.**

(3) An exploration of the Jewish holy days. Emphasis is placed on their historical development, philosophical messages, and ritual forms.

**JWST 261 History of Jewish Philosophy & Thought.**

(3) An introduction to Jewish philosophy and thought from the Hellenic period (Philo) to the beginning of the modern era (Spinoza) focusing on topics such as prophecy and philosophy, God and the world; the Law as a canon of ethical rules and as a political constitution. survey the treatment of such issues by Jewish thinkers from Philo to Maimonides.

● **JWST 280 Introductory Yiddish.**

(6) (Summer) Introduction to basic structures of standard Yiddish. Intensive practice in speech and written structures. Emphasis on grammar, reading and writing. Selected readings to introduce Yiddish culture.

**JWST 280D1 (3), JWST 280D2 (3) Introductory Yiddish.**

(Students must register for both JWST 280D1 and JWST 280D2.) (No credit will be given for this course unless both JWST 280D1 and JWST 280D2 are successfully completed in consecutive terms) (JWST 280D1 and JWST 280D2 together are equivalent to JWST 280) Introduction to basic structures of standard Yiddish. Intensive practice in speech and written structures. Emphasis on grammar, reading and writing. Selected readings to introduce Yiddish culture.

**JWST 300 Charisma and Social Change.**

(3) An introduction to charismatic phenomena in politics, religion and the media, and interpretation of them, from the ancient prophets to the modern period. Particular attention will be given to charisma as a general force for social change and also the lives of individuals such as Lenin, Krishnamurti and Chaplin.

● **JWST 303 The Soviet Jewish Experience.**

(3) (Readings in English) Sovietization both fueled the modernization of Russian Jewry and contributed to its eventual suppression. This experience will be examined from two perspectives: history and literature. The interrelationship between culture and politics and the effects of ideology and censorship on literature will be discussed.

● **JWST 305 American Jewish History / Colonial Era to WWI.**

(3) The interaction of Jewish and American historical traditions in forging the American Jewish experience. The themes of acculturation, immigration and political behaviour will be treated.

● **JWST 306 The American Jewish Community.**

(3) Issues affecting American Jewry in the post-World War I era until today and the American Jewish community's responses to those issues. Special emphasis on understanding the community responses and reactions to developments in both the American society and in the Jewish world.

● **JWST 309 Jews in Film.**

(3) An introduction to the portrayal of Jews in film from the 1920s to the present. Films to be studied will usually be based on literary texts in English, which will form part of the required study. Films in languages other than English will be subtitled.

**JWST 310 Believers, Heretics and Critics.**

(3) Issues in the development of Biblical interpretation based on classical Jewish thought, heretical Jewish doctrines and contemporary Biblical criticism.

● **JWST 314 Denominations in North05.6 Tm /F1gD3.2 744.6 Tm 1 0 0 1 288 72.6 Tm 1 0 0 1IF**

● **JWST 331 Bible Interpretation/Medieval Ashkenaz.**

(3) (Prerequisite: Knowledge of Hebrew) An introduction to Jewish interpretation of the Bible in the Middle Ages. Readings from the Hebrew Bible and the commentaries of Rashi, Rashbam, the Tosafists, etc.

● **JWST 332 Bible Interpretation/Sefardic Tradition.**

(3) (Prerequisite: Knowledge of Hebrew. Recommended: JWST 331) Readings from the Hebrew Bible and the commentaries of Ibn Ezra, Nachmanides, Abravanel, etc.

● **JWST 333 The Hebrew Liturgy.**

(3) (Prerequisite: Reading knowledge of Hebrew) The structure, contents, foci and ideological assumptions of Jewish prayer. Texts will reflect the different approaches to prayer in Biblical, rabbinic, medieval and modern periods, with emphasis on the evolution of the classical Hebrew prayer book (Siddur) and the Passover Haggadah.

**JWST 337 Jewish Philosophy and Thought 1.**

(3) (Fall) Focuses on either a period, a current of thought or the work of a thinker in the history of Jewish thought from Antiquity to the Middle Ages, paying particular attention to the relationship of Jewish thinkers to intellectual trends in their respective cultural contexts. contemporary Muslim and Christian theologians and philosophers.

● **JWST 338 Jewish Philosophy and Thought 2.**

(3) (Winter) Focuses on either a period, a current of thought or the work of a thinker in the history of Jewish thought from the Middle Ages to Modern Times, paying particular attention to the relationship of Jewish thinkers to intellectual trends in their respective cultural contexts. themes and concerns of Jewish theology and on Jewish responses to contemporary trends in European thought.

● **JWST 340 Advanced Hebrew.**

(6)

**JWST 340D1 (3), JWST 340D2 (3) Advanced Hebrew.**

(Prerequisite: JWST 200 or JWST 320 or permission of the Hebrew Language Coordinator) (Students must register for both JWST 340D1 and JWST 340D2.) (No credit will be given for this course unless both JWST 340D1 and JWST 340D2 are successfully completed in consecutive terms)

**JWST 345 Introduction to Rabbinic Literature.**

(3) (All readings in English) An introduction to the study of Rabbinic texts.

**JWST 346 Modern Jewish Studies.**

(3) Jewish Footprints in World Music. Topics in Jewish Studies. Semesters will be devoted to specific issues and periods of the Jewish Experience since 1500 and the literature produced by Jews during this period.

**JWST 347 Modern Jewish Studies.**

(3) Topic: Political Expression in Israeli Songs. Political Expression in Israeli Songs. Topics in Jewish Studies. Semesters will be devoted to specific issues and periods of the Jewish Experience since 1500 and the literature produced by Jews during this period.

● **JWST 348 Modern Jewish Studies.**

(3) Topics in Jewish Studies. Semesters will be devoted to specific issues and periods of the Jewish Experience since 1500 and the literature produced by Jews during this period.

**JWST 349 Modern Jewish Studies.**

(3) Mosaic of Jewish Music in North America. Topics in Jewish Studies. Semesters will be devoted to specific issues and periods of the Jewish Experience since 1500 and the literature produced by Jews during this period.

● **JWST 351 Studies in Modern Jewish Literature.**

(3) (All texts will be read in English)

**JWST 355 The Yiddish Canon.**

(3) (Prerequisite: Any literature course) This course will focus on the Classical Period (1860 - 1915) in Yiddish literature. We will be reading landmark texts in English translation.

● **JWST 356 Jewish Labour Movement/Eastern Europe.**

(3) The development of the Jewish labor and socialist movement in Eastern Europe from the last quarter of the 19th century to the Bolshevik Revolution.

● **JWST 357 Jewish Labour Movement/North America.**

(3) The development of the Jewish labor and socialist movement in North America from the last quarter of the 19th century to WW I.

**JWST 358 Topics in Jewish Philosophy 1.**

(3) (All texts in English) Revelation and Law in Modern Jewish Thought.

● **JWST 361 The Shtetl: 1500-1897.**

(3) Using historical, sociological, literary and cultural sources, this course will examine various aspects of communal and individual life in the shtetl, the Jewish - or largely Jewish - town in Eastern Europe.

● **JWST 362 The Shtetl: 1897-1939.**

(3) (Recommended: JWST 361)

● **JWST 365 Modern Jewish Ideologies.**

(3) The rise and development of the various ideologies which attempt to define the Jews in historical, national and socio-cultural terms will be analyzed within the context of modern European nationalism. Selected texts of the Jewish Enlightenment, Science of Judaism, Peretz Smolenskin, Leon Pinsker, Simon Dubnow, Chaim Zhitlowsky and Ahad Ha-Am.

● **JWST 366 History of Zionism.**

(3) (Recommended: JWST 365) An examination of the development of the Zionist idea, the most influential expression of modern Jewish nationalism, which led to the creation of the Jewish state. The transformation of elements of traditional Jewish messianism into a modern political ideology. Hibbat Zion, Political Zionism, Cultural and Synthetic Zionism will be discussed.

● **JWST 367 Studies in Hebrew Language and Literature.**

(3) (Fall) To expand knowledge of grammar, and vocabulary and idioms in order to enhance reading comprehension and facility in writing and speaking. Of value to those interested in all aspects of Hebrew literature, classical and modern.

● **JWST 368 Studies in Hebrew Language and Literature.**

(3) (Winter) To expand knowledge of grammar, and vocabulary and idioms in order to enhance reading comprehension and facility in writing and speaking. Of value to those interested in all aspects of Hebrew literature, classical and modern.

**JWST 369 Studies in Hebrew Language and Literature.**

(3) (Fall) To expand knowledge of grammar, and vocabulary and idioms in order to enhance reading comprehension and facility in writing and speaking. Of value to those interested in all aspects of Hebrew literature, classical and modern.

**JWST 370 Studies in Hebrew Language and Literature.**

(3) (Winter) To expand knowledge of grammar, and vocabulary and idioms in order to enhance reading comprehension and facility in writing and speaking. Of value to those interested in all aspects of Hebrew literature, classical and modern.

● **JWST 371D1 (3), JWST 371D2 (3) Jews and the Modern City.**

(Students must register for both JWST 371D1 and JWST 371D2.) (No credit will be given for this course unless both JWST 371D1 and JWST 371D2 are successfully completed in consecutive terms) In the forefront of the development of modern society in Europe and North America, the Jews have shown a distinct preference for the metropolis. The influence of Vienna and New York on the socio-cultural development of the Jews and on the Jewish contribution to general culture. The contributions of Schnitzler, Freud, Herzl and the New York intellectuals.

**JWST 374 Talmud and Law 1: Bava Kamma.**

(3) An introduction to Bava Kamma, in particular to Talmudic dialectic and interpretation; Talmudic law of torts; damages committed by one's self or one's property; negligence and absolute liability.

● **JWST 375 Talmud and Law 2: Bava Metzia.**

(3) An introduction to Bava Metzia. Talmudic texts covering a wide range of subjects.

**JWST 380D1 (3), JWST 380D2 (3) Intermediate Yiddish.**

(Prerequisite: JWST 280 or permission of instructor) (Students must register for both JWST 380D1 and JWST 380D2.) (No credit will be given for this course unless both JWST 380D1 and JWST 380D2 are successfully completed in consecutive terms) Intermediate level of study of structures of standard Yiddish. Emphasis on reading, composition and conversation. Selected readings and visual materials to expand

knowledge of Yiddish culture.

● **JWST 381 Modern Yiddish Literature.**

(3)

● **JWST 383 Holocaust Literature.**

(3) (Restriction: Not open to students who have taken this topic under JWST 381) Readings from Holocaust literature in English translation. Writers include Primo Levi, Aharon Appelfeld, Elie Wiesel, Dan Pagis, Paul Celan, Nelly Sachs, U.Z. Greenberg and others.

● **JWST 386 American Jewish Literature.**

(3) (Readings in English) An intensive study of American Jewish novels from the 1900s to the present. Attention to representations of gender, class and Jewishness as seen in relation to changing notions of America. Focus on ways novels represent and wrestle with Jewish difference.

**JWST 387 Modern Jewish Authors.**

(3) Novels by Roth, Bellow, Malamud and Horn, and stories by Paley, Ozick and others will be analyzed. Introduction to representative novels written in America by Jews from the 1950s to the present. Issues of Jewish identity, ethnicity will inform our discussions. Focus on contemporary Jewish authors; consideration of the ways in which the complexities of American life are re-scripted in these novels.

● **JWST 403 Contemporary Hebrew Literature.**

(3) (Prerequisite: Proficiency in Hebrew.) Israeli literature in its original language with emphasis on in-depth literary analysis. Texts read in Hebrew; assignments may be written in English.

**JWST 404 Literary Response to Loss/Separation.**

(3) (Prerequisite: Some prior related university course at 300 level or higher, e.g. literature, psychology or social work. Permission of instructor required) (All texts in English) Discussion of loss in Jewish literature, particularly in Holocaust writings, and in various themes, in memories, dreams and in mysticism, for example. A basic introduction to clinical studies on grief will serve as background.

● **JWST 412 Topics: Modern Hebrew Literature 2.**

(3) (Prerequisite: Knowledge of advanced Hebrew essential) Readings from Israeli prose and poetry illustrating some of the main concerns of the literature: the struggle for survival, the holocaust, the tension between the collective and the individual, the decline of orthodox Judaism and of Zionist ideology, the conflicts between the religious and the secular, Oriental and occidental, Jew and Arab.

● **JWST 430 Tutorial in Hebrew Literature.**

(3)

● **JWST 439 Survey of Hebrew Literature 2.**

(3) (Prerequisite: Advanced Hebrew or equivalent)

● **JWST 445 The Poetry of Nationalism.**

(3) An introduction to the work of various modern 'national poets' - i.e. poets closely linked to national movements who expressed (or constructed) a particular national identity and whose work has lasting artistic value. These will include Mickiewicz of Poland, Tagore of India, Yeats of Ireland, and Bialik of pre-state Israel.

● **JWST 474 Maimonides' Mishneh Torah.**

(3) Study of the Moses Maimonides' Mishneh Torah, including such subjects as idolatry, repentance, and sacrifices, to torts, contracts, and public law.

**JWST 480 Advanced Yiddish 1.**

(3) (Fall) (Prerequisite: JWST 380 or permission of the instructor) (Restriction: Not open to students who have taken JWST 480D1 and JWST 480D2) Development of advanced Yiddish language skills in conversation and discussion, composition, and oral presentation. Particular emphasis will be placed on the reading and paraphrasing of a variety of literary texts.

**JWST 481 Advanced Yiddish 2.**

(3) (Winter) (Prerequisite: JWST 380D1 and JWST 380D2; or permission of the instructor.) (Restriction: Not open to students who have taken JWST 480D1 and JWST 480D2) Additional development of advanced Yiddish language skills in conversation and discussion, composition, and oral presentation. Particular emphasis will be placed on the reading and paraphrasing of a variety of literary texts.

**JWST 485 Tutorial in Yiddish Literature.**

(3) .Yiddish literature in Yiddish. (The course is open only to students who can read, converse and write in Yiddish.)

● **JWST 486 Tutorial in Yiddish Literature.**

(3)

● **JWST 487 Tutorial in Yiddish Literature.**

(3)

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Israeli centres of Jewish Learning.

● **JWST 520 Bible Interpretation in Antiquity.**

(3)

● **JWST 521 Bible in Dead Sea Scrolls.**

(3)

● **JWST 523 Ancient Bible Interpretation.**

(3) Advanced level work in one aspect of Jewish Bible interpretation in ancient times.

● **JWST 530 Topics in Yiddish Literature.**

(3) Supervised research in Yiddish literature. Work will focus on one genre, literary school or author.

● **JWST 531 Topics in Yiddish Literature.**

(3) Supervised research in Yiddish literature. Work will focus on one genre, literary school or author.

● **JWST 532 Narrative Midrash.**

(3)

● **JWST 533 Halakhic Midrash.**

(3) Supervised research in Yiddish literature. Work will focus on one genre, literary school or author.

● **JWST 534 Homiletic Midrash.**

(3) The issues and techniques of early rabbinic preaching and teaching the Bible as they emerge from a close reading of homiletical midrashic texts.

● **JWST 535 Exegetic Midrash.**

(3)

● **JWST 536 Readings: Aramaic Bible Translation.**

(3)

● **JWST 537 The Bible in the Talmud Bavli.**

(3)

● **JWST 538 Early Rabbinic Parshanut 1.**

(3) Advanced level work on one aspect of Jewish Bible interpretation in late antiquity.

● **JWST 539 Biblical Interpretation 1.**

(3) Close readings in one or more texts of early rabbinic Bible interpretation: Mishnah, Tosefta, Halakhic and Aggadic Midrashim, Talmud.

● **JWST 540 Biblical Interpretation 2.**

(3) Close reading of medieval rabbinic bible interpretation: Ashkenazi and Sefaradi exegetes, commentators, philologists, philosophers and jurists.

● **JWST 541 Medieval Ashkenazi Parshanut.**

(3) Issues, techniques and texts of Jewish Bible study in medieval France and Germany; Rashi, Qara, Rashbam, the Tosafists, etc.

● **JWST 542 Abraham Ibn Ezra as Parshan.**

(3)

● **JWST 543 Maimonides as Parshan.**

(3) (Requires Departmental approval) (Restriction: Not open to students who have taken JWST 540) Biblical Interpretation in the Guide of the Perplexed and related writings.

● **JWST 544 Nachmanides as Parshan.**

(3) The interpretative issues and procedures of Nachmanides. Torah commentary examined in the context of rabbinic and

**JWST 581 Aramaic Language.**

(3) (Requires Departmental approval) (Restriction: Not open to students who have taken JWST 506)

●**JWST 582 Hebrew and Aramaic Philology.**

(3)

**JWST 585 Tutorial: Eastern European Studies 1.**

(3)

**JWST 586 Tutorial: Eastern European Studies 2.**

(3)

**JWST 587 Tutorial in Yiddish Literature.**

(3)

**JWST 588 Tutorial in Yiddish Literature.**

(3)

**JWST 589 Tutorial in Jewish Literature.**

● **LING 417 Topics at the Interfaces 1.**

(3) (Fall) (Prerequisites: LING 360 and LING 371 and permission of instructor.) Topics relevant to a linguistic

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## **MUAR-Music-Arts Faculty**

Offered by: Music Research

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### **MUAR 201 Basic Materials: Western Music.**

(3) (3 hours) A combination of elementary theory and ear training (sightsinging and aural recognition), and basic piano skills. Topics include: notation of pitch and rhythm, intervals, scales and modes, concept of key, triads and seventh chords, introductory melody and accompaniment writing.

### **MUAR 202 Basic Materials: Western Music 2.**

(3) (3 hours) (Prerequisite: MUAR 201 or permission of instructor) Integrated course in music theory with creative

all persons?

**NAST 471 Topics in North American Studies 1.**

(3)

**NAST 472 Topics in North American Studies 2.**

(3) Winter 2011 topic will be announced at a later date.

**NAST 490 Independent Reading & Research.**

(3) (It is the responsibility of the student to obtain the instructor's consent prior to registering.) (Restrictions: Open only to U3 Major students.) Final year students wishing to pursue a specialized interest will be allowed to undertake a program of independent reading and/or research in that area under the supervision of a member of staff.

**NAST 499 Arts Internships: North American Studies.**

(3) (Note: U-2 and U-3 students in good standing, normally after completing 30 credits of a 90-credit program or 45 credits of a 96-120 credit program, a minimum CGPA of 2.7, and permission from the departmental internship Adviser. This course will normally not fulfill program requirements for seminar or 400-level courses.) Internship with an approved host institution or organization.

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## **PHIL-Philosophy**

Offered by: Philosophy

**PHIL 198 FYS: Knowledge and Ideas in Early Modern Philosophy.**

(3) (Restriction(s): Open only to newly admitted students in U0 or U1, who may take only one FYS.) (Note: Enrollment limit 25. Students who register for more than one FYS will be obliged to withdraw from all but one of them.) (Note: Language of instruction is English.) An introduction to central issues in the philosophy of the early modern period through an examination of works by, for example, Descartes, Malebranche, Spinoza, Locke, Leibniz, Berkeley and Hume.

**PHIL 199 FYS: Minds, Brain, and Machines.**

(3) (Restriction(s): Open only to newly admitted students in U0 or U1, who may take only one FYS.) (Note: Enrollment limit 25. Students who register for more than one FYS will be obliged to withdraw from all but one of them.) (Note: Language of instruction is English.) An introduction to the philosophical foundations of the sciences of the mind.

**PHIL 200 Introduction to Philosophy 1.**

(3) (Philosophy students may use either PHIL 200 or PHIL 201 towards their program requirements, but not both. Students may, however, take both for credit (using the second as



**PHIL 344 Medieval and Renaissance Political Theory.**

(3)

**PHIL 345 Greek Political Theory.**

(3) (Restriction: Not open to students who have taken POLI 333) An examination of the ethical and political theories of ancient Greece, especially those of Plato and Aristotle.

**PHIL 436 Aesthetics 2.**

(3) (Prerequisite: PHIL 336 or written permission of the instructor) An advanced discussion of issues in aesthetics.

**PHIL 440 Philosophy of Social Sciences 2.**

(3) (Prerequisite: PHIL 340 or written permission of the

**PHIL 515 Seminar: Philosophy of Language.**

(3) (Prerequisite: PHIL 415 or written permission of the instructor) (Restriction: Seminars are open only to graduate students and final year Philosophy Majors, Honours and Joint Honours students, except by written permission of the Department) An advanced course devoted to a topic in the philosophy of language.

**PHIL 519 Seminar: Epistemology.**

(3) (Prerequisite: PHIL 420 or written permission of the instructor) (Restriction: Seminars are open only to graduate students and final year Philosophy Majors, Honours and Joint Honours students, except by written permission of the Department) An advanced course devoted to a topic in the theory of knowledge. Subject varies from year to year.

**PHIL 521 Seminar: Metaphysics.**

(3) (Prerequisite: PHIL 421 or written permission of the instructor) (Restriction: Seminars are open only to graduate students and final year Philosophy Majors, Honours and Joint Honours students, except by written permission of the Department) An advanced course devoted to a topic in metaphysics.

**PHIL 534 Seminar: Ethics.**

(3) (Prerequisite: PHIL 334 or written permission of the instructor) (Restriction: Seminars are open only to graduate students and final year Philosophy Majors, Honours and Joint Honours students, except by written permission of the Department)

**●PHIL 536 Seminar: Aesthetics.**

(3) (Prerequisite: PHIL 336 or PHIL 436 or permission of the instructor.) (Restriction: Open only to graduate students and final year Philosophy Majors, Honours and Joint Honours students, except by written permission of the Department.) An advanced course devoted to a specific topic in the area of aesthetics and/or the philosophy of art.

**●PHIL 540 Seminar: Philosophy and Social Sciences.**

(3)

**●PHIL 541 Seminar: Philosophy of Science.**

(3) (Prerequisite: PHIL 441 or other requirements specified by the instructor) (Restriction: Seminars are open only to graduate students and final year Philosophy Majors, Honours and Joint Honours students, except by written permission of the Department) An advanced course devoted to a topic in the philosophy of science.

**PHIL 543 Seminar: Medical Ethics.**

(3) (Prerequisite: PHIL 343 or written permission of the instructor) (Restriction: Seminars are open only to graduate students and final year Philosophy Majors, Honours and Joint Honours students, except by written permission of the Department) An advanced course devoted to a particular philosophical problem as it arises in the context of medical practice or the application of medical technology.

**●PHIL 544 Political Theory.**

(3) (Restriction: Seminars are open only to graduate students and final year Philosophy Majors, Honours and Joint Honours students, except by written permission of the Department)

**●PHIL 548 Seminar: Philosophy of Law.**

(3) (Prerequisite: PHIL 348 or written permission of the instructor) (Restriction: Seminars are open only to graduate students and final year Philosophy Majors, Honours and Joint Honours students, except by written permission of the Department) An advanced course devoted to a particular topic in the philosophy of law. Subject varies from year to year.

**●PHIL 550 Seminar: Ancient Philosophy 1.**

(3)

**PHIL 551 Seminar: Ancient Philosophy 2.**

(3) (Prerequisite: at least one course in ancient philosophy and the specific requirements of individual instructors)

(Restriction: Seminars are open only to graduate students and final year Philosophy Majors, Honours and Joint Honours students, except by written permission of the Department) An advanced course on a philosopher or philosophical issue articulated in antiquity.

**PHIL 556 Seminar: Medieval Philosophy.**

(3) (Prerequisite: PHIL 345 or PHIL 357 or written permission of the instructor) (Restriction: Seminars are open only to graduate students and final year Philosophy Majors, Honours and Joint Honours students, except by written permission of the Department) An advanced course devoted to a particular topic in medieval philosophy. Subject varies from year to year.

**PHIL 561 Seminar: 18th Century Philosophy.**

(3) (Prerequisite: PHIL 361 or written permission of the instructor) (Restriction: Seminars are open only to graduate students and final year Philosophy Majors, Honours and Joint Honours students, except by written permission of the Department) An advanced course on an eighteenth-century philosopher or philosophical issue.

**PHIL 567 Seminar: 19th Century Philosophy.**

(3) (Prerequisite: PHIL 366 or PHIL 367 or written permission of the instructor) (Restriction: Seminars are open only to graduate students and final year Philosophy Majors, Honours and Joint Honours students, except by written permission of the Department) An advanced course on 19th-century philosophy or philosophical issue.

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## **PHWR-Philosophy & Western Religions**

Offered by: Arts - Dean's Office

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### **●PHWR 300 Philosophy & Western Religions 1.**

(3) (Restrictions: Open to students in Philosophy & Western Religions, Islamic Studies, Jewish Studies, Philosophy, Religious Studies, and to students of other units with permission of the instructor.) Introduction to the encounter between philosophy and the Abrahamic religions, Judaism, Christianity, and Islam, from Antiquity to the 12th Century, covering the philosophical sources (Plato to Neoplatonism), the religious sources (Bible to Qu'ran), and their manifold syntheses in the thought of theologians, philosophers and mystics within the three religious traditions.

### **●PHWR 301 Philosophy & Western Religions 2.**

(3) (Prerequisite: PHWR 300 or permission of the instructor.) (Restrictions: Open to students in Philosophy & Western Religions, Islamic Studies, Jewish Studies, Philosophy, Religious Studies, and to students of other units with permission of the instructor.) Introduction to the encounter between philosophy and the three Abrahamic religions, Judaism, Christianity, and Islam, from the 13th Century to the Enlightenment, covering the manifold syntheses of philosophical and religious ideas in thinkers from the Later Middle Ages, the Renaissance, the 17th Century and the Enlightenment.

### **PHWR 400 Joint Honours/Honours Tutorial.**

(3) (Restrictions: Open to Joint Honours and Honours students in Philosophy & Western Religions in their final year.) Guided reading and research for Joint Honours and Honours students in their final year.

### **PHWR 401 Honours Thesis Tutorial 1.**

(3) (Restrictions: Open to Honours students in Philosophy & Western Religions in their final year.) Initial guided reading

**POLI 243 International Politics of Economic Relations.**

(3) (Note: The field is International Politics.) An introduction to international relations, through examples drawn from international political economy. The emphasis will be on the politics of trade and international monetary relations.

**POLI 244 International Politics: State Behaviour.**

(3) (Note: The field is International Politics.) Offers a comprehensive introduction to the behaviour of nation states. Explores how states make foreign policy decisions and what motivates their behaviour. Other covered topics include the military and economic dimensions of state behaviour, conflict, cooperation, interdependence, integration, globalisation, and change in the international system.

**●POLI 300 Developing Areas/Revolution.**

(6) (Prerequisite: A basic course in Comparative Politics or written permission of the instructor) (Note: The area in the field of Comparative Politics is Developing Areas.) The post WW II revolutionary process in the third world. Attention to the nature of the revolutionary process in the struggle for national liberation both where this approach succeeded and failed. Examples drawn from Asia, Africa and Latin America. Students will be required to do a thorough case study.

**●POLI 300D1 (3), POLI 300D2 (3) Developing Areas/Revolution.**

(Prerequisite: A basic course in Comparative Politics or written permission of the instructor) (Note: The area in the field of Comparative Politics is Developing Areas.) (Students must register for both POLI 300D1 and POLI 300D2.) (No credit will be given for this course unless both POLI 300D1 and POLI 300D2 are successfully completed in consecutive terms) The post WW II revolutionary process in the third world. Attention to the nature of the revolutionary process in the struggle for national liberation both where this approach succeeded and failed. Examples drawn from Asia, Africa and Latin America. Students will be required to do a thorough case study.

**POLI 311 Techniques of Empirical Research.**

(3) An introduction to empirical political research. Among the topics considered are the formulation of research problems, the selection of samples, interviewing, questionnaire construction, and the analysis and interpretation of data.

**●POLI 315 Approaches to Political Economy.**

(3) (Prerequisite: POLI 211 or POLI 212 and one preferably University level course in the area in Cote: The area in the field of Comparative Politics is Developed Areas.) Influential traditions in political economy. Focus on how these attempted to integrate the economic and political. Application of economic analysis to social and political phenomena ("social choice"). Recent efforts to combine the deductive logic of economics with comparative empirical analysis of actors in different institutional settings. Extension to the international political economy.

**●POLI 318 Comparative Local Government.**

(3) (Prerequisite: POLI 211 or POLI 212 or written permission of instructor) (Note: The area in the field of Comparative Politics is Developed Areas; also in the field of Canadian Politics.) An examination of the organization and conduct of local government in Canada, the United States, and selected European countries. Attention to theories of local government, the criteria for comparative analysis, the provision of public goods and bads, urban political patterns and the "urban crises" in North America.

**POLI 319 Politics of Latin America.**

(3) (Prerequisite: A basic course in Comparative Politics or a course on the region or written permission of the instructor) (Note: The area in the field of Comparative Politics is Developing Areas.) This course will deal with the dynamics of political change in Latin America today.

**●POLI 320 Issues in Canadian Democracy.**

(3) (Prerequisite: At least one other course in Canadian or Comparative Government and Politics or permission of instructor) (Note: The field is Canadian Politics.) Critical analysis of selected issues and debates in Canadian politics, including citizen participation, electoral system effects, party financing, office-seeking, approaches to representation, and direct democracy and non-party alternatives. Topics are examined from both the perspective of the general population and the specific experience of women and ethno-racial minorities.

**POLI 321 Issues: Canadian Public Policy.**

(3) (Prerequisite: at least one other course in Canadian or Comparative Politics) (Note: The field is Canadian Politics.) The Canadian political process through an analysis of critical policy issues in community development, welfare state, education, and institutional reforms in public service delivery systems. Diagnostic and prescriptive interpretations of public choices in a federal-parliamentary regime.

**POLI 322 Political Change in South Asia.**

(3) (Prerequisite: A basic course in Comparative Politics or a course on the region or written permission of the instructor) (Note: The area in the field of Comparative Politics is Developing Areas.) Political change in South Asia in late colonial and post-colonial periods. Issues covered include social and cultural history; colonial rule, nationalism and state formation; democratic and authoritarian tendencies; economic policies and consequences; challenges to patterns of dominance and national boundaries; prospects for democracy, prosperity and equality.

**●POLI 323 Developing Areas/China and Japan.**

(3) (Prerequisite: A basic course in Comparative Politics or a course on the region or written permission of the instructor) (Note: The area in the field of Comparative Politics is Developing Areas.) A survey of traditional and modern political society in China and Japan. Special emphasis is placed on governmental policy and institutions in relation to ideology in the Peoples' Republic of China and post-1945 Japan.

**POLI 324 Developing Areas/Africa.**

**POLI 326 Provincial Politics.**

(3) (Prerequisite: A basic course in Canadian Government or Politics or permission of the instructor) (Note: The field is Canadian Politics.) The effect of regional and provincial culture on the operation of political parties and the institutions of government; the effect of institutional modernization on provincial governments; the role of provincial sub-systems within the Canadian political system.

**POLI 328 Modern Politics in Western Europe.**

(3) (Prerequisites: POLI 211 or POLI 212, or POLI 227) (Note: The area in the field of Comparative Politics is Developed Areas.) This course seeks an understanding of the similarities and differences between the political systems of contemporary Western Europe by examining the different ways in which these systems have taken shape over time. The political development of Western Europe will be conceptualized as a series of critical phases beginning with the formation of the modern dynastic state in the 15th Century and concluding with the "postwar settlement" of the late 1940s.

**POLI 329 Russian and Soviet Politics.**

(3) (Prerequisite: POLI 211, POLI 212, or written consent of instructor; Soviet history helpful but not required) (Note: The area in the field of Comparative Politics is Developed Areas.) This course explores the institutions of the Soviet system and pressures to reform this system. Examines specific changes made to the system through democratization and market reform. Compares these changes to similar transitions in other countries to assess possible twists in Russian's political future.

**POLI 330 Law and Courts in Europe.**

(3) (Prerequisite: POLI 211 or POLI 212) (Restrictions: Not open to students who have taken POLI 339 in 2006-2007 or 2007-2008) Judicial politics in continental Europe, including theoretical accounts of the rule of law, judicial independence, power, and accountability, and the judicialization of politics. Empirical examples will be drawn from both Western and Eastern Europe countries, as well as the constitutional and the ordinary judiciaries.

**●POLI 331 Politics in East Central Europe.**

(3) (Prerequisite: Some prior related course i.e. Comparative Politics or East European History or written consent of the instructor. Recommended POLI 329.) Analysis of recent dramatic changes in East Central Europe in light of the historical development and current structure of these states, their relationship to their societies, with emphasis on diversity and its sources.

**POLI 333 Western Political Theory 1.**

(3) (Prerequisite: POLI 231 or POLI 232 or PHIL 240 or at least two political science courses at the 300 level; or permission of the instructor) (Note: The field is Political Theory.) The major themes and writers in the political theory of classical antiquity. The political ideas of Thucydides, Plato, Aristotle, and the Hellenistic philosophers will be explored through the significant texts of this period.

**POLI 334 Western Political Theory 2.**

(3) (Prerequisite: POLI 333 or written permission of the instructor. POLI 333 should be taken before this course) (Note: The field is Political Theory.) Medieval and renaissance political philosophy, from Saint Augustine to Sir Thomas More. Scholastic and neo-scholastic political thought, natural law and natural rights, as well as civic and northern humanism, republicanism and liberty. Twentieth century work on similar concepts will be used.

**POLI 336 Le Québec et le Canada.**

(3) (Restrictions: An ability to understand and read French is required; writing and speaking ability are not. Not open to students who have taken QCST 336.) (Note: The field is Canadian Politics.) Comment les Canadiens anglais et les Québécois se perçoivent-ils? Les différences culturelles entre les deux groupes. Les relations politiques et économiques entre les deux groupes. L'impact de la Révolution Tranquille. La place des francophones et des anglophones dans la vie collective. Les projets de réaménagement du cadre politique.

**POLI 337 Canadian Public Administration.**

(3) (Prerequisite: at least one other course in Canadian government or politics) (Note: The field is Canadian Politics.) Organization and practice of public administration at the federal provincial and local level in Canada. Contrasting theories/techniques of public administration and policy, organization of field offices for delivery of essential public services.

1967, 1973, 1982 crisis-wars; conflict- crisis management;

● **POLI 379 Topics in Canadian Politics.**

(3) (Prerequisite: A basic course in Canadian Government and Politics) (Note: The field is Canadian Politics.) Topics in Canadian politics.

● **POLI 410 Canadian Political Parties.**

(3) (Prerequisite: At least one other course in Canadian Politics) (Note: The field is Canadian Politics.) This course examines Canadian political parties and party systems, stressing patterns of historical development, party organization and finance, relationships with social movement, and the impact of Canadian federalism.

● **POLI 411 Immigration and Multiculturalism in Canada.**

(3) (Prerequisite: at least one course in Canadian politics, preferably at the 300 or 400 level, or permission of the instructor) (Note: The field is Canadian Politics.) An examination of various aspects of Canadian politics that stems from the country's experience with immigration and ethnic and racial diversity.

**POLI 412 Canadian Voting/Public Opinion.**

(3) (Prerequisite: at least one course in Canadian politics, preferably at the 300 or 400 level, or permission of the instructor) (Note: The field is Canadian Politics.) A critical examination of major debates within the literature on Canadian voting behaviour and public opinion.

**POLI 414 Society and Politics in Italy.**

(3) (Prerequisite: a basic course in Comparative Politics and preferably an upper level course or written permission of the Instructor) (Note: The area in the field of Comparative Politics is Developed Areas.) Analysis of modern Italian political development in comparison to other Western and Mediterranean countries. What makes Italian politics unique, what makes it resemble that of other countries.

**POLI 417 Health Care in Canada.**

(3) (Prerequisites: POLI 221 or POLI 221) (Note: The field is Canadian Politics.) This course analyzes the theory and politics of health policy and institutions, comparing provincial models and contextualizing Canadian systems with international perspectives from the U.S. and Europe. Current health reform debates will be explored, particularly those involving federal-provincial relations, sustainable financing and the role of the state in social protection.

**POLI 419 Transitions from Communism.**

(3) (Prerequisites: A previous History or Political Science course on the USSR, or Eastern Europe after WW II, or written permission of the instructor) (Note: The area in the field of Comparative Politics is Developed Areas.) Selected problems facing the Post-Soviet world. Themes include: new political institutions, parties, and groups; economic reform; social problems; ideological changes; the rise of ethnonationalism; linkages with the West.

**POLI 423 Politics of Ethno-Nationalism.**

(3) (Prerequisites: one 300 or 400-level course in comparative politics; and one 300 or 400-level course on developing areas (any discipline.) The same course can fulfill both requirements) (Note: The area in the field of Comparative Politics is Developing Areas.) Theories of ethno-nationalism examined in light of experience in Asia, Middle East and Africa. Topics include formation and mobilization of national, ethnic and religious identities in colonial and post-colonial societies; impact of ethno-nationalism on pluralism, democracy, class and gender relations; means to preserve tolerance in multicultural societies.

**POLI 424 Media and Politics.**

(3) (Prerequisites: POLI 211 or POLI 212; and at least 3 credits in Political Science at the 300 level) (Note: The area in the field of Comparative Politics is Developed Areas; also in the field of Canadian Politics.) The role of media in domestic and international politics, with reference to recent studies in political science. Themes in the study of mass media and politics in developed democracies.

● **POLI 425 Topics in American Politics.**

(3) (Prerequisite: POLI 325) (Note: The area in the field of Comparative Politics is Developed Areas.) This course involves a detailed analysis of a limited area of American politics and government.

**POLI 427 Selected Topics: Canadian Politics.**

(3) (Prerequisite: A basic course and preferably an upper level course as well in Canadian Government and Politics or permission of the instructor) (Note: The field is Canadian Politics.) Selected problem areas in Canada's political process, political culture, constitutional development, and machinery of government.

**POLI 431 Nations and States/Developed World.**

(3) (Prerequisite: POLI 211 or POLI 212 or POLI 328) (Note: The area in the field of Comparative Politics is Developed Areas.) The role of nationalism in European and North American political development. Topics include: nationalism and state-formation, secession and sub-state nationalism, war and nationalism, federal and consociational arrangements in multi-national societies.

**POLI 432 Selected Topics: Comparative Politics.**

(3) (Note: The field is Comparative Politics in Developed Areas.) Topic: Memory, Place and Power.

**POLI 433 History of Political/Social Theory 3.**

(3) (Prerequisite: POL1 231 or 232 or 333 or 334 or written permission) (Note: The field is Political Theory) Early modern political philosophy, from Luther to Rousseau and Burke. Resistance theories of the 16th century, Hobbes and Locke, the Enlightenment and the French Revolution. Twentieth century work on concepts developed in this period such as rights, revolution, legitimacy, democracy, authority and liberty.

**POLI 434 History of Political/Social Theory 4.**

(3) (Prerequisite: POL1 433) (Note: The field is Political Theory.) A consideration of selected writers and themes of late 19th and 20th century political theory. Writers include Hegel, Clausewitz, Marx, Mill, Nietzsche, Lenin, Rowis, Foucault, and Habermas. The rise of industrial society, scientism, the romantic revolt, revolutionary movements, socialism and liberal-democracy.

**POLI 435 Identity and Inequality.**

(3) (Prerequisite: 300 level course in comparative politics or



**POLI 442 International Relations of Ethnic Conflict.**

(3) (Prerequisite: POLI 244 or permission of instructor)  
Issues related to the internationalization of ethnic conflict, including diasporas, contagion and demonstration effects, intervention, irredentism, the use of sanctions and force. Combination of theory and the study of contemporary cases.

●**POLI 444 Topics in International Politics 2.**

(3) (Prerequisite: An upper level course in International Politics or written permission of the instructor) (Note: The field is International Politics.) A specific problem area in International Politics.

**POLI 445 International Political Economy: Monetary Relations.**

(3) (Prerequisites: POLI 243 or permission of the instructor.) (Note: The field is International Politics.)  
Advanced course in international political economy; the politics of international of monetary relations, such as international rules governing international finance, the reasons for and consequences of financial flows, and the functioning of international financial bodies such as the IMF and World Bank.

**POLI 450 Peacebuilding.**

(3) (Prerequisites: previous courses in comparative politics/developing areas and international relations. Internet research skills are strongly recommended) (Note: The area in the field of Comparative Politics is Developing Areas; also in the field of International Politics.) An examination of transitions from civil war to peace, and the role of external actors (international organizations, bilateral donors, non-governmental organizations) in support of such transitions. Topics will include the dilemmas of humanitarian relief, peacekeeping operations, refugees, the demobilization of ex-combatants, transitional elections, and the politics of socio-economic reconstruction.

**POLI 451 The European Union.**

(3) (Prerequisite: one course each in International Relations and Comparative Politics) (Note: The area in the field of Comparative Politics is Developed Areas; also in the field of International Politics.) The emergence of the EU and its innovative institutions and policies will be studied through lectures, discussions, and a simulation (of a European Council or Parliament session). Emphasis upon current debates about the EU's developing identity, its internal political economy, its institutions of 'multilevel' governance, and its external relation.

**POLI 459 Topics in Political Theory 2.**

(3) (Prerequisite: A 300- or 400-level course in political theory) (Note: The field is Political Theory.) Topic: Feminist Political Thought. This course will deal with a specific problem area in Political theory.

**POLI 461 Advanced Techniques of Empirical Research.**

(3) (Prerequisite: POLI 311) A lab course introducing some advanced statistical methods used in political research. Topics include univariate and bivariate descriptive statistics, and regression analysis, taught alongside current topics across political science subfields.

**POLI 522 Seminar: Developing Areas.**

(3) (Prerequisite: At least one upper-level course in the politics of developing areas.) (Restriction: Open to graduate students, final year honours students, and other advanced undergraduates with permission of instructor; (Note: The field is Comparative Politics in Developing Areas.) State-society relations in the developing world through historical, comparative, and analytical perspectives, focusing on: (1) theories and concepts of the state; (2) state capacity and incapacity; (3) state formation.

**POLI 524 Seminar: Developed Areas.**

(3) (Prerequisite: At least one upper-level course in the politics of developed areas) (Restriction: Open to graduate students, final year Honours students, and other advanced undergraduates with the permission of the instructor) (Note: The area in the field of Comparative Politics is Developed Areas.)  
Fall Topic: Social Capital in Comparative Perspective. Winter

**RUSS 224 From War to Revolution.**

(3) (Winter) (Given in English) Russian literature from the Crimean War (1856) to the revolutions of 1917. The classical novel through Symbolism to the end of the Empire. Literature in an age of uncertainty. There will be an examination of the works of Tolstoy, Dostoevsky, Chekhov, Bely, Gorky and other selected authors.

**●RUSS 255D1 (3), RUSS 255D2 (3) Introduction to Polish.**

(Fall, Winter) (Students must register for both RUSS 255D1 and RUSS 255D2.) (No credit will be given for this course unless both RUSS 255D1 and RUSS 255D2 are successfully completed in consecutive terms) An introduction to the study of Polish with emphasis on basic Polish grammar, conversation, reading and writing. Please consult Department prior to registration.

**RUSS 300 Russian for Heritage Speakers 1.**

(3) (Fall) (Prerequisite: Permission of the Department) (Restriction: Not open to students who have taken RUSS 210, RUSS 211, RUSS 215, RUSS 310, RUSS 311 and RUSS 316.) (Given in Russian) For native speakers of Russian who have not had full academic instruction in the language. Focus on grammatical structure and syntax, the formalities of written Russian and appreciation of the language's stylistic diversity. Multi-media approach including excerpts from literary works, current newspapers, television news broadcasts, films and cartoons.

**RUSS 301 Russian for Heritage Speakers 2.**

(3) (Winter) (Given in Russian) (Prerequisites: RUSS 300 or permission of the instructor) (Restrictions: Not open to students who have taken Russ 210,211,215,310,311 and 316) For native speakers of Russian who have not had full academic instruction in the language. Focus on complex grammatical structures, syntax, and stylistically differentiated uses of vocabulary in written and spoken Russian. Multi-media approach including excerpts from literary works, current newspapers, Internet sources, and films.

**RUSS 310 Intermediate Russian Language 1.**

(3) (Fall) (Prerequisite: RUSS 210 and RUSS 211 or equivalent) (Restriction: Not open to students who are taking RUSS 316) Reading, translation, conversation.

**RUSS 311 Intermediate Russian Language 2.**

(3) (Winter) (Prerequisite: RUSS 310 or equivalent) (Restriction: Not open to students who are taking or have taken RUSS 316) Reading, translation, conversation.

**RUSS 316 Intermediate Russian Language Intensive 2.**

**RUSS 453 Advanced Russian Language and Syntax 2.**

(3) (Winter) (Prerequisite: RUSS 452 or equivalent) Prose composition, translation, essay writing. An introduction to Russian stylistics.

●**RUSS 455 History of Modern Russian Language.**

(3) (Fall) (Prerequisite: Permission of instructor) (Note open to students who have taken RUSS 456) (Course given

● **SOCI 219 Sociology of Culture.**

(3) A survey of theoretical approaches and substantive topics in the culture. Topics include: norms and values in national cultures; negotiation of cross-cultural interpersonal exchanges; structural codes and cultural classifications; production constraints on cultural objects; the differential reception of cultural products.

**SOCI 222 Urban Sociology.**

(3) Comparative analysis of the process of urbanization in Europe, North America and the Third World; effects of urbanization upon social institutions and individuals; theories of urbanization and urbanism; the Canadian urban system; urban problems in comparative view.

**SOCI 225 Medicine and Health in Modern Society.**

(3) Socio-medical problems and ways in which sociological analysis and research are being used to understand and deal with them. Canadian and Québec problems include: poverty and health; mental illness; aging; death and dying; professionalism; health service organization.

**SOCI 230 Sociology of Ethnic Relations.**

(3) (Prerequisite: SOCI 210 or permission of instructor) An introduction to the sociological study of minority groups in Canada. The course will explore the themes of racism, prejudice, and discrimination, ethnic and racial inequalities, cultural identities, multiculturalism, immigration. Theoretical, empirical, and policy issues will be discussed. While the focus will be primarily on Canada, comparisons will be made with the United States.

**SOCI 234 Population and Society.**

(3) Introduction to the reciprocal linkages in the social world between population size, structure and dynamics on the one hand, social structure, action and change on the other. An examination of population processes and their relation to the social world.

**SOCI 235 Technology and Society.**

(3) An examination of the extent to which technological developments impose constraints on ways of arranging social relationships in bureaucratic organizations and in the wider society: the compatibility of current social structures with the effective utilization of technology.

**SOCI 247 Family and Modern Society.**

(3) (Course for the Women's Studies Concentrations) Contrasting family in Canada and in the United States for the recent past. Examination of theories on family; changes and diversity of family life; complex relationships among marriage, work, and family; domestic violence; various types of family experience; and the future of the family.

**SOCI 250 Social Problems.**

(3) Contrasting theoretical approaches to social problems.

**SOCI 254 Development and Underdevelopment.**

(3) (Summer) Competing theories about the causes of underdevelopment in the poor countries. Topics include the impact of geography, the population explosion, culture and national character, economic and sexual inequalities, democracy and dictatorship. Western imperialism and multi-national corporations, reliance on the market, and development through local participation, cooperation, and appropriate technology.

● **SOCI 265 War, States and Social Change.**

(3) The impact of war on society in agrarian and industrial epochs. Particular attention is given to the relationship between war and economic development, social classes, nationalism, and democratization.

**SOCI 270 Sociology of Gender.**

(3) This course focuses on social changes in gender relations, gender inequalities and the social construction of gender. Using sociological theories of gender, different social institutions and spheres of society will be analyzed. Topics such as gender socialization, gender relations in work, family, education, and

segregation and stratification; sexual harassment; and work-family policy.

● **SOCI 322 Sociology of Literature.**

(3) (Prerequisite: SOCI-219.) A review of sociological research on the production, readership, and broader social implications of literature. Topics will include: the issue of whether literature "reflects" society, the use of literature in establishing collective identities, and reading as a social practice.

**SOCI 326 Political Sociology 01.**

(3) An examination of the social changes that underlie the emergence of modern politics. An outline and empirical critique of the principal alternative models of political functioning in industrial societies. Empirical analysis of elite and mass political behaviour.

**SOCI 327 Jews in North America.**

(3) Understanding of contemporary North American Jewry using findings of sociology and other social sciences. Social, cultural, and political issues of concern to the Jewish community. Specific characteristics of Jewish life in Canada, and Québec in particular, in comparison to the American Jewish experience.

**SOCI 330 Sociological Theory.**

(3) (Prerequisite: SOCI 210 or permission of instructor) Major sociological theoretical traditions are seen in their historical contexts, as the background to current theoretical issues. Emphasis on Smith, Tocqueville, Marx, Durkheim, Weber and Parsons.

● **SOCI 333 Social Stratification.**

(3) The pattern, causes and consequences of social inequality. Among the inequalities considered are those of economic class, sex (gender), race, ethnicity and age. Competing theories of the causes of social inequalities are compared and assessed.

● **SOCI 338 Introduction to Biomedical Knowledge.**

(3) The dynamics of biomedical disciplines and specialties. Social, scientific, political and commercial aspects of biomedical research. The organization of work in clinical and fundamental research and its consequences on the choice of research topics.

**SOCI 341 Current Problems in Sociology 02.**

(3) (Prerequisite: permission of instructor.) (Restriction: Open to U2 and U3 students only) Intended for students who are adequately prepared to undertake advanced work and have an explicit proposal to submit.

**SOCI 342 Independent Study 1.**

(3) (Prerequisite: permission of instructor.) (Restriction: Open to U2 and U3 students only) Intended for students who are adequately prepared to undertake advanced work and have an explicit proposal to submit.

**SOCI 343 Independent Study 2.**

(3) (Prerequisite: permission of instructor.) (Restriction: Open to U2 and U3 students only) Intended for students who are adequately prepared to undertake advanced work and have an explicit proposal to submit.

**SOCI 350 Statistics in Social Research.**

(3) (Prerequisite: SOCI 211) (Restriction: Not open to students who have taken PSYC 204, PSYC 305 or ECON 227) (You may not be able to receive credit for this course and other statistic courses. Be sure to check the Course Overlap section under Faculty Degree Requirements in the Arts or Science section of the Calendar.) This is an introductory course in descriptive and inferential statistics. The course is designed to help students develop a critical attitude toward statistical argument. It serves as a background for further statistics courses, helping to provide the intuition which can sometimes be lost amid the formulas.

● **SOCI 354 Dynamics of Industrial Societies.**

(3) (Prerequisite: SOCI 210 or any other introductory course in the social sciences) Theories of social, economic, and political change in the industrialized societies. Causes of cycles in economic growth; imperialism and war; and in ethnic, religious, and industrial conflict. Causes of long run trends in social inequality, crime, family stability, and the position of women. Comparison of North America, Europe, Russia, and Japan.

**SOCI 365 Health and Development.**

(3) (Prerequisite: SOCI 234 or SOCI 254) Main concepts and controversies linking health to broader social and economic conditions in low income countries. Topics include the demographic and epidemiological transitions, the health and wealth conundrum, the social determinants of health, health as an economic development strategy, and the impact of the AIDS pandemic.

● **SOCI 370 Sociology: Gender and Development.**

(3) (Prerequisite: SOCI 210) Exploration of the main development theories and discussion of how gender is placed within them, analysis of the practical application of development projects and discussion of how they affect gender dynamics, and examination of power relations between development agencies and developing countries. Examples from Sub-Saharan Africa and Latin America are used.

**SOCI 377 Deviance.**

(3) Introduction to the sociological study of deviance. Emphasis on the "societal reaction" or "interactionist" approach to deviance. The correctional and causal approach towards deviance, its limitations and alternative ways to address the subject of deviance.

**SOCI 386 Contemporary Social Movements.**

(3) This course will focus on contemporary social movements in Canada, the U.S., and Western Europe, such as the civil rights movement, the women's movement, and the environmental movement. Empirical studies of movements will be used to explore such general issues as how social movements emerge, grow, and decline.

**SOCI 388 Crime.**

(3) Introductory course on methods and theories in criminology. Exploration of the nature and distribution of crime; and critical evaluation of definitions and the measurement of crime; review of theoretical approaches used to understand such a phenomenon; a comparative overview of the criminal justice system.

**SOCI 390 Gender and Health.**

(3) Key conceptual and substantive issues in gender and health since c1950: stratified medicalization of women's and men's health; social movements in health including the women's health movement; gender inequality in morbidity and mortality; gender, power and control in patient/physician interactions; embodied experience; politics and policies of gender and health.

**SOCI 420 Organizations.**

(3) (Prerequisites: SOCI 210 or SOCI 235) A survey of theories of organization with particular reference to problems of growth, technology, centralization and decentralization, and organizational environments.

● **SOCI 422 Health Care Providers.**

(3) Current trends and issues in health and illness. The role of occupations and organizations which define health and illness and organize and provide health care. Topics include: the impact of interprofessional relationships; legitimation of approaches to health and illness; knowledge and belief systems, and the role of power; challenges to traditional providers, and the impact of the consumers' and women's movements.

**SOCI 424 Networks and Social Structures.**

(3) The study of relations and networks. Concepts and techniques of network analysis. Issues include: interlocking directorates, er and A2s,

● **SOCI 435 Popular Culture.**

(3) A seminar exploring the nature of popular culture, tracing historical beginnings and contemporary changes in film, TV, comics, magazines, and rock music content. Emphasis on developing theoretical perspectives and methodologies for analysing genres and themes, and for making distinctions between so-called folk and popular art.

**SOCI 440 Current Problems.**

(3) (Prerequisite: permission of instructor.) (Restriction: Open to U2 and U3 students only) Intended for students who are adequately prepared to undertake advanced work and have an explicit proposal to submit.

**SOCI 441 Current Problems in Sociology 03.**

(3) (Prerequisite: permission of instructor.) (Restriction: Open to U2 and U3 students only) Intended for students who are adequately prepared to undertake advanced work and have an explicit proposal to submit.

**SOCI 442 Independent Reading and Research 01.**

(3) (Prerequisite: permission of instructor.) (Restriction: Open to U2 and U3 students only) Intended for students who are adequately prepared to undertake advanced work and have an explicit proposal to submit.

**SOCI 443 Independent Reading and Research 02.**

(3) (Prerequisite: permission of instructor.) (Restriction: Open to U2 and U3 students only) Intended for students who are adequately prepared to undertake advanced work and have an explicit proposal to submit.

● **SOCI 446 Colonialism and Society.**

(3) (Prerequisite: SOCI 210 or permission from instructor.) Forms that colonialism took, its impact on colonial societies, and its modern legacies, focusing on overseas colonialism between 1600 and the 1970s.

**SOCI 455 Post-Socialist Societies.**

(3) (Prerequisite: SOCI 210.) The demise of Communist Party rule between 1989 - 1991 throughout Eastern Europe and the Soviet Union. The societal implications (e.g. class formation, gender relations, nationalism, corruption, religious freedom) of these dramatic economic and political changes.

● **SOCI 506 Quantitative Methods 3.**

(3) (Prerequisite: SOCI 504 or equivalent or permission of instructor.) Advanced statistical analyses focusing on advanced methods such as event history analysis and analysis of contingency tables.

● **SOCI 507 Social Change.**

(3) (Restrictions: Not open to students who have taken SOCI 672. Undergraduates by permission of instructor only.) An examination of the major sociological theories of long term macro social change. Topics include why industrialization began in Europe instead of Asia, the divergence among societies in systems of class, gender, ethnic and racial inequality, and whether industrial society has entered a new post-industrial or post-modern phase.

**SOCI 508 Medical Sociology and Social Psychiatry.**

(3) (Prerequisite: SOCI 309 or SOCI 310 or Permission of the Instructor.) (Note: Open to Social Studies of Medicine students.) The social construction of mental illness and disease, the personal and professional definition and recognition of illness, the distribution and determinants of illness, disease, sickness in the population, and the politics of medical research.

**SOCI 510 Seminar in Social Stratification.**

(3) (Prerequisites: SOCI 333 and SOCI 350 or equivalents) Recent theoretical and empirical developments in social stratification and inequality. The study of social class, with attention to the anomalous findings on heterogeneity in labour markets and the labour process, status attainment processes, and the socio-political and industrial attitudes of the working class. Students will prepare quantitative analysis of Canadian survey material as well as critical qualitative reviews.

**SOCI 511 Movements/Collective Action.**

(3) A critical examination of classical and more recent approaches to the study of social movements and collective action. Discussion of: the role of grievances and interests, incentives and beliefs, conditions of breakdown and solidarity, mobilization and social control, the dynamics of collective action.

● **SOCI 512 Ethnicity & Public Policy.**

(3) (Prerequisite: SOCI 230 or permission from the instructor.) (Restriction: Not open to students who have taken SOCI 629.) Major themes in the theoretical literature on ethnicity. Public policies with direct and indirect implications for inter-ethnic relations will be studied. Policies affecting areas such as language, education, immigration, employment and promotion, multiculturalism and welfare. Examples drawn from several multi-ethnic societies. Political, constitutional, and economic problems associated with these policy initiatives.

**SOCI 513 Social Aspects HIV/AIDS in Africa.**

(3) (Prerequisites: SOCI 225 or SOCI 309 or Permission of Instructor.) Examination of the social causes and consequences of HIV/AIDS in Africa. Gender inequality, sexual behaviours, marriage systems, migration, and poverty are shaping the pandemic as well as how the pandemic is altering social, demographic and economic conditions across Africa.

**SOCI 514 Criminology.**

(3) (Prerequisite: Permission of Instructor.) (Note: Grad students and U3 students only.) A survey of the major schools of thought that have developed to explain criminal behaviour from the emergence of modern criminology in the 18th and 19th f grols of



● **SOCI 555 Comparative Historical Sociology.**

(3) (Restriction: Undergraduate students require permission of instructor) The analysis of patterns of state and nation-building in historical and comparative perspectives with particular attention being given to methodology.

● **SOCI 560 Labour and Globalization.**

(3) (Prerequisite: SOCI 307 or Permission of Instructor) The relationship between labour and globalization, focusing on globalization of production, working conditions, national labour responses, and the emergence of transnational campaigns for labour rights and new forms of private regulation.

● **SOCI 565 Social Change in Panama.**

(3) (Prerequisites: SOCI 210 and SOCI 350 or equivalents.) (Restriction: Students must register for a full term in the Panama Field Studies Semester.) (Note: Four field trips.) Analysis of social change in Panama, particularly during the 20th century: demography, social and economic structures, rural and urban activities and landscapes, indigenous peoples, the effects of the Canal and the Free Trade Zone. Focus throughout on the interaction of human society and the environment.

● **SOCI 571 Deviance and Social Control.**

(3) This seminar focuses on how social groups enforce rules (and maintain social order) through coercion and socialization. It reviews current research and critiques key theoretical approaches to social control. Included are discussions of regulating institutions such as prisons and mental asylums, and the roles of gossip, manners and etiquettes.

● **SOCI 580 Social Research Design and Practice.**

(3) (Restriction: Open to U3 and graduate students) Asking researchable sociological questions and evaluation of different research designs used to answer such questions. Development of cogent research proposals, including data collection procedures. Principles, dynamics, strengths and practical limitations of research designs. Examples from recent publications.

● **SOCI 588 Sociology of Knowledge.**

(3) (Restriction: Not open to students who have taken SOCI 661.) A review of the current research in the sociology of knowledge. The focus will be on sociological studies of the formation, circulation and reception of scientific and artistic ideas, beliefs and practices, and the configuration and social organization of the collectives involved in these processes.

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## SWRK-Social Work

Offered by: Social Work

● **SWRK 199 FYS: Social Work Profession.**

(3) (Fall) (Restriction: Open only to newly admitted students in U0 or U1, who may take only one FYS. Students who register for more than one will be obliged to withdraw from all but one of them.) (Maximum 25) The course will explore the profession and practice of social work including its history; ethical foundations and place in society. It will also address the various fields in which social workers practice - e.g., health; child welfare; women's issues.

● **SWRK 220 History & Philosophy of Social Work.**

(3) (Restrictions: Limited to BSW U1 and 2-year BSW students. Not open to students who have taken SWRK240.) Historical, theoretical and philosophical base of social work which includes the role of social work in the social welfare, modalities of practice, professional codes of ethics, and human rights legislation.

● **SWRK 221 Public Social Services in Canada.**

(3) (Restrictions: Limited to BSW U1 and 2-year BSW students. Not open to students who have taken SWRK352.) Federal and provincial social welfare programs - the intended objectives, program design, issues of eligibility and funding, and comparison with programs in other parts of Europe and North America. Particular emphasis on concepts of social justice and poverty. Programs such as income security, labour market, health, immigration, and social services.

● **SWRK 222 Introduction to Practicum.**

(3) (Restrictions: Limited to BSW U1 students. Not open to students who have taken SWRK255.) Basic social work skills.

● **SWRK 223 Poverty and Inequality.**

(3) (Restrictions: Limited to BSW U1 students. Not open to students who have taken SWRK357.) Examination and analysis of laws and policies affecting those living in poverty, experiencing inequality, strategies for mitigating these issues, role of social work in advocating for legal and welfare rights of clients and communities.

● **SWRK 224 Human Development Across the Lifespan.**

(3) (Restriction: Limited to BSW U1 students) Physical, cognitive, emotional, behavioural and social development in different stages of the life course with a focus on childhood and adolescence. Human development in different social contexts. Theory and research as it relates to social work practice.

● **SWRK 320 Practice with Individuals and Families 1.**

(3) (Restrictions: Limited to BSW U1 and 2-year BSW students. Not open to students who have taken SWRK 320 D1/D2 and SWRK 341) Introduction to theories and techniques informing clinical social work practice with individual and family systems in a social context. Sexual orientation, race, class, gender, culture, ability and diverse family forms are integrated. Knowledge and skills required for assessment and treatment across a range of practice settings.

● **SWRK 321 Introduction to Practice with Groups.**

(3) (Restrictions: Limited to BSW U1 and 2-year BSW students. Not open to students who have taken SWRK 321 D1/D2 and SWRK 376) Introduction to theories and techniques informing social work practice with groups. Emphasis on understanding group formation, assessment, and models of group intervention across a range of practice settings and with different populations.

● **SWRK 322 Field Practice 1.**

(3) (Restrictions: Limited to BSW students. Not open to students who have taken SWRK 355.) Supervised educational experiences in social work practice designed to integrate practice and theory.

● **SWRK 323 Field Practice 2.**

(3) (Prerequisite: SWRK 322) (Restrictions: Limited to BSW students. Not open to students who have taken SWRK 356.) Supervised educational experiences in social work practice designed to integrate practice with theoretical knowledge.

● **SWRK 325 Anti-Oppression Social Work Practice.**

(3) (Prerequisite: SWRK 223.) (Restrictions: Limited to BSW U1 and 2-year BSW students. Not open to students who have taken SWRK 344) Social work policy and practice, including an examination of discrimination and oppressions, identity and social location, reflexivity, intersectionality, contemporary anti-oppression movements, access and equity in human services and their implications.



Always check at [www.mcgill.ca/study/](http://www.mcgill.ca/study/) for the most up-to-date information on whether a course is offered.

\* Denotes courses taught only in alternate years.

‡ Professional Practice (Stage) in Dietetics involving special prerequisites

◆ Indicates that departmental approval/permission must be obtained by a student prior to registration.

† Denotes courses not available as Education electives.

□ Denotes courses with limited enrolment.

● Denotes courses not offered by the Faculty of Arts or Faculty of Science in 2010-11.

▲ Denotes courses offered by the Faculty of Education which, if appropriate to the student's program, may be included in the academic concentration.

\* Denotes courses which, because they are scheduled around practice teaching, are open only to Bachelor of Education students.

**SWRK 326 Practice with Individuals and Families 2.**

(3) (Prerequisite: SWRK 320) (Restrictions: Limited to BSW U1 and 2-year BSW students. Not open to students who have taken SWRK 320 D1/D2 and SWRK 341) Advanced integration of theories and techniques informing clinical social work practice with individual and family systems in a social context. Sexual orientation, race, class, gender, culture, ability and diverse family forms are integrated. Knowledge and skills required for assessment and treatment across a range of practice settings.

**SWRK 327 Approaches to Community Practice.**

(3) (Prerequisite: SWRK 321) (Restrictions: Limited to BSW U1 and 2-year BSW students. Not open to students who have taken SWRK 321 D1/D2, SWRK 374 and SWRK 467.) A comparison of models of community practice in a variety of social settings. An analysis of practice assumptions and methods. Intervention strategies and methods from student practice will be discussed.

**SWRK 341 Introduction: Practice with Families.**

(3) (Winter) An introduction to theories and techniques of family assessment and intervention using genograms, family systems and eco-systemic approaches and family life cycle theory. The effects of class, gender, race, culture; also diverse family forms (nuclear, extended, divorcing, reconstituted, substitute, lone parent, gay/lesbian) are considered. Illustrations using simulations and tapes.

**SWRK 342 Practice with Gay, Lesbian, Bisexual & Two-Spirit People.**

(3) (Restrictions: Limited to Social Work BSWU2, BSWU3, 2-year BSW students and U2, U3 Minor in Sexual Diversity Studies students.) Issues facing gay, lesbian, bisexual and two-spirit people. Addresses how social workers can support the development of health and social services informed by principles of social justice and equity. Topics include self-esteem, youth at risk, families, and aging.

**SWRK 345 First Peoples' Issues and Social Work.**

(3) (Prerequisite: SWRK 220) An analysis of Canadian policies and legislation, their impact on First Peoples and on social work practice. Historical overview of European-Canadian and First Nations, Métis and Inuit relations.

**●SWRK 350 Social Work Skills Laboratory.**

(3) (Summer) (Restriction: Limited to Special B.S.W. Students) A Compulsory Skills laboratory for all Special B.S.W. students which focuses on developing basic interviewing skills. Student participation is required.

**●SWRK 351 Children's Needs and Social Services.**

(3)

**●SWRK 353 Introduction to Practice.**

(6) (Summer) (Corequisite: SWRK 350) (Restriction: Limited to Special B.S.W. students only) Introduction to the principles and practice of social work. Examination of social legislation, social policy, and social services.

**SWRK 354 Social Work in the Health Field.**

(3) (Restrictions: Limited to BSW U2, BSW U3, and 2-year BSW students.) An introduction to health and health institutions in the context of service delivery. Major themes will include: multidisciplinary teamwork in the hospital; crisis intervention; legal ethical issues; and emerging issues for social workers in health.

**●SWRK 374 Community Development/Social Action.**

(3) (Fall) (Restriction: Not open To U1 Level Students.) The organizing process and development of direct organizing skills. Emphasis on organizational entities, community power and conflict, organizing strategies and their application, urban community development.

**●SWRK 376 Social Work Practice with Groups.**

(3) (Fall) (Prerequisite: U1 required Social Work course) (Restriction: Limited to B.S.W. students only) Theory and practice of work with groups. Emphasis on understanding group concepts and group dynamics and learning about various theoretical models of social group work practice. Focus on group development theory and the skills of the worker in a small group context. Small group participation, role playing and simulations will be utilized.

**●SWRK 377 Women's Issues in Practice.**

(3) (Winter) (Restriction: Limited to B.S.W. U2, B.S.W. U3, Special B.S.W. and U3 Women's Studies Major/ Minor Concentration students) Social work practice with women based on recent advances in understanding women's relationships to the structures and institutions of society. Issues which arise in the provision of social services: women and the family, mental and physical health, poverty and the welfare system, feminist counselling.

**SWRK 400 Policy and Practice for Refugees.**

(3) (Restrictions: Limited to BSW U3, 2-year BSW, and U3 non-Social work students) Refugee-generating conflicts, international and national responses are considered. Canadian policy, history and response to refugees are analyzed. Theory-grounded practice with refugees is examined, including

workers. Examples are drawn from current field experiences of students.

● **SWRK 434 Practice with I 8Go38a nuAy Clits.**





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## Post Graduate Dentistry

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# Faculty of Education

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## EDEA-Arts Education

Offered by: Integrated Studies in Ed

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▲ EDEA 201 Basic Musicianship Teaching 1.

(3) Introduction to the elements of music theory through techniques of aural training, sight singing and keyboard. Lab work at the keyboard.

▲ EDEA 204 Drawing.

**▲ EDEA 404 Painting 5.**

(3) (Prerequisite: EDEA 305) Major problems in graphic expression. A tutorial course where the student selects the instructor. Individual conferences and criticism leads the student to an independent approach to painting.

**▲ EDEA 405 Painting 6.**

(3) (Prerequisite: EDEA 404) The student will be required to work in a variety of sizes up to mural painting. Exploration of selected media and new dimensions of design.

**EDEA 407 Final Year Professional Seminar Music.**

(3) (Corequisite: EDFE 407) (Restriction: Students in B.Ed. in Music or Concurrent B.Ed. and B.Mus.) Summary of philosophical, theoretical and practical issues related to the profession of teaching.



**▲ EDEC 241 Cree Language 1.**

(3) Students will learn their own phonology and see how the phonological system is reflected in dialects. They will learn the spelling rules and develop their literacy skills in syllabics. Finally, they will derive Cree grammatical terms and begin to study Cree morphology and syntax.

**▲ EDEC 242 Cree Language 2.**

(3) (Prerequisite: EDEC 241) Students will study the morphology and syntax analysis of Cree at a more advanced level and begin the study of word generation conventions. In addition, features of Cree that are difficult in first language acquisition will be highlighted and implications for classroom practice discussed.

**EDEC 243 Teaching: Multigrade Classrooms.**

(3) This course introduces students to concepts and strategies for organizing, teaching, and evaluating learning in classes in which there are students from 2, 3 or 4 grade levels.

**▲ EDEC 244 Issues in Aboriginal Education.**

(3) The content of this course changes depending on the needs and interests of the students and the educational communities participating in programs administered by First Nations and Inuit Education. It always addresses issues related to Aboriginal education, e.g., local control, development of linguistic and cultural policies.

**EDEC 245 Middle School Teaching.**

(3) Explores the philosophy of middle school teaching and how this impacts on the institutional, curricula and instructional decisions made in meeting the specialized needs of Aboriginal adolescents. Particular attention will be paid to how middle school philosophy can be integrated with Aboriginal values.

**EDEC 246 Middle School Curriculum.**

(3) (Prerequisite: EDEC 245) Curriculum principles underlying an integrated approach to learning in the middle school level; surveys various curricula looking at program structures; explores teaching and learning methodologies appropriate for this age level when implementing an integrated curriculum, with particular attention to integrating indigenous language and culture.

**EDEC 247 Policy Issues in Quebec Education.**

(3) (Restriction: Not open to students who have taken EDEM 405.) This course examines the organization of education in Quebec from various perspectives, including historical, political, social and legal. It aims to provide students with sufficient knowledge that they can begin the life-long learning process of a professional educator, aware of, and contributing to, the policy talk on school.

**EDEC 248 Multicultural Education.**

(3) (Restriction: Not open to students who have taken EDEC 410 and EDER 464.) Introduction to theories about intercultural and multicultural education in Quebec and Canadian schools.

**EDEC 249 Global Education and Social Justice.**

(3) A cross-curricular, interdisciplinary approach to teaching/creating learning experiences for students. It will foster critical thinking and nurture lifelong global understanding, active engagement and participation in relation to questions of social, economic, and environmental justice, by

**EDEC 306 Third Year Professional Seminar (Sec).**

(3) (Prerequisites: EDFE 254.) (Corequisite: EDFE 351.) (Restriction: Open to B.Ed. Secondary students only) Preparation for the third field experience through engaging in the full spectrum of unit/lesson planning, micro-teaching, critical analysis and self-reflection. Professional portfolios will be addressed.

**EDEC 308 Learning to Write Fiction.**

(3) Course focuses on basic story elements: character development, plot structure, setting, description, dialogue, point of view and the drafting and revising of stories through a shared experience within a community of supportive readers.

**EDEC 309 Learning to Write Poetry.**

(3) Basic poetic techniques such as free writing, lineation, metaphor, simile, and scansion. Collaborative development and oral readings.

**EDEC 311 Resource Management.**

(3) (Restriction: Normally for students registered within the Certificate in First Nations and Inuit Educational Leadership) A problem-solving approach (needs assessment, projections, creative solutions, and proposals) will establish a procedure for proactive management of the First Nations and Inuit educational environment (human, financial, and physical resources). Topics include staffing, finance, budgeting, payroll, and building and equipment maintenance.

**EDEC 312 Practicum in Educational Leadership.**

(3) (Restriction: Normally for students registered within the Certificate in First Nations and Inuit Educational Leadership) A work-study course within a First Nations and Inuit educational milieu. Supervised practice and application of communication and group skills; staff development and evaluation; human, fiscal, and physical resource management; and community outreach.

**EDEC 351 Third Professional Seminar (Secondary).**

(2) (Prerequisite: EDEC 254) (Corequisite: EDFE 351) (Restriction: Open to B.Ed. Secondary, B.Sc. and B.Ed. concurrent students only. Not open to students who have taken EDEC 306.) Preparation for the third field experience through engaging in the full spectrum of unit/lesson planning, critical analysis and self-reflection. Professional portfolios and competencies will be addressed.

**▲ EDEC 403 The Dialects of Inuktitut.**

(3) (Prerequisite: EDEE 344) Study of the main Eskimo-Aleut dialects from Siberia to Greenland, looking at the effect of Inuit migrations across the Arctic on the development of dialectal differences. The main phonological, grammatical and lexical differences between the dialects and the patterns underlying these differences will be examined.

**EDEC 404 Fourth Year Professional Seminar (Sec).**

(3) (Prerequisites: EDEC 306, EDFE 351.) (Corequisite: EDFE 451) (Restriction: Open to B.Ed. Secondary students only) Preparation for the final field experience and entry into the teaching profession. Emphasis will be placed on developing the ability to demonstrate ethical and responsible professional behaviour in the performance of duties. Final preparation of professional portfolios will be addressed.

**EDEC 405 Fourth Year Professional Seminar (K/Elem).**

(3) (Prerequisite: EDEE 355) (Corequisite: EDFE 406) (Restriction: Open to B.Ed. K/Elem. students only) Preparation for the final field experience and entry into the teaching profession. Emphasis will be placed on developing the ability to demonstrate ethical and responsible professional behaviour in the performance of duties. Final preparation of professional portfolios will be addressed.

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## EDEE-Elementary Education

Offered by: Integrated Studies in Ed

**EDEE 223 Language Arts.**

(3) This course will explore the current research and theory of language learning and the practices which provide meaningful language experiences in the context of the pre-school and elementary classroom.

**□ EDEE 224 Language Arts Part 2.**

(3) (Prerequisite: EDEE 223) This course will explore the current research and theory of language learning and the practices which provide integrated and meaningful language experiences in the context of the pre-school and elementary classroom.

**▲ EDEE 230 Elementary School Mathematics.**

(3) A course specially designed for elementary school teachers to provide the basic foundations, insight and understanding of the Quebec modern elementary mathematics programs.

**EDEE 234 Elementary School Geometry.**

(3) A course specially designed for elementary school teachers to provide the basic foundations, insight and understanding of the geometry found in the Quebec modern elementary mathematics programs.

**EDEE 240 Use and Adaptation of Curricula.**

(3) Provincial or Nunavut curricula as a basis for planning, materials production and evaluation. Methods of adapting curricula to local needs and of developing local courses of study in First Nations and Inuit community schools.

**EDEE 241 Teaching Language Arts.**

(3) (Prerequisite: Fluency in Inuktitut or another Aboriginal language) Organization and planning of Language Arts programs in Inuktitut or another Aboriginal language. Preparation and presentation of lesson sequences. Use of various techniques to improve language skills in listening, speaking, reading and writing.

**EDEE 242 Teaching Mathematics.**

(3) An introduction to mathematical concepts and approaches to teaching First Nations or Inuit students at the elementary level. Emphasis on the preparation and use of materials directly related to First Nations or Inuit life.

**EDEE 243 Reading Methods in Inuktitut/Cree.**

(3) (Prerequisite: Fluency in Inuktitut/Cree syllabics) Overview of reading theories and their application to Inuktitut/Cree; processes used by proficient readers. Methods of teaching reading.

**EDEE 245 Orientation to Education.**

(3) The First Nations or Inuit classroom as a unique pedagogical setting. Introduction to planning and maintaining a learning environment for First Nations or Inuit children. Study and application of differential learning styles.

**▲ EDEE 246 Cultivating Language and Thought.**

(3) Study and observation of spoken language development and its maturation in First Nations or Inuit children. Application of observed data to the selection and devising of appropriate materials and methods for pre-school and elementary levels.

**EDEE 248 Reading and Writing Inuktitut/Cree.**

(3) (Prerequisite: Fluency in Inuktitut/Cree syllabics) Methods of teaching syllabic reading and writing. Understanding the principles of sight word reading instruction, child observation, material development and guided instruction.

**▲ EDEE 249 Inuktitut Orthography and Grammar.**

(3) (Prerequisite: Fluency in Inuktitut) Structure and morphology of Inuktitut for teachers working in that language. Use of orthography, both qaliujaaqpait (Roman script) and qaniujaaqpait (syllabics) as established by the Inuit Cultural Association.

**EDEE 250 The Kindergarten Classroom.**

(2) (Restriction: Not open to students who have taken EDEC 310) An orientation to the Kindergarten curriculum. Integration of the school subject areas (language arts, second language, mathematics, social sciences, science, expressive arts, moral and religious education, and physical education) in a manner appropriate to the developmental level of the pre-school child.

**EDEE 260 Reading Methods - Early Childhood.**

(3) Methods and materials for the teaching of reading in the first cycle of the elementary school.

**EDEE 261 Reading Clinic - Early Childhood.**

(3) Reading problems at a readiness and basic decoding level presented in a clinic format covering classroom diagnosis and remediation.

▲ **EDEE 270 Elementary School Science.**

(3) (The course includes a fee of \$10 for a lab manual prepared by the professor required for the course. The fee is refundable

**EDEE 435 Mathematics Topics.**

(3) (Restriction: Permission of instructor) (Offered through Continuing Education) Seminars and workshops on specific topics in mathematics education. One to three topics will be chosen, from such areas as construction of teaching materials,

**EDER 523 Teaching Judaism: Bible.**

(3) (Restriction: Not open to students who have taken 422-401 / EDER 401) (Prerequisite: Knowledge of Hebrew, with

**EDET 395 Principles and Foundations.**

(3) (Offered through Distance Education) A study of leaders,

**EDFE 326 Aboriginal Education Practicum 3.**

(3) (Restrictions: Not open to students who have taken EDFE 423. Open to students registered in the Certificate in Education for First Nations and Inuit.) Supervised teaching of designated subject areas for a specific number of weeks in an elementary school, including assuming more responsibility for student learning, classroom management and formative and summative evaluation.

**EDFE 351 Third Field Experience (Secondary).**

(8) (Prerequisites: EDFE 254, EDEC 254, EDEC 215.) (Corequisite: EDEC 351.) (Restriction: Students must have completed, with a grade of C or higher, a minimum of 24 credits in a teachable subject and have taken the corresponding Methods courses as a co-requisite.) (Note: Expectations for this field experience, according to your program, can be found at [www.mcgill.ca/os](http://www.mcgill.ca/os) 9ompleted, with 24

**▲ EDKP 205 Structural Anatomy.**

(3) Skeletal, muscular and nervous system are examined anatomically and physiologically within the realm of how they interact to generate and apply the forces which permit man's mobility.

**▲ EDKP 206 Biomechanics of Human Movement.**

(3) (Prerequisite: PHYS 101 OR PHYS 131) Analysis of fundamental human movement and the kinematic concepts which underlie each: Stability, agility, walking, running, jumping, throwing, absorbing forces, striking, kicking, spinning, twisting, aquatics and work positions.

**EDKP 208 Applied Biomechanics.**

(3) (Prerequisite: EDKP 293.) (Restriction: Not open to students who have taken EDKP 206.) Nature and mechanical function of human movement in sport, dance, physical recreation and adapted movement activities.

**EDKP 212 Folk Dance.**

(1)

**EDKP 213 Aquatics 1.**

(1)

**EDKP 214 Basketball 1.**

(1)

**EDKP 217 Track & Field / Cross Country.**

(2) Skills and techniques of the various disciplines in track and field/cross country and the teaching and evaluation strategies for the elementary and secondary school levels.

**EDKP 218 Volleyball 1.**

(1)

**EDKP 219 Healthy Lifestyle Activity.**

(1) An introduction to activities designed to meet personal needs and self-management skills necessary to adopt healthy lifestyles. Emphasis is on activities that foster mind-body connections, aerobic fitness, muscular tone, balance, and range of motion. Activities may include yoga, tai-chi, pilates, aerobics, walking, in-line skating, and cycling.

**EDKP 223 Games: Principles and Practice.**

(2) Use of games as a teaching strategy to develop physical fitness, tactical understanding, technical ability, game sense and social skills. Specific connections will be made to the three competencies in the Quebec Education Program.

**▲ EDKP 224 Foundations of Movement Education.**

(3) (Restriction: Not open to P.E. Majors) This course is designed for the elementary school classroom teacher. It will include the study of basic movement education concepts, principles of movement and the role of movement education in the life of the developing child.

**EDKP 225 Games: Principles and Practice 2.**

(1) (Prerequisite: EDKP 223) Examination of how to teach team sports at the secondary level, using the "Teaching Games for Understanding" approach, focusing on teaching methodology and classroom management in order to plan, deliver and assess all team sports that are part of a secondary program. Specific connections to the QEP will be made and development of a series



**EDKP 307 Evaluation in Physical Education.**

(3) (Prerequisite: EDFE 246) (Restriction: Not open to students who have taken EDKP 207) Measurement and evaluation techniques designed to assess progress in physical education settings.

**EDKP 311 Athletic Injuries.**

(3) (Prerequisite: EDKP 205) This course is designed to educate students about the prevention, immediate care, and minor rehabilitation of athletic injuries. The course will focus on specific situations encountered in elementary, high school and fitness centers. An intensive academic program is coupled with practical lab sessions and field experience.

**EDKP 314 Basketball 2.**

(1)

**EDKP 318 Volleyball 2.**

(1)

**EDKP 330 Physical Activity and Health.**

(3) This course introduces students to literature on the role of physical activity and general health and well-being. Students will examine issues of exercise adherence, exercise prescription and the economic impact of physical fitness programs in the workplace.

**EDKP 332 Physical Education Curriculum and Instruction.**

(3) (Restriction: Not open to P.E. Majors) Principles, programs and procedures that an elementary teacher may use to promote the designing and teaching of elementary school P.E.

**EDKP 336 Lacrosse.**

(1) (Due to the intensive nature of this course, the standard add/drop and withdrawal deadlines do not apply. Add/drop is the second lecture day and withdrawal is the fourth lecture day.)

**† EDKP 342 Physical Education Methods.**

(3) (Prerequisite: EDKP 223.) This course is a prerequisite for all field experience and practice.) Designed to prepare students for a teaching/leadership role in physical education. They will examine teaching/leadership effectiveness as it relates to organization and observation techniques, planning, instruction and evaluation of physical activity.

**† EDKP 350 Physical Fitness Evaluation Methods.**

(3) (Restriction: Open to BSc (Kinesiology) students only.) Protocols to evaluate physical fitness, including interpretation and evaluation of results, and prescription of exercise training programs for healthy populations.

**▲ EDKP 391 Physiology in Sport and Exercise.**

(3) (Prerequisite: EDKP 293 or equivalent.) Examination of the responses of the human body during and following acute and chronic exercise with practical applications for a school setting.

**EDKP 394 Historical Perspectives.**

(3) A historical survey of the form and function of organized sport and physical activity.

**EDKP 395 Exercise Physiology.**

(3)s: PHGY 201isitPHGY 209282.6PHGY n of organized

◆†**EDKP 450 Practicum 3.**

(3) (Prerequisites: EDKP 250 and EDKP 350) A work-study experience with a focus on administration and program development in fitness. Work will be in a community placement under a qualified sponsor selected with the approval of the Department.

◆**EDKP 451 Personal Trainer Practicum.**

(3)

◆**EDKP 452 Fitness & Lifestyle Consulting.**

(3) (Prerequisites: EDKP 201, EDKP 249 and EDKP 350D1/D2.) This course prepares Kinesiology and Physical Education students for Professional Fitness and Lifestyle Consultant Certification from the Canadian Society of Exercise Physiology. Core competencies in ten subject domains as outlined in the certification guide will be reviewed. The certification process includes both theoretical and practical examinations.

◆**EDKP 453 Research Practicum in Kinesiology.**

(3) (Prerequisites: EDKP 206, EDKP 395.) (Note 1: EDKP 453D1 and EDKP 453D2 together are equivalent to EDKP 453) Supervised directed study and research leading to the development of a formal undergraduate thesis proposal.

◆**EDKP 453D1 (1.5), EDKP 453D2 (1.5) Research Practicum in Kinesiology.**

(Prerequisites: EDKP 206, EDKP 395.) (Students must register for both EDKP 453D1 and EDKP 453D2.) (No credit will be given for this course unless both EDKP 453D1 and EDKP 453D2 are successfully completed in consecutive terms.) (EDKP 453D1 and EDKP 453D2 together are equivalent to EDKP 453.) Supervised directed study and research leading to the development of a formal undergraduate thesis proposal.

**EDKP 485 Exercise Pathophysiology 1.**

(3) (Prerequisite: EDKP 395.) The physiological bases of selected cardiovascular, respiratory and metabolic disorders and an examination of the particularities of exercise responses and the effects of exercise conditioning in these populations. A special emphasis on the scientific bases for exercise prescription.

† **EDKP 494 Physical Education Curriculum Development.**

(3) (Prerequisite: EDKP 442) Analysis of important philosophies, principles, and personal, educational, and societal issues that influence current physical and health education curricula with particular emphasis on the Québec curriculum for Physical Education and Health.

▲ **EDKP 495 Scientific Principles of Training.**

(3) (Prerequisite: EDKP 395.) Application of physiological and kinesiological principles in the selection and evaluation of athletic and physical fitness programs. Specific topics studied will include aerobic and anaerobic training, interval training, circuit training, weight training for muscular strength and endurance, flexibility, motor ability, obesity and energy balance.

▲ **EDKP 498 Sport Psychology.**

(3) (Prerequisite: EDKP 261) The psychological aspects of participation in sport and physical activity relative to performance enhancement.

**EDKP 499 Undergraduate Honours Research Project.**

(6) (Prerequisite: EDKP 453) (Restriction: Open only to students enrolled in the B.Sc.(Kinesiology); Honours in Kinesiology program.) Supervised preparation of an Honours research project under the direction of a faculty member.

**EDKP 504 Health & Lifestyle Education.**

(3) This course will focus on content development and implementation of Health and Lifestyle concepts within the elementary and secondary physical education curriculum concepts wib0E the Qué1 43.2 156.6 Tm (e443.2 1567v3.2 1567v3.2 1567v3.2.6 Tm (Dma 316.8 183.6 T



**★EDPE 535 Instructional Design.**

(3) This course draws on the fields of learning theory, developmental psychology, and measurement to focus on the tasks of constructing instructional materials. Areas to be considered include behaviour analysis, concept formation, and test construction.

**EDPE 550 Consciousness and Virtual Reality.**

(3) (Restriction: Not open to students who have taken EDPE 650.) An exploration of the nature and role of consciousness from the virtual reality research perspective, and the implications of virtual reality and cyberspace in education.

**EDPE 555 Applied Cognitive Science.**

(3) Examination of foundations of cognitive science including contributions by psychology, linguistics, and computer science.

**EDPI 527 Creativity and its Cultivation.**

(3) (Offered through Continuing Education.) Recent research, theory, and educational practice concerning creativity, with special attention to creativity in students and educational settings.

**☞ EDPI 539 Field Work 1: Exceptional Students.**

(3) (Restriction: Permission of Program Director required.) Supervised experience with exceptional students in an approved educational setting.

**☞ EDPI 540 Field Work 2: Exceptional Students.**

(3) (Prerequisite: EDPI 539) (Restriction: Permission of Program Director required.) Supervised experience with exceptional students in an approved educational setting.

**EDPI 543 Family, School and Community.**

(3) (Offered through Summer Studies and Continuing Education.) Examination of family, school, community and societal influences on student growth, development and adjustment. Emphasis on family perspectives, school orientation, community services, and community collaboration. Application component: using knowledge and skills in the field.

**EDPT-Ed Psych & Couns (Media)**

Offered by: Educational&Counselling Psych

**▲ EDPT 200 Integrating Educational Technology in Classrooms.**

(3) (Also offered through Continuing Education and Summer Studies) Applications Software is the "gateway" course to educational computing. It introduces novices to basic computing skills, using a printer, word processing, data bases and spreadsheets. Assignments and projects focus on educational applications by teachers and students.

**▲ EDPT 204 Educational Media 1.**

(3) (Offered through Continuing Education) Educational Media 1 is the "gateway" course for educational media. It reviews audio-visual education and emphasizes the rationale for audio-visual materials in education, and the underlying principles in their design, production and effective use.

**EDSL-Education in Second Languages**

Offered by: Integrated Studies in Ed

**EDSL 210 First Professional Seminar.**

(1) (Corequisite: EDFE 209) (Restriction: Not open to students who have taken EDSL 209 (First Year Professional Seminar)) How to observe in second language classrooms. Students will be introduced to ways of observing instructional practices and procedures and will begin to reflect on various interactional patterns between teachers and students as observed in the First Year Field Experience.

**EDSL 215 Effective Communication in French.**

(3) (Students who place at or above the FRSL 321 French proficiency level will be exempt from EDSL 215) (Prerequisite: Placement test.) Intermediate course on effective communication in Quebec French school settings. Exposure to different professional and social situations via role playing and problem-solving and various oral and written interactions in French.

**▲ EDSL 247 Second Language Education in Aboriginal Communities.**

(3) (Restriction: Limited to students enrolled in off-campus programs delivered through First Nations and Inuit Education) Issues and considerations in the learning of English or French in Aboriginal communities. Emphasis on teaching a second language to Aboriginal children.

**EDSL 255 Second Professional Seminar.**

(2) (Restrictions: Open to B.Ed. (TESL) students. Not open to students who have taken EDSL 259 (Second Year Professional Seminar).) (Prerequisites: EDSL 210, EDFE 209 and EDSL 330.) (Corequisite: EDFE 255) The course aims to develop basic practices in planning and teaching in ESL classrooms, including microteaching and reflective analysis.

**EDSL 255D1 (1), EDSL 255D2 (1) Second Professional Seminar.**

(Restrictions: Open to B.Ed. (TESL) students. Not open to students who have taken EDSL 259 (Second Year Professional Seminar)) (Prerequisites: EDSL 210, EDFE 209 and EDSL 330) (Students must register for both EDSL 255D1 and EDSL 255D2) (No credit will be given for this course unless both EDSL 255D1 and EDSL 255D2 are successfully completed in consecutive terms) The course aims to develop basic practices in planning and teaching in ESL classrooms, including microteaching and reflective analysis.

**EDSL 260 Séminaire professionnel-2e.**

(1) (Corequisites: EDFE 261, EDSL 301, EDSL 444.) Analyse réflexive des pratiques d'enseignement propres à l'assistantat.

**▲ EDSL 300 Foundations of L2 Education.**

(3) This introduction to the field of second language education provides an overview of the supporting disciplines (e.g., linguistics, psychology, sociology and education) and includes historical and analytical perspectives on the development of L2 teaching through an examination of approaches to L2 instruction and specific teaching methods.

**EDSL 301 Étude de la langue.**

(3) (Prerequisites: FREN 245, EDSL 265 or EDUM 265) (Corequisite: EDSL 444) (Restriction: Not for credit if EDSL 311 or EDEC 302 has been or is being taken) Notions de base pour l'enseignement des composantes linguistique (lexique, morphologie, syntaxe et sémantique) et discursive (de la phrase aux types de textes et de discours); apprentissage de la grammaire nouvelle; composante langue des programmes d'études.

**▲ EDSL 304 Sociolinguistics and L2 Education.**

(3) (Prerequisite: Gp 393.6 Tm 1 0 0 Ng Eduteso(O1Tj 1 0AMayr th 1 0 0 1 43.2 588r 408.6

**EDSL 311 Pedagogical Grammar.**

(3) (Prerequisite: EDSL 350) (Restriction: Not for credit if EDSL 301 or EDEC 302 has been or is being taken) The course focuses on how the English language works as a system, examining it from the levels of phonology, morphology, syntax, semantics, and discourse. These aspects will be considered in relation to second language teaching and learning.

**EDSL 315 Third Year Professional Seminar.**

(2) (Prerequisites: EDSL 255 or EDSL 255D1/D2, and EDFE 255) (Corequisites: EDFE 359, EDSL 447)

(Restrictions: Open only to B.Ed. TESL students who have taken EDFE 255. Not open to students who have taken or are taking EDFE 259, EDSL 309 or EDSL 310.) Classroom processes such as teaching and learning strategies, lesson planning and implementation, classroom organization and management, and developing a reflective teaching and learning practice.

**EDSL 320 Séminaire 3 professionnel.**

(1) (Corequisites: EDFE 362 and EDSL 472) Ce séminaire professionnel porte sur l'analyse réflexive des pratiques stratégiques d'enseignement propres aux divers contextes scolaires au primaire. Ce séminaire vise également l'expérimentation de divers matériels pédagogiques et la simulation de techniques d'animation et de gestion de classe.

**EDSL 330 L2 Literacy Development.**

(3) (Prerequisite: EDSL 350) This course examines current theories of second language literacy development and their implications for teaching, including the use of literature as a tool for language learning. Key issues include the nature of literacy development, reading and writing processes, and appropriate pedagogical approaches.

**EDSL 334 Teaching Oral Skills in ESL.**

(3) (Prerequisite: LING 200 or LING 201) Application of the English sound system to practical ESL teaching situations, planning and integrating pronunciation (as well as other oral skills, such as fluency) into activities and projects, developing materials, and assessing progress.

**EDSL 345 Enseignement du FLS-immersion.**

(3) (Prerequisite: EDSL 402 or EDUM 402) (Corequisites: EDFE 461, EDSL 420.) Ce cours examine divers cheminements retrouvés en contexte immersif ainsi que diverses approches pédagogiques propices à l'enseignement du FLS par le biais de matières scolaires. Des recherches effectuées en contexte immersif seront également examinées par rapport au développement langagier des élèves en immersion.

**EDSL 350 Essentials of English Grammar.**

(3) (Restriction: Restricted to B.Ed. (TESL) students) (Restriction: This is a required course for B.Ed. TESL students. Students from other programs may be admitted at the discretion of the instructor.) Analysis of English phrases, clauses and sentences up to discourse level in connected text.

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## **EDUM-Education University of MTL**

Offered by: Integrated Studies in Ed

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### **EDUM 245 Français écrit pour futurs enseignants.**

(3) Problèmes textuels, syntaxiques, orthographiques et lexicaux. Stratégies de révision.

### **EDUM 262 Système éducatif - profession enseignante.**

(3) (Restriction: Not open to students who have taken UdeM: ETA 1900, McGill: EDEC 247 (formerly EDEM 405) or EDSL 262) Initiation aux institutions scolaires du Québec et, au premier chef, à l'école. Initiation au rôle professionnel des enseignants. Perspectives historique et contemporaine.

### **EDUM 263 Apprentissage et développement.**

(3) (Restriction: Not open to students who have taken UdeM: PPA 1100 or EDSL 263) Théories de l'apprentissage scolaire.





# Faculty of Engineering

## ARCH-Architecture

Offered by: Architecture

A limited number of courses are open to students not registered in the School of Architecture. Please consult Class Schedule for further information.

### ARCH 201 Communication, Behaviour and Architecture.

(6) (2-10-6) Introduction to design; development of design judgement and communication skills in a series of exercises addressing light, scale, space, form and colour in the built environment; introduction to techniques of oral and graphic presentation, including model making, photography, sketching and architectural drawing. The course is based in the studio and includes lectures, seminars and field trips.

### ARCH 202 Architectural Graphics and Elements of Design.

(6) (2-10-6) (Prerequisite: ARCH 201) Introduction to architectural design; consideration of building form in relation to program, structural system, material selection, site and climate; further development of skills in model making, conventional architectural drawing, axonometric and perspective drawing, sketching and architectural rendering. The course is based in the studio and includes lectures, seminars and field trips.

### ARCH 217 Freehand Drawing 1.

(1) (0-2-1) Development of skills in drawing and observation through a series of exercises based on the study of the human figure in a studio setting. Media include pencil, charcoal, conte crayon, and pen and ink.

### ARCH 218 Freehand Drawing 2.

(1) (0-2-1) (Prerequisite: ARCH 217) Continuation of ARCH 217. Development of graphic skills and visual literacy through exercises in life drawing. Introduction to basic colour theory: hue, intensity/dilution, temperature and emotional power. Additional media include coloured chalk and gouache.

### ARCH 240 Organization of Materials in Buildings.

(3) (2-3-4) The characteristics of basic building materials: wood, steel, masonry and concrete. How building materials are shaped into building components, and how these components are integrated into the building envelope. Problems, laboratory projects and field trips to illustrate principles.

### ARCH 241 Architectural Structures.

(3) (2-1-6) Introduction to the basic concepts and forms of structures in architecture.

### ARCH 242 Digital Representation.

(2) (2-0-4) (Prerequisite: ARCH 201.) This course introduces students to digital representation in architecture. Students explore applications of state-of-the-art two- and three-dimensional computer modeling software in architectural design.

### ARCH 250 Architectural History 1.

(3) (3-0-6) The study of architecture in relation to landscape, urban form and culture, from Antiquity to the end of the Middle Ages.

### ARCH 251 Architectural History 2.

(3) (3-0-6) (Prerequisite: ARCH 250) Overview of early 20th century architecture with emphasis on a thematic approach to buildings and cities, architects and ideologies. The lectures will examine the origins, development and impact of canonical figures and buildings of Modernism.

### ARCH 303 Design and Construction 1.

(6) (2-10-6) (Prerequisite: ARCH 202) An exploration of the design of buildings. Projects emphasize the major social, technological, environmental, and symbolic aspects of the design process. Introduction to specific modelling, presentation, and documentation techniques. Discussions, readings, field trips and practical exercises.

### ARCH 304 Design and Construction 2.

(6) (2-10-6) (Prerequisite: ARCH 303) Continuation of Design and Construction I with projects of increasing complexity. Projects deal with particular aspects of architectural design and/or explore approaches to design methodology. Discussions, readings, field trips and practical exercises.

### ARCH 321 Freehand Drawing 3.

(1) (0-2-1) (Prerequisite: ARCH 218) Continuation of ARCH 218. Refinement of graphic skills and visual literacy through exercises in life drawing. Introduction to the materials and methods of watercolour painting.

### ARCH 322 Freehand Drawing 4.

(1) (0-2-1) (Prerequisite: ARCH 321) Synthesis of ARCH 217, 218 and ARCH 321. Further refinement of graphic skills and visual literacy through exercises in life drawing. Students select and combine various media and apply them to diverse drawing and painting surfaces.

### ARCH 324 Sketching School.

(1) (0-0-3) (Prerequisite: ARCH 218) (This course in the Faculty of Engineering is open only to McGill students.) An eight-day supervised field trip in the late summer to sketch places or things having specific visual characteristics. Students are required to include Sketching School I in the B.Sc.(Arch.) program.

### ARCH 352 Art and Theory of House Design.

(3) (2-2-5) (Prerequisite: ARCH 202 or permission of instructor) An examination of the art and theory of the design of houses by architects who developed the form to perfection. Lectures and field trips will focus on the work of selected house architects from antiquity to the present.

### ARCH 354 Architectural History 3.

(3) (3-0-6) (Prerequisite: ARCH 250 and ARCH 251) General introduction to Modern Architecture in Western Europe from the Renaissance to the end of the 19th century. The course uses a thematic approach and sources on specific ideas and works drawn particularly from Italy, France, England and Germany.

### ARCH 355 Architectural History 4.

(3) (3-0-6) (Prerequisite: ARCH 250 and ARCH 251) The study of architecture and cities in the postwar period. Emphasis placed on themes and approaches to architectural history, as opposed to traditional survey.

### ARCH 375 Landscape.

(2) (2-2-2) Land form, plant life, microclimate; land use and land preservation; elements and methods of landscape design.

### ARCH 377 Energy, Environment and Buildings.

(3) (3-0-6) (Prerequisite: ARCH 202 or permission of instructor) Exploration of the interrelationship between energy, environment and building. Topics include sustainability, assessment tools, the integrated design process, water conservation, energy conservation, renewable energy, materials and embodied energy, indoor environmental quality, environmental acoustics, and advanced building technology.



**Always check at [www.mcgill.ca/study/](http://www.mcgill.ca/study/) for the most up-to-date information on whether a course is offered.**

\* Denotes courses taught only in alternate years.

‡ Professional Practice (Stage) in Dietetics involving special prerequisites

‡ Indicates that departmental approval/permission must be obtained by a student prior to registration.

† Denotes courses not available as Education electives.

□ Denotes courses with limited enrolment.

**ARCH 378 Site Usage.**

(3) (2-0-7) (Prerequisite: ARCH 202 or permission of instructor) The study of the creation, form and usage of the exterior space generated in various patterns of low-rise housing. Socio-cultural aspects of patterns; exterior space as a logical extension of the living unit; social control of the use of urban and suburban land; comparative model for low-rise housing patterns.

**ARCH 379 Summer Course Abroad.**

(3) (0-0-9) (Prerequisite: ARCH 202 or permission of instructor) (Restriction: Departmental permission required) Studies in-situ of key buildings, landscapes and urban settings; techniques of graphic documentations, analysis of physical configuration, constructional details and present use. Excursions to neighbouring sites of architectural interest.

**★ARCH 383 Geometry and Architecture.**

(3) (2-0-7) (Prerequisite: ARCH 202 or permission of instructor) (Given alternate years, alternating with ARCH 525) Geometry in the formal structure of design. Grids, lattices, polygons and polyhedra; proportional systems. Evidence of these figures and structures in natural objects and phenomena. Graphical and physical models. Application to architecture and the human environment. Case studies.

**ARCH 405 Design and Construction 3.**

(6) (2-10-6) (Prerequisite: ARCH 304) A structured investigation of architectural concepts; program interpretation with respect to relevant cultural, social and environmental contexts; applications of appropriate formal languages and building technologies in integrated proposals for a variety of building forms.

**ARCH 406 Design and Construction 4.**

(6) (2-10-6) (Prerequisite: ARCH 405) A detailed study and comprehensive development of architectural proposals for complex building types and site conditions; the exploration of coherent initial concepts with respect to programmatic requirements, image and form; subsequent elaboration leading to meaningful and technologically viable designs for the built environment.

**ARCH 410 Design and Construction 5.**

(6) A study of the function and structure of the urban environment, including surveys of selected urban areas by recording and analysing specific environmental factors. Architectural and urban design with reference to their social implications. Urban renewal and rehabilitation by means of systematic design methods. Techniques of visual communication including documentary film-making.

✖ **ARCH 525 Seminar on Analysis and Theory.**

(3) (2-0-7) (Prerequisite: ARCH 202 or permission of instructor) (Given alternate years, alternating with ARCH 383) (Restriction: Not open to students who have taken ARCH 379) (Restriction: Departmental permission required) Analysis and evaluation of significant architectural projects with reference to contemporary architectural theories.

**ARCH 526 Philosophy of Structure.**

(3) (2-0-7) (Prerequisite: ARCH 202 or permission of Instructor) (Restriction: Not open to students who have taken ARCH 379) (Restriction: Departmental permission required) Philosophy of Structure can investigate ARCH structure in its broadest sense. The course is divided in two halves; the first one gives an overview of the development of theoretical structural frameworks such as mathematics and geometry, while the second one highlights physical structures constructed by nature (geology, turbulence), man or animals.

**ARCH 527 Civic Design.**

(3) (2-0-7) (Prerequisite: ARCH 378) The elements of form in buildings and their siting design in the urban setting.

**ARCH 528 History of Housing.**

(3) (2-0-7) (Prerequisite: ARCH 251 or permission of instructor) Indigenous housing both transient and permanent, from the standpoint of individual structure and pattern of settlements. The principal historic examples of houses including housing in the age of industrial revolution and contemporary housing.

**ARCH 529 Housing Theory.**

(3) (2-0-7) (Prerequisite: ARCH 528 or permission of instructor) A review of environmental alternatives in housing; contemporary housing and the physical and sociological determinants that shape it; Canadian housing.

**ARCH 531 Architectural Intentions Vitruvius - Renaissance.**

(3) (2-0-7) (Prerequisite: ARCH 251) Architectural intentions embodied in buildings and writings of architects from antiquity to the Renaissance. Special emphasis is placed on the cultural connections of architecture to science and philosophy.

**ARCH 532 Origins of Modern Architecture.**

(3) (2-0-7) (Prerequisite: ARCH 251) Examination of architectural intentions (theory and practice) in the European context (especially France, Italy and England), during the crucial period that marks the beginning of the modern era.

☐ **ARCH 533 New Approaches to Architectural History.**

(3) (2-0-7) (Prerequisite: ARCH 251 or permission of instructor) (Restriction: Departmental permission required) An exploration of the aims, tools, and methods of Architectural History as a discipline; the use of primary sources from the Canadian Centre for Architecture and other archives.

**ARCH 534 Architectural Archives.**

(3) (3-0-6) (Prerequisites: ARCH 250 and ARCH 251 or equivalent.) (Restriction: Open only to architecture students.)

**ARCH 566 Cultural Landscapes Seminar.**

(3) (3-0-6) Overview of cultural landscapes studies, methodologies, and resources. Comparative studies of the connection between people, place, and artifact systems through a critical examination of architecture, regional context, and material culture. Examination of precedents for the interpretation of cultural landscapes by architects, ethnologists, anthropologists, folklorists, historians, writers, filmmakers, photographers, and artists.

**CHEE 310 Physical Chemistry for Engineers.**

(3) (3-1-5) (Prerequisite: CHEE 220 or MIME 212.)

(Restriction: Not open to students having taken CHEM 233.)

Introduction to statistical thermodynamics, chemical kinetics, surface and colloid chemistry, spectroscopy, and electrochemistry from an engineering viewpoint. Topics emphasize applications of physical chemistry for chemical engineers.

**CHEE 314 Fluid Mechanics.**

(4) (3-3-6) (Prerequisite: CHEE 204.) (Corequisite: MATH

265 or MATH 264.) Fluid properties; dimensional analysis; drag; packed/fluidized beds; macroscopic energy balances, Bernoulli's equation and linear momentum theorem; flowmeters, pipeline systems, non-Newtonian fluids, microscopic balances leading to continuity and Navier-Stokes equations; boundary layer approximation; turbulence. Laboratory exercises.

**CHEE 315 Heat and Mass Transfer.**

(4) (3-2-7) (Prerequisite: CHEE 314) Transport of heat and mass by diffusion and convection; transport of heat by radiation; diffusion; convective mass transfer; drying;

**CHEE 464 Projects Chemical Engineering 2.**

(2) (1-0-5) (Prerequisite: CHEE 363) Projects on social or technical aspects of chemical engineering practice. Students must suggest their own projects to be approved and supervised by a member of the staff. Students may work in groups.

**CHEE 474 Biochemical Engineering.**

(3) (3-0-6) (Prerequisite: CHEE 370.) Bioreactor design for biotechnology and environmental applications; microbial growth kinetics; application of transport phenomena and selected chemical engineering unit operations. Bioreactor instrumentation and performance optimization. Air and media sterilization processes. Selected operations of downstream processing and product recovery.

**CHEE 484 Materials Engineering.**

(3) (3-0-6) (Prerequisites: CHEE 315, CHEE 380) Processes for forming and producing engineering materials such as amorphous, semicrystalline, textured and crystal-oriented substances and composites. Effect of processing variables on the properties of the finished article. Process of blending and alloying. Shaping and joining operations. Vessel equipment design for chemical engineering applications.

**CHEE 494 Research Project and Seminar 1.**

(3) (1-6-2) (Prerequisite: CHEE 393) Independent study and experimental work on a topic chosen by consultation between the student and Departmental staff.

**CHEE 494D1 (1.5), CHEE 494D2 (1.5) Research Project and Seminar 1.**

(Students must register for both CHEE 494D1 and CHEE 494D2.) (No credit will be given for this course unless both CHEE 494D1 and CHEE 494D2 are successfully completed in consecutive terms) (CHEE 494D1 and CHEE 494D2 together are equivalent to CHEE 494) Independent study and experimental work on a topic chosen by consultation between the student and Departmental Staff.

**CHEE 495 Research Project and Seminar 2.**

(4) (1-9-2) (Prerequisite: CHEE 393) Independent study and experimental work on a topic chosen by consultation between the student and the Departmental staff.

**CHEE 495D1 (2), CHEE 495D2 (2) Research Project and Seminar 2.**

(Students must register for both CHEE 495D1 and CHEE 495D2.) (No credit will be given for this course unless both CHEE 495D1 and CHEE 495D2 are successfully completed in consecutive terms) (CHEE 495D1 and CHEE 495D2 together are equivalent to CHEE 495) Independent study and experimental work on a topic chosen by consultation between the student and the Departmental staff.

**CHEE 496 Environmental Research Project.**

(3) (1-6-2) (Prerequisite: CHEE 393 or permission of instructor.) Independent study and experimental work on an environmental topic chosen by consultation between the student and Departmental staff.

**CHEE 496D1 (1.5), CHEE 496D2 (1.5) Environmental**







**CIVE 451 Geoenvironmental Engineering.**

(3) (3-1.5-4.5) (Prerequisites: CIVE 225 and CIVE 311) Geoenvironmental hazards; land management of waste; regulatory overview, waste characterization; soil-waste interaction; geosynthetics; low permeability clay barriers; contaminant transport; containment systems; collection and removal systems; design aspects; strategies for remediation; rehabilitation technologies.

**CIVE 452 Water Resources in Barbados.**

(3) (Corequisites: None.) (Restrictions: Must be enrolled in the Barbados Field Study Semester.) Physical environment challenges, centered on water, being faced by an island nation. Guest speakers, field study tours and laboratory tests. Private, government and NGO institutional context of conservation strategies, and water quantity and quality analyses for water management specific to Barbados.

**CIVE 460 Matrix Structural Analysis.**

(3) (3-2-4) (Prerequisites: CIVE 206 and CIVE 317) Computer structural analysis, direct stiffness applied to two and three dimensional frames and trusses, matrix force method, nonlinear problems, buckling of trusses and frames, introduction to finite element analysis.

**CIVE 462 Design of Steel Structures.**

(3) (3-3-3) (Prerequisite: CIVE 318) Design of structural steel elements: plate girders, members under combined loadings, eccentrically loaded connections, structural systems. Design of structural steel systems: composite floor systems, braced frames, moment resisting frames.

**CIVE 463 Design of Concrete Structures.**

(3) (3-3-3) (Prerequisite: CIVE 318) Review of flexural behaviour and design concepts. Design of flexural members, columns, two-way slab systems, retaining walls, disturbed regions, and shear walls. Introduction to prestressed concrete design.

**CIVE 469 Infrastructure and Society.**

(3) (3-2-4) (Prerequisite: MIME 310) Infrastructure systems, historical background and socio-economic impact; planning, organization, communication and decision support systems; budgeting and management; operations, maintenance, rehabilitation and replacement issues; public and private sectors, privatization and governments; infrastructure crisis and new technologies; legal, environmental, socio-economic and political aspects of infrastructure issues; professional ethics and responsibilities; case studies.

**CIVE 470 Undergraduate Research Project.**

(3) (0-1-8) (Prerequisite: 60 credits in the Civil Engineering and Applied Mechanics program) Open to students with a high CGPA. A research project must be carried out and a technical paper prepared under the supervision of a member of staff. The project must be established with the consent of the Staff Supervisor, and must be approved by the Department before registration. May be taken in conjunction with the required course CIVE 418 and the project therefore can be carried out through two semesters.

**CIVE 492 Structures.**

(2) (2-2-2) (Prerequisites: CIVE 385 and CIVE 388) A study of structural systems in concrete, steel, timber; a philosophy of structure; choice of structure; economic factors in design; recent developments and trends in structure; lateral stability by frame action, bracing shear walls; mechanics of certain structural forms.

**CIVE 512 Advanced Civil Engineering Materials.**

(3) (3-3-3) (Prerequisite: CIVE 202) Production, structure and properties of engineering materials; ferrous alloys, treatments, welding, special steels, cast iron; ceramic materials; polymers; composite materials; concrete, admixtures, structure, creep, shrinkage; asphalt and asphaltic materials; clay materials and bricks; impact of environment on material response, durability, quality assessment and control, industrial specifications; recent advances.

**CIVE 519 Sustainable Development Plans.**

(6) (1-9-8) (Restriction: Must be enrolled in the Barbados Field Study Semester.) Geared for solving real-world environmental problems related to water at the local, regional and international scale in Barbados. Projects to be designed by instructors in consultation with university, government and NGO partners and to be conducted by teams of 2 to 4 students in



control design. Basic concepts in design for testability. The laboratory experiments involve the design and testing of digital systems using small and medium scale integrated circuits. CAD

**ECSE 423 Fundamentals of Photonics.**

(3) (3-2-4) (Prerequisites: ECSE 352) Introduction to the fundamentals of modern optics and photonics. Geometric optics, wave optics, Gaussian beam optics and resonators, electromagnetic optics, polarization, Fourier optics. Attenuation and dispersion, interference, coherence, diffraction. Classical description of optical amplifiers, introduction to lasers. Experiments on physical and geometric optics.

**ECSE 424 Human-Computer Interaction.**

(3) (3-4-2) (Prerequisite: ECSE 322) The course highlights human-computer interaction strategies from an engineering perspective. Topics include user interfaces, novel paradigms in human-computer interaction, affordances, ecological interface design, ubiquitous computing and computer-supported cooperative work. Attention will be paid to issues of safety, usability, and performance.

**ECSE 425 Computer Organization and Architecture.**

(3) (3-1-5) (Prerequisites: ECSE 322 and ECSE 323) (Tutorials assigned by instructor.) Trends in technology. CISC vs. RISC architectures. Pipelining. Instruction level parallelism. Data and Control Hazards. Static prediction. Exceptions. Dependencies. Loop level parallelism. Dynamic scheduling, branch prediction. Branch target buffers. Superscalar and N-issue machines. VLIW. ILP techniques. Cache analysis and design. Interleaved and virtual memory. TLB translations and caches.

**□ECSE 426 Microprocessor Systems.**

(3) (1-5-3) (Prerequisites: CCOM 206 or EDEC 206, ECSE 323) (This course may be counted as a technical complementary or a lab complementary.) (Limited Enrolment (50)) (Lab hours assigned by instructor.) Introduction to current microprocessors, their architecture, programming, interfacing and operating systems. The course includes lectures, use of crossassemblers, and simulators as well as laboratory experiments on actual microprocessor hardware.

**ECSE 427 Operating Systems.**

(3) (3-3-3) (Prerequisite: ECSE 322 or COMP 273) (Tutorials assigned by instructor.) Operating system services, file system organization, disk and cpu scheduling, virtual memory management, concurrent processing and distributed systems, protection and security. Aspects of the DOS and UNIX operating systems and the C programming language. Programs that communicate between workstations across a network.

**ECSE 428 Software Engineering Practice.**

(3) (3-4-2) (Prerequisite: ECSE 321 or COMP 335) Software engineering practice in industry, related to the design and commissioning of large software systems. Ethical, social, economic, safety and legal issues. Metrics, project management, costing, marketing, control, standards, CASE tools and bugs. The course involves a large team project.

**ECSE 429 Software Validation.**

(3) (3-0-6) (Prerequisite: ECSE 321 or COMP 303) Correct and complete implementation of software requirements. Verification and validation lifecycle. Requirements analysis, model based analysis, and design analysis. Unit and system testing, performance, risk management, software reuse. Ubiquitous computing.

**ECSE 430 Photonic Devices and Systems.**

(3) (3-2-4) (Prerequisites: ECSE 352, PHYS 271.) (Tutorials assigned by instructor.) Introduction to photonic devices and applications. Semiconductor lasers, optical amplifiers, optical modulators, photodetectors and optical receivers, optical fibers and waveguides, fiber and waveguide devices. Photonic systems (communications, sensing, biomedical). Experiments on characterizing photonic devices and systems. Optical test-and-measurement instrumentation.

**□ECSE 431 Introduction to VLSI CAD.**

(3) (3-4-2) (Prerequisites: ECSE 323 and ECSE 330) (Limited enrolment - 30. Departmental permission required.) (Note: This course may be counted as a technical complementary or as a lab complementary.) (Lab hours assigned by instructor.) The computer-aided design of digital VLSI circuits. Hardware description languages, automatic synthesis, design for testability, technology mapping, simulation, timing analysis,

generation of test vectors and fault coverage analysis.

**ECSE 432 Physical Basis: Transistor Devices.**

(3) (3-0-6) (Prerequisites: ECSE 212 or MIME 262, ECSE 330, ECSE 351 and PHYS 271) Quantitative analysis of diodes and transistors. Semiconductor fundamentals, equilibrium and non-equilibrium carrier transport, and Fermi levels. PN junction diodes, the ideal diode, and diode switching. Bipolar Junction Transistors (BJT), physics of the ideal BJT, the Ebers-Moll model. Field effect transistors, metal-oxide semiconductor structures, static and dynamic behaviour, small-signal models.

**ECSE 434 Microelectronics Laboratory.**

(2) (1-3-2) (Prerequisites: CCOM 206 or EDEC 206, ECSE 334) Designing, building, and debugging electronic hardware using discrete transistors and circuit building blocks; Designing, simulating, laying-out, and post-fabrication experimental testing of an integrated circuit (IC). The laboratory experiments are designed to reinforce the microelectronics circuit theory studied in ECSE 334.

**ECSE 435 Mixed-Signal Test Techniques.**

(3) (3-0-6) (Prerequisites: ECSE 304 and ECSE 334.) (Note: This course may be counted as a technical complementary or as a lab complementary.) Purpose and economics of mixed-signal test, DC measurements. Accuracy and repeatability. DSP-based theory and its applications to parametric testing of analog filters, DACs, and ADC. Timing and PLL measurements. Design for Testability.

d'isolement.

**ECSE 461 Electric Machinery.**



**ECSE 509 Probability and Random Sig. 2.**

(3) (3-0-6) (Prerequisites: ECSE 304 and ECSE 305)  
Multivariate Gaussian distributions; finite-dimensional mean-square estimation (multivariate case); principal components; introduction to random processes; weak stationarity: correlation functions, spectra, linear processing and estimation; Poisson processes and Markov chains: state processes, invariant distributions; stochastic simulation.

**ECSE 510 Stochastic Processes and Systems.**

(3) (3-0-6) (Prerequisites: ECSE 500 and ECSE 509 or equivalent.) Basic notions. Linear state space (SS) systems. Least squares estimation and prediction: conditional expectations; Orthogonal Projection Theorem. Kalman filtering; innovations; Riccati equation. ARMA and SS systems. Stationary processes; Wold decomposition; spectral factorization; Weiner filtering. The Weiner process; linear stochastic differential equations; continuous time filtering. Chapman-Kolmogorov, Fokker-Plank equations. Applications.

**ECSE 511 Introduction to Digital Communication.**

(3) (3-1-5) (Prerequisite: ECSE 304.) (Corequisite: ECSE







leadership and communications. Students learn how to design an effective and winning business plan around a technology or engineering project in small, medium or large enterprises.

**FACC 501 Technology Business Plan Project.**

(3) (1-0-8) (Prerequisite: FACC 500 or Permission of Instructor.) (Restrictions: Not open to students who have taken FACC 480.) (Recommended to be taken in combination with FACC 500.) Students work in teams to develop a comprehensive business plan project based on a technological or engineering innovation while utilizing site visits.

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## **MECH-Mechanical Engineering**

Offered by: Mechanical Engineering

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**MECH 201 Introduction to Mechanical Engineering.**

(2) (3-0-3) The practice of Mechanical Engineering: its scope and context. The role of Design. Introduction to the Design process. The role of engineering analysis and socio-economic factors in Design. Introduction to the individual mechanical engineering subjects and their role in Design. Case studies.

**MECH 210 Mechanics 1.**

(2) (2-1-3) Static equilibrium of particles and rigid bodies. Beams, trusses, frames and machines. Concept of work and energy. Static equilibrium and stability.

**MECH 220 Mechanics 2.**

(4) (4-1-7) (Prerequisites: MECH 210 and (MATH 260 or MATH 262). Pre-/Co-requisite: MATH 261 or MATH 263.) Kinematics of particles and rigid bodies. Particle dynamics: force-momentum and work-energy approaches. Kinematics and kinetics of rigid bodies.

**MECH 240 Thermodynamics 1.**

(3) (3-1-5) Thermodynamic systems and properties. First law of thermodynamics: energy, work and heat. State principle, p-v-T surfaces, phase equilibrium, ideal gas model. Second law of thermodynamics, entropy, exergy analysis. Energy analysis applied to steady and transient engineering systems including heat engines, refrigerators and heat pumps, air compressors.

**MECH 260 Machine Tool Laboratory.**

(2) (1-3-2) (This course in the Faculty of Engineering is open only to McGill students.) Basic machine tool operations, numerical control of machine tools, and metrology. The use of hand tools, and sheet metal work. Introduction to rapid prototyping and nontraditional machining methods. Extensive laboratory hands-on exercises.

**MECH 261 Measurement Laboratory.**

(2) (2-3-1) (Restriction: Civil Engineering students) Basic experimental laboratory measurements, such as measurement of strain, pressure, force, position, and temperature.

**MECH 262 Statistics and Measurement Laboratory.**

(3) (3-3-3) Introduction to probability: conditional probability, binomial and Poisson distributions, random variables, laws of large numbers. Statistical analysis associated with measurements; regression and correlation. Basic experimental laboratory techniques, including the measurement of strain, pressure, force, position, and temperature.

**MECH 289 Design Graphics.**

(3) (3-3-3) (Restriction: Not open to students who have taken MECH 290 or MECH 291.) Preliminary concepts of design, including free-hand sketching; fundamentals of geometry construction; and technology of object representation.

**MECH 292 Conceptual Design.**

(3) (1-3-5) (Prerequisites: MECH 260 and MECH 289 or MECH 291. Pre-/Co-requisite: CIVE 207) Introduction to design. Problem formulation; idea generation; feasibility study; preliminary design; design; analysis, design evaluation, project management, and optimal design.

**MECH 309 Numerical Methods in Mechanical Engineering.**

(3) (3-1-5) (Prerequisites: MATH 261 or MATH 263, MATH 266 or MATH 271, COMP 208.) Numerical techniques for problems commonly encountered in Mechanical Engineering are presented. Chebyshev interpolation, quadrature, roots of equations in one or more variables, matrices, curve fitting, splines and ordinary differential equations. The emphasis is on the analysis and understanding of the problem rather than the details of the actual numerical program.

**MECH 314 Dynamics of Mechanisms.**

(3) (3-1-5) (Prerequisite: MECH 220.) First principles of analysis; motion; position; displacement; velocity; acceleration; force; inertia and its effects. Kinematic and dynamic analysis of rigid bodies in pure rotation and in pin-connected systems; dynamic balance. Rigid bodies in rolling contact; planetary gear-trains. Bodies in sliding contact; lower and higher sliding pairs.

**MECH 315 Mechanics 3.**

(4) (4-1-7) (Prerequisites: MECH 220 and (MATH 266 or MATH 271). Pre-/Co-requisite: CIVE 207.) Single-degree-of-freedom systems; free vibrations; effect of damping; response to harmonic, periodic and arbitrary excitation. Lagrange's equations of motion. Vibrations of



**MECH 516 Computational Gasdynamics.**

(3) (Prerequisite(s): MECH 430 or permission of instructor) Fundamentals of computational fluid dynamics. Numerical methods for hyperbolic conservation laws: first- and higher-order upwind schemes; monotonicity and Godunov theorem; total-variation-diminishing schemes; Riemann solvers; treatment of source terms; multi-dimensional methods. Introduction to grid generation and adaptation. Methodology for the comparison of numerical and experimental results.

**MECH 522 Production Systems.**

(3) (3-0-6) Characteristics of production systems. System boundaries, input-output, feedback time-lag effects, dynamics of production systems. Design for manufacturability. Process planning, process/machine tool selection, break-even analysis, CAPP. Production planning, scheduling and control of operations; quality management. Competitive strategies; FMS, CIM. Hands-on experience with production modelling and industrial simulation software.

**□MECH 524 Computer Integrated Manufacturing.**

(3) (3-0-6) (Prerequisite: Permission of the instructor) A study of the present impact of computers and automation on manufacturing. Computer-aided systems. Information modelling. Information system structures. Study of several types of production systems. Integration issues: inter- and intra-enterprise. Laboratory experience with manufacturing software systems.

**□MECH 526 Manufacturing and the Environment.**

(3) (3-0-6) (Prerequisite (Undergraduate): Permission of the instructor) Course topics include: clean manufacturing, product and process design for minimizing materials and energy use, the product life cycle, impact of technology on the environment, environmental impact assessment, regulatory process, and managing the "political" process.

**□MECH 528 Product Design.**

(3) (3-0-6) (Prerequisite (Undergraduate): Permission of the instructor) A study of the design issues present in product life cycle demands. Computer-aided systems. Rapid prototyping. Design for manufacturability. Integration of mechanics, electronics and software in products. Effect on design of product cost, maintainability, recycling, marketability.

**□MECH 529 Discrete Manufacturing Systems.**

(3) (3-0-6) (Prerequisite (Undergraduate): Permission of the instructor) (Due to the intensive nature of this course, the standard add/drop and withdrawal deadlines do not apply. Add/drop is the second lecture day and withdrawal is the fourth lecture day.) An overview of present day production machines and systems with special emphasis on automation, computer control and integration techniques. Material handling, automatic inspection, process monitoring, maintenance. Socio-economic and environmental issues. Laboratory experience with factory simulation.

**MECH 530 Mechanics of Composite Materials.**



kinetostatics of multifingered hands and walking machines.  
Kinematics and dynamics of parallel manipulators and wheeled mobile robots.

**MECH 576 Geometry in Mechanics.**

(3) (3-2-4) (Prerequisites (Undergraduate): MATH 271, MECH 220, MECH 289 and MECH 314 or permission of the instructor.) Homogeneous vectors related to projective geometry and to linear, vector, matrix and symbolic algebra. Applications in mechanics. Pluecker and dual quaternions in statics and robot

**MIME 311 Modelling and Automatic Control.**

(3) (3-2-4) (Prerequisite: MIME 356) Mass and energy conservation laws. Dynamic versus steady state models, dynamic behaviour of first and higher order metallurgical systems, linear and nonlinear models, interacting and noninteracting systems. Laplace domain dynamics and transfer functions. Feedback control, control valves and controllers, transducers. Feedback-feedforward control, introduction to cascade, adaptive

heat transfer. Transient/steady state flow.

**MIME 360 Phase Transformations: Solids.**

(3) (2-3-4) (Pre/Corequisite: MIME 212.) (Prerequisite: MIME 260 or MIME 261.) Free energy (equilibrium) and kinetic (non-equilibrium) considerations, phase diagrams and TTT diagrams, solid state diffusion, diffusional (nucleation and growth) and shear (martensitic) transformations.

**MIME 362 Mechanical Properties.**

(3) (2-3-4) (Prerequisite: MIME 360) Stress-strain behaviour. Elasticity and plasticity of metals, ceramics and polymers. Dislocations theory. Single crystal and polycrystalline slip. Mechanical twinning. Strengthening mechanisms. Process-property and microstructure-property relationships. Notch toughness and fracture mechanics. Failure, fracture and damage accumulation. Fatigue. Creep and creep rupture. Fractography. Design considerations in materials al and





**MIME 556 Sustainable Materials Processing.**

(3) (3-1-5) (Prerequisite: Permission of instructor.)

Sustainability, population and environment impact, environmental impact indicators, materials flows, enthalpy flows, the carbon cycle, materials intensity, energy intensity, global warming potential, acidification potential, FACTOR-Two, -Four and -Ten, life-cycle-inventory/assessment, end-of-pipe strategies, supply-chain and flow-sheet redesign, recycling, waste treatment and materials case studies.

**MIME 558 Engineering Nanomaterials.**

(3) (3-2-4) (Prerequisite: MIME 260 or MIME 261 and MIME

362 or equivalent or permission of instructor.) Aspects of manufacturing bulk-nanostructured materials. Fabrication of nanosized and nanostructured precursors (metals, ceramics, intermetallics, CNT). Reactivity, handling and safety of nano-particles. Processes developed to fabricate bulk nanostructured materials (pressing and sintering, hot pressing and extrusion, ECAP, electrodeposition, spray forming, shockwave compaction). Characterisation of nanostructures. Physical and mechanical properties of nanomaterials.

cheminement critique et PERT, programmation linéaire et non-linéaire, théorie des graphes. Modèles de capacité: théorie des files d'attente, simulation, silos et stockage. Modèles de mélange.

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# McGill School of Environment

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## ENVR-Environment

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Offered by: McGill School of Environment

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### **ENVR 200 The Global Environment.**

(3) (Fall) (Section 001: Downtown Campus) (Section 051: Macdonald Campus) A systems approach to study the different components of the environment involved in global climate change: the atmosphere, biosphere, hydrosphere, and lithosphere. The interactions among these components. Their role in global climate change. The human dimension to global change.

### **ENVR 201 Society and Environment.**

(3) (Fall) (Section 001: Downtown Campus) (Section 051: Macdonald Campus) An introduction to human societies and their

both ENVR 495N1 and ENVR 495N2 are successfully completed in a twelve month period.) Preparation of an honours thesis.

**ENVR 496 Honours Research Part 1.**

(3) (Prerequisite: ENVR 301. Acceptance to Honours Program

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# Desautels Faculty of Management

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## ACCT-Accounting

Offered by: Management

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### **ACCT 351 Intermediate Financial Accounting 1.**

(3) (Prerequisite: MGCR 211) An examination of the theoretical foundation for financial reporting and revenue recognition. The tools of accounting, including a review of the accounting process and compound interest concepts. Asset recognition, measurement and disclosure. Partnership accounting.

### **ACCT 352 Intermediate Financial Accounting 2.**

(3) (Prerequisites: ACCT 351 and MGCR 341 or ACCT 311 and MGCR 341) A continuation of Intermediate Financial Accounting 1. An examination of liability recognition, measurement and disclosure, including leases, pension costs and corporate income tax. Shareholders' equity, dilutive securities and earnings per share. The statement of changes in financial position, basic financial statement analysis and full disclosure in financial reporting.

### **ACCT 354 Financial Statement Analysis.**

**BUSA 395 Managing in Europe.**

(3) (Prerequisite: MGCR 382) (Corequisite: BUSA 356)

Current social, economic and trade developments in the rapidly-evolving European arena. Focus on both the expanding EU and integrating with emerging market economies and Central and Eastern Europe. Emphasis on managing in the expanded opportunities and challenges facing international and Canadian managers.

**BUSA 399 Internship Project.**

(1) Upon completion of the internship, students must submit a paper on the integration of the applied and academic aspects of









**MGCR 472 Operations Management.**

(3) (Prerequisite: MGCR 271 or equivalent) (Requirement for the Canadian Institute of Management) Design, planning, establishment, control, and improvement of the

**MGSC 403 Introduction to Logistics Management.**

(3) (Prerequisite: MGCR 472.) Managing logistics systems, including transportation management, facility location, procurement, distribution management, and supply chain management.

**MGSC 405 Quality Management.**

(3) (Restriction: Not open to U0 and U1 students and other faculties.) Integrated view of quality management, quality systems and improvement techniques including tools and methodologies for quality improvement, six-sigma methodology.

**MGSC 415 Supplier Management.**

(3) (Restriction: Not open to U0 and U1 students) (Due to the intensive nature of this course, the standard add/drop and withdrawal deadlines do not apply. Add/drop is the second lecture day and withdrawal is the fourth lecture day.) Strategic role of purchasing, supplier selection, supplier relationship management, international sourcing, E-procurement, price determination, purchasing services, and auctions.

**MGSC 431 Operations Analysis.**

(3) (Prerequisite: MGCR 472.) Optimizing cycle-time, throughput and inventory performance of operations, including analytical modeling as well as simulation.

**MGSC 434 Topics in Management Science.**

(3) Topics will be selected from current issues in the Management Science Area.

**MGSC 479 Applied Optimization.**

(3) (Prerequisite: MGSC 373.) Applications of optimization models to management problems, including Linear Programming, Integer Programming and Nonlinear Programming.

**MGSC 575 Applied Time Series Analysis Managerial Forecasting.**

(3) (Prerequisite (Undergraduate): MGCR 271.) (Restriction: Not open to students who have taken MGSC 675.) Management applications of time series analysis. Starting with ratio-to-moving average methods, the course deals successively with Census 2, exponential smoothing methods, the methodology introduced by Box and Jenkins, spectral analysis and time-series regression techniques. Computational aspects and applications of the methodology are emphasized.

**MRKT 459 Retail Management.**

(3) (Prerequisite: MGCR 352) Principles and methods of marketing management as applied to retailing, including strategy and tactics: market structure; consumer behaviour; competition; financial management; human resources planning; promotion; presentation; merchandising; operations; pricing; planning and attaining retail profits. Lectures, text material, outside reading, planned retail visiting, cases.

**MRKT 461 Advertising Practicum.**

(3) (Corequisite: MRKT 453) Primarily designed as a practical course in measuring advertising effectiveness. Emphasis on understanding the dynamics of persuasion in an advertising context and developing projects focused on specific aspects of campaign strategies. Knowledge of basic techniques of statistical hypothesis testing is essential.

# Schulich School of Music

## MUCO-Composition

Offered by: Music, Performance, Music Research

### MUCO 181

(3) Practical instruction on an instrument or voice.

### MUCO 240D1 (3), MUCO 240D2 (3) Tonal Composition.

(3 hours) (Prerequisites: MUTH 110 and MUTH 111 OR their equivalent.) (Corequisites: MUSP 229 and MUSP 231 AND MUSP 170 and MUSP 171.) (Restriction: Open only to students in Composition) (Students must register for both MUCO 240D1 and MUCO 240D2.) (No credit will be given for this course unless both MUCO 240D1 and MUCO 240D2 are successfully completed in consecutive terms) A writing course based on the stylistic concepts and resources of European music - 1770-1850 - and designed to develop control of factors such as phrase structure, melodic shape, rhythm, linear continuity, economy of means, and dynamics. Includes analysis of 20th Century music. Extensive and detailed analysis of characteristic forms.

### MUCO 245D1 (2), MUCO 245D2 (2) Composition 1.

(2 hours) (Prerequisite: MUTH 150) (Corequisites: MUSP 240, MUSP 241 AND MUSP 170 and MUSP 171) (Restriction: Open only to students in Composition) (Students must register for both MUCO 245D1 and MUCO 245D2.) (No credit will be given for this course unless both MUCO 245D1 and MUCO 245D2 are successfully completed in consecutive terms) 20th Century techniques and approaches. Basic dimensions such as pitch, rhythm and timbre, and their inter-relationship at all structural levels. Notation and score preparation. Performance practice. Analysis of selected 20th Century scores. Writing of short pieces for solo instruments and small ensembles, including voice.

### MUCO 260 Instruments of the Orchestra.

(2) (2 hours) (Prerequisite: MUTH 111 or equivalent) An introductory study of the instruments of string, woodwind and brass families, elementary acoustics of the instruments. Techniques of playing including embouchure, fingering, bowing, hand-stopping, transposing instruments. Evolution of the instruments, their technique and their music from the 18th century to the present.

### MUCO 261 Orchestration 1.

(2) (2 hours) (Prerequisites: MUTH 151, MUSP 141, MUSP 171) The history of orchestration. Study of instrumentation and traditional orchestration. Reduction of orchestral scores for piano. Transcription of piano works for string quartet and string orchestra.

### MUCO 340D1 (2), MUCO 340D2 (2) Composition 2.

(2 hours) (Prerequisite: MUCO 245D1/D2) (Corequisites: MUSP 329 and MUSP 331) (Students must register for both MUCO 340D1 and MUCO 340D2.) (No credit will be given for this course unless both MUCO 340D1 and MUCO 340D2 are successfully completed in consecutive terms) Free composition.

### MUCO 341 Digital Studio Composition 1.

(3) (3 hours lecture-demonstration and 3 hours studio time) (Prerequisites: MUCO 240D1/D2 and MUCO 245D1/D2.) Composition with MIDI, audio recording, digital audio signal processing software and hardware. Creation of small-scale composition studies using technological resources in the context of electroacoustic music. The hands-on activities will include critical listening and evaluation of electronic and computer music repertoire.

### MUCO 342 Digital Studio Composition 2.

(3) (3 hours lecture-demonstration and 3 hours studio time) (Prerequisite: MUCO 341) Advanced composition with MIDI, audio recording, digital audio signal processing software and hardware. Creation of complete electroacoustic pieces and/or production of audio media materials.

### MUCO 360 Orchestration 2.

(2) (Prerequisite: MUCO 261) Traditional orchestration through analysis. Transcription of piano works for woodwind quintet, brass quintet, wind orchestra and percussion ensemble. Scoring for classical orchestra.

### MUCO 373 Special Topic in Composition 1.

(3) (Prerequisites: MUHL 184, MUHL 185, MUTH 211 or MUCO 240, MUSP 231.) Special topic in composition.

### MUCO 374 Special Topic in Composition 2.

(3) (Prerequisites: MUHL 184, MUHL 185, MUTH 211 or MUCO 240, MUSP 231.) Special topic in composition.

### MUCO 440D1 (2), MUCO 440D2 (2) Composition 3.

(2 hours) (Prerequisite: MUCO 340) (Students must register for both MUCO 440D1 and MUCO 440D2.) (No credit will be given for this course unless both MUCO 440D1 and MUCO 440D2 are successfully completed in consecutive terms) Free composition.

### MUCO 441 Special Projects: Composition.

(6) (2 hours) (Prerequisite: MUCO 440)

### MUCO 441D1 (3), MUCO 441D2 (3) Special Projects: Composition.

(Students must register for both MUCO 441D1 and MUCO 441D2.) (No credit will be given for this course unless both MUCO 441D1 and MUCO 441D2 are successfully completed in consecutive terms) (MUCO 441D1 and MUCO 441D2 to, must register for 1 it will be g

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## **MUEN-Ensemble**

Offered by: Performance

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### **MUEN 496 Opera Studio.**

(2) (2 hours) (Prerequisite: Audition) (For undergraduates voice majors students cast in roles in Opera McGill productions.) Coachings, rehearsals, stagings, technical/dress rehearsals in the theatre, and performances in front of an audience.

### **MUEN 553 Vocal Chamber Ensemble.**

(1) (Prerequisite: Audition) (Restriction: Open by audition to pianists and singers.) Vocal ensemble repertoire written after 1800.

### **MUEN 554 Opera Excerpts.**

(2) (Prerequisite: Audition) Opera scenes from all periods; including Baroque, Classical, 19th and 20th century, and new works from this century in original languages.

### **MUEN 556 Introduction to Collaborative Piano 1.**

(1) (2 hours) (Prerequisite: Audition) (Restriction: Not open to students who have taken MUEN 583) (Open to singers and pianists.) Aspects and techniques of performing in ensembles,

size.) (Section 003 University Chorus: a mixed chorus of approximately 100 which performs a variety of choral material including both traditional and popular selections.) (Section 004 Women's Chorale: an ensemble of approximately 40 women stressing the fundamentals of singing and ensemble participation.) Students enrolling in Choral Ensembles will be assigned to one of the above groups.

**MUEN 594 Contemporary Music Ensemble.**

(2) (4 hours) (Prerequisite: Audition.) .

**MUEN 595 Jazz Ensembles.**

(2) (3-4 hours) (Prerequisite: Audition.) .

**MUEN 596 Opera Repetiteur.**

(2) (6 hours) (Restriction: Open by audition to advanced pianists, and to students in conducting, who are interested in training as operatic coaches. Students enrolled for piano instruction at McGill must also have their practical teacher's approval) Supervised coaching of singers, and playing of scenes and productions; rehearsal pianists and backstage conducting responsibilities.

**MUEN 597 Orchestral Ensembles.**

(2) (6-7 hours) (Prerequisite: Audition.) .

**MUEN 598 Percussion Ensembles.**

(1) (2-3 hours) .

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## **MUGT-General Music Techniques**

Offered by: Music Research

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**MUGT 205 Psychology of Music.**

(3)

**□MUGT 215 Basic Conducting Techniques.**

(1) (1 hour) (Prerequisites: MUTH 110, MUTH 111, MUSP 129.) Development of basic manual dexterity and rehearsal skills. Topics include: preparatory posture, establishing tempo, releases, simple duple and triple metre beat patterns, cueing, dynamics, fermata, transposition, terminology, score preparation, and listening.

**MUGT 301 Technology and Media for Music Education.**

(3) (3 hours) Introduction to the use of microcomputers and electronic music instruments in the music classroom and in individualized instruction. Topics include: computer-assisted instruction, MIDI, sequencing and notation software, hard disk recording, NICT, and object-oriented authoring software.

**□MUGT 305 Introduction to Music Therapy.**

(3) (3 hours) (Prerequisites: MUTH 210 and MUSP 229) Introduction to basic principles and techniques of music therapy. Topics will include: definitions of music therapy; identifying and developing an understanding of the individual's special needs; simple social, emotional, and physiological therapeutic applications; and music as a motivational tool. Will include limited field observation.

**MUGT 354 Music for Children.**

(3) (Restriction(s): Not open to students who have taken or are taking MUGT 356 or MUGT 357) Using child centered approaches such as Orff, Kodaly and Dalcroze, students will explore techniques and philosophies for cultivating musical understanding in children aged 6-12. Research related to musical development and the fostering of creativity will also be investigated. A field experience and curriculum organization component is included.

**MUGT 355 Music in Early Childhood.**

(3) (3 hours) Organized as a laboratory, this course will explore the musical growth and development of children from birth to age six, with topics including heredity and environment, music skills and concept development, affective development, creativity, and musical activities.

**MUGT 356 Music for Children 1: Philosophy and Techniques.**

(3) (3 hours) (Prerequisite: none) Introduction to techniques for cultivating musical understanding and creativity onent is incol 43hM r52ltcte: ing T.6 Tm (includinc6 Tm 7.5 TL 1 0 0 1 43.2 243creativity onent one )Tj .6 Tm



technologies in commercial and concert music are examined.

**MUHL 362 Popular Music.**

(3) (3 hours) (Prerequisites: MUHL 184 and MUHL 185 and MUTH 211 OR MUCO 240 and MUSP 231) History, criticism, and analysis of twentieth-century repertoires of popular musics. Detailed examination of special topics. These include genre and style in 1970s rock and soul, history of the Broadway musical, approaches to the transcription of pop music, and/or constructions of race and gender in music video.

**MUHL 366 The Era of the Fortepiano.**

(3) (3 hours) (Prerequisites: MUHL 184 and MUHL 185 and MUTH 211 OR MUCO 240 and MUSP 231) Survey of the repertoire for keyboard 1750-1850: the instruments, Empfindsamkeit, gallant style, London, Paris, Vienna, the Czech school, Haydn, Mozart, Beethoven, sonatas, variations, character pieces, "high" and "low" salon music, virtuosos and the virtuoso repertoire, Schubert, Chopin, Schumann, Mendelssohn, early Liszt.

**MUHL 372 Solo Song Outside Germany and Austria.**

(3) (3 hours) (Prerequisites: MUHL 184 and MUHL 185 and MUTH 211 OR MUCO 240 and MUSP 231) Topics in American and European non-German song repertoire from the eighteenth century to the present. Issues discussed may include the role of song in national music culture, art song and folk song, national styles and poetic traditions, text-music relationships, and performance practice.

**MUHL 373 Special Topic.**

(3) (3 hours) (Prerequisites: MUHL 184 and MUHL 185 and MUTH 211 OR MUCO 240 and MUSP 231)

**MUHL 374 Special Topic.**

(3) (Summer) (3 hours) (Prerequisites: MUHL 184 and MUHL 185 and MUTH 211 OR MUCO 240 and MUSP 231)

**MUHL 375 Introduction to Ethnomusicology.**

(3) (Prerequisite: MUHL 184, MUHL 185, MUTH 211 or MUCO 240, MUSP 231, or permission of instructor) Central themes and methods in contemporary ethnomusicology. Music and its meanings in several contrasting cultural regions and groups. Topics include: colonialism, politics, globalization, and the impact of technology. Techniques of transcription, ethnography, and fieldwork.

**MUHL 377 Baroque Opera.**

(3) (3 hours) (Prerequisites: MUHL 184 and MUHL 185 and MUTH 211 OR MUCO 240 and MUSP 231) History of opera from its origins in the musical, literary, and philosophical models available to the Florentine Camerata to the end of the baroque. The development of opera will be studied from the perspective of artistic style and in the light of historical, political, social, and economic conditions.

**MUHL 380 Medieval Music.**

(3) (3 hours) (Prerequisites: MUHL 184 and MUHL 185 and MUTH 211 OR MUCO 240 and MUSP 231) (Corequisites: MUTH 210 and MUSP 229) (Normally alternates with MUHL 381) The medieval style - an intensive study of one or more selected topics from the repertoire. Possible subjects include liturgical chant, Notre Dame, the medieval motet, secular developments, and instrumental literature.

**MUHL 381 Renaissance Music.**



**MUIN 130 Performance Practical Instruction 1.**

(4) (1 hour) (Prerequisite: Admission to the B.Mus.)  
(Performance program by audition) (Restriction: Open to students entering directly from high school outside Quebec.)

**MUIN 131 Performance Practical Instruction 2.**

(4) (1 hour) (Prerequisite: MUIN 130) (Restriction: Open to transfer students and high school students entering directly from outside Quebec.)

**MUIN 180 BMus Practical Lessons 1.**

(3) (3 hours) (Prerequisite: Admission to the B.Mus. program by audition.) Practical instruction on an instrument or voice.

**MUIN 181 BMus Practical Lessons 2.**

(3) (Prerequisite: MUIN 180) (Restriction: Open to students entering directly from High Schools outside Quebec.) Practical instruction on an instrument or voice.

**MUIN 210 Elective Practical Instruction 3.**

(2)

**MUIN 211 Elective Practical Instruction 4.**

(2)

**MUIN 220 Practical Instruction 3.**

(2) (1 hour) (Prerequisite: MUIN 121)

**MUIN 221 Practical Instruction 4.**

(2) (1 hour) (Prerequisite: MUIN 220) .

**MUIN 222 Concentration 1 Examination.**

(0) .

**MUIN 230 Performance Practical Instruction 3.**

(4) (1 hour) (Prerequisite: MUIN 131)

**MUIN 231 Performance Practical Instruction 4.**

(4) (1 hour) (Prerequisite: MUIN 230)

**MUIN 232 Performance 1 Examination.**

(0) (Note: Complete descriptions are to be found under Examinations and Goals in Practical Subjects in the Music Chapter of the University Calendar.) .

**MUIN 250 L.Mus. Practical Instruction 1.**

(8) (1 hour) (Prerequisite: Admission to the L.Mus. program by audition)

**MUIN 251 L.Mus. Practical Instruction 2.**

(8) (1 hour) (Prerequisite: MUIN 250) .

**MUIN 252 L.Mus. Performance 1 Examination.**

(0) (Note: Complete descriptions are to be found under Examinations and Goals in Practical Subjects in the Music Chapter of the University Calendar.) .

**MUIN 269 Classical Concerto Exam.**

(1) (1 hour) (Prerequisite: MUIN 232) Performance by memory before jury of a concerto from the Classical period.

**MUIN 280 BMus Practical Lessons 3.**

(3) (Prerequisite: MUIN 181 or admission to the B.Mus. program by audition.) Practical instruction on an instrument or voice.

**MUIN 281 BMus Practical Lessons 4.**

(3) (Prerequisite: MUIN 280) Practical instruction on an instrument or voice.

**MUIN 282 BMus Performance Examination 1.**

(0) (Exam details are to be found under Examinations and Goals in Practical Subjects in the Music Chapter of the University Calendar.) Assessment of student's progress in the practical area.

**MUIN 283 BMus Concentration Final Examination.**

(0) (Exam details are to be found under Examinations and Goals in Practical Subjects in the Music Chapter of the University Calendar.) Assessment of student's progress in the practical area.

**MUIN 300 Voice Coaching 1.**

(2)

**MUIN 301 Voice Coaching 2.**

(2)

**MUIN 320 Practical Instruction 5.**

(2) (1 hour) (Prerequisite: MUIN 221)

**MUIN 321 Practical Instruction 6.**

(2) (1 hour) (Prerequisite: MUIN 320) .

**MUIN 322 Concentration 2 Examination.**

(0) (Note: Complete descriptions are to be found under Examinations and Goals in Practical Subjects in the Music Chapter of the University Calendar.) .

**MUIN 330 Performance Practical Instruction 5.**

(4) (1 hour) (Prerequisite: MUIN 231)

**MUIN 331 Performance Practical Instruction 6.**

(4) (1 hour) (Prerequisite: MUIN 330) .

**MUIN 332 Performance 2 Examination.**

(0) (Note: Complete descriptions are to be found under Examinations and Goals in Practical Subjects in the Music Chapter of the University Calendar.) .

**MUIN 333 Piano Techniques 2.**

(0) (pass/fail) (Mandatory test for pianists to be taken prior to the Performance 2 Exam.)

**MUIN 340 Honours Practical Instruction 5.**

(4) (1 hour) (Prerequisite: MUIN 231)

**MUIN 341 Honours Practical Instruction 6.**

(4) (1 hour) (Prerequisite: MUIN 340) .

**MUIN 342 Honours Performance 2 Examination.**

(0) (Note: Complete descriptions are to be found under Examinations and Goals in Practical Subjects in the Music Chapter of the University Calendar.) .

**MUIN 350 L.Mus. Practical Instruction 3.**

(8) (1 hour) (Prerequisite: MUIN 251)

**MUIN 351 LMus Practical Instruction 4.**

(8) (1 hour) (Prerequisite: MUIN 350) .

**MUIN 352 L.Mus. Performance 2 Examination.**

(0) (Note: Complete descriptions are to be found under Examinations and Goals in Practical Subjects in the Music Chapter of the University Calendar.) .

**MUIN 369 Concerto.**

(0) (pass/fail) (Mandatory test for pianists)

**MUIN 380 BMus Practical Lessons 5.**

(3) (Prerequisite: MUIN 281) Practical instruction on an instrument or voice.

**MUIN 381 BMus Practical Lessons 6.**

(3) (Prerequisite: MUIN 380) Practical instruction on an instrument or voice.

**MUIN 382 BMus Performance Examination 2.**

(0) (Exam details are to be found under Examinations and Goals in Practical Subjects in the Music Chapter of the University Calendar.) Assessment of student's progress in the practical area.

**MUIN 400 Voice Coaching 3.**

(2) (Restriction: Open only to students in the Artist Diploma in Voice program.) A course in which the student will have individual coaching sessions on repertoire, with emphasis in musical and linguistic nuance.

**MUIN 401 Voice Coaching 4.**

(2) (Restriction: Open only to students in the Artist Diploma in Voice program.) Continued individual coaching sessions on repertoire, with emphasis in musical and linguistic nuance.



**Always check at [www.mcgill.ca/study/](http://www.mcgill.ca/study/) for the most up-to-date information on whether a course is offered.**

\* Denotes courses taught only in alternate years.

‡ Professional Practice (Stage) in Dietetics involving special prerequisites

◆ Indicates that departmental approval/permission must be obtained by a student prior to registration.

† Denotes courses not available as Education electives.

□ Denotes courses with limited enrolment.

● Denotes courses not offered by the Faculty of Arts or Faculty of Science in 2010-11.

▲ Denotes courses offered by the Faculty of Education which, if appropriate to the student's program, may be included in the academic concentration.

\* Denotes courses which, because they are scheduled around practice teaching, are open only to Bachelor of Education students.

**MUIN 430 Performance Practical Instruction 7.**

(4) (1 hour) (Prerequisite: MUIN 331)

**MUIN 431 Performance Practical Instruction 8.**

(4) (1 hour) (Prerequisite: MUIN 430) .

**MUIN 432 Performance 3 Examination.**

(0) (Note: Complete descriptions are to be found under Examinations and Goals in Practical Subjects in the Music Chapter of the University Calendar.) .

**MUIN 433 Piano Techniques 3.**

(0) (pass/fail) (Mandatory test for pianists to be taken prior to the Performance 3 Exam.)

**MUIN 440 Honours Practical Instruction 7.**

(4) (1 hour) (Prerequisite: MUIN 341)

**MUIN 441 Honours Practical Instruction 8.**

(4) (1 hour) (Prerequisite: MUIN 440) .

**MUIN 442 Honours Performance 3 Examination.**

(0) (Note: Complete descriptions are to be found under Examinations and Goals in Practical Subjects in the Music Chapter of the University Calendar.) .

**MUIN 450 L.Mus. Practical Instruction 5.**

(8) (1 hour) (Prerequisite: MUIN 351)

**MUIN 451 LMus Practical Instruction 6.**

(8) (1 hour) (Prerequisite: MUIN 450) .

**MUIN 452 L.Mus. Performance 3 Examination.**

(0) (Note: Complete descriptions are to be found under Examinations and Goals in Practical Subjects in the Music Chapter of the University Calendar.) .

**MUIN 460 Artist Diploma Practical Instruction 1.**

(8) (1.5 hours) (Prerequisite: admission to the Artist Diploma program by audition.)

**MUIN 461 Artist Diploma Practical Instruction 2.**

(8) (1.5 hours) (Prerequisite: MUIN 460) .

**MUIN 462 Artist Diploma Recital 1.**

(0) (Note: Complete descriptions are to be found under Examinations and Goals in Practical Subjects in the Music Chapter of the University Calendar.) .

**MUIN 469 Artist Diploma Concerto 1.**

(1) (Prerequisite: MUIN 460)

**MUIN 480 BMus Practical Lessons 7.**

(3) (Prerequisite: MUIN 381) Practical instruction on an instrument or voice.

**MUIN 481 BMus Practical Lessons 8.**

(3) (Prerequisite: MUIN 480) Practical instruction on an instrument or voice.

**MUIN 482 BMus Performance Examination 3.**

circle of 5ths, simple turnarounds, simple substitution, symmetrical scales and chord relationships, voice leading.

**MUJZ 161 Jazz Materials 2.**

(3) (4 hours) (Prerequisite: MUJZ 160. Open to non-jazz majors, space permitting, but not for elective credit in B.Mus. or Artist Diploma programs) Simple and advanced substitution, borrowed chords, reharmonisation, modes of harmonic minor and melodic minor diatonic systems, unresolved tensions, odd and infrequent modulations, mixed two-five-ones, introduction to polychords, slashchords and non-functional harmony.

**MUJZ 170 Jazz Keyboard Proficiency 1.**

(1) (1 hour) (Prerequisite: none. Open only to Jazz Performance Majors. May not be taken for elective credit in B.Mus. or Artist Diploma programs) Basic piano skills, basic comping techniques, standard 3 note rootless voicings in 7, 3 and 3, 7 position with one extension, two-five-ones in major and minor - limited keys. Simple substitution and reharmonisation.

**MUJZ 171 Jazz Keyboard Proficiency 2.**

(1) (1 hour) (Prerequisite: MUJZ 170. Open only to Jazz Performance Majors. May not be taken for elective credit in B.Mus. or Artist Diploma programs) Continuation of previous semester. Two-five-ones and mixed two-five-ones using 4 note close position voicings and 4 and 5 note spreads, in all keys, diminished passing chords, half step shifts, voice leading extensions, quartal and modal voicing, sight reading of standard jazz repertoire.

**MUJZ 187 Jazz History Survey.**

(3) (3 hours) An introductory study of the principle recordings, artists and musical trends in jazz from its origins to the present day.

**MUJZ 213 Non-Performance Jazz Improvisation 1.**

(3) (Prerequisites: MUTH 110, MUTH 111, MUSP 129, MUSP 131.) (Note: Open to jazz instrumentalists who are not in Performance programs, with preference given to Jazz Concentration students.) Introduction to basic improvisation concepts of phrasing, articulation, melodic development, harmonic control, musical vocabulary and style. Pedagogical techniques will be discussed.

**MUJZ 214 Non-Performance Jazz Improvisation 2.**

(3) (Prerequisite: MUJZ 213 or permission of instructor.) (Note: Open to jazz instrumentalists who are not in Performance programs, with preference given to Jazz Concentration students.) A continuation of development of basic improvisation concepts of phrasing, articulation, melodic development, harmonic control, musical vocabulary and style. Pedagogical techniques will be discussed.

**MUJZ 223 Jazz Improvisation/Musicianship 1.**

(3) (3 hours) (Prerequisite: none.) (Restriction: Open only to Jazz Performance Majors) Basic improvisational concepts with emphasis on time feel, phrasing, articulation, melodic development, voice leading, harmonic control and stylistic nuance. Memorization and aural recognition of standard jazz repertoire also stressed. The aural tradition of the music is emphasized through rhythmic/diatonic development.



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**MUPG 331 Introduction to Woodwind Pedagogy.**

(2) (Prerequisite: MUIN 382) The pedagogy of woodwind playing through performing techniques and instructional materials including: etudes and scale systems and graded repertoire for technical and musical advancement on the specific instrument.

**MUPG 335 Orchestral Excerpts Brass 2.**

(2) (Prerequisite: MUPG 235) Additional excerpts from the standard orchestral literature, highlighting favorite audition materials of the major symphony orchestras, including





Repertoire Building (MUTH 211).

**MUSP 240 Musicianship Training 3.**

(2) (Prerequisites: Matriculation Music or McGill Conservatory

**MUTH 111 Elementary Harmony and Analysis.**

(3) (4 hours) (Prerequisite: MUTH 110) (Corequisites: MUSP 131 and MUSP 171) Diatonic chords, harmonic progression, the concept and practice of tonality, simple modulation, seventh chords and secondary dominants. Small forms from c.1700 to the early 19th Century will be analyzed. Written four-part exercises will be required.

**MUTH 150 Theory and Analysis 1.**

(3) (Prerequisite: Matriculation Music or McGill Conservatory Theory Secondary V or its equivalent.) (Corequisites: MUSP 140 and MUSP 170) Diatonic chords and harmonic progressions, focus on outer-voice framework, cadences, embellishments, building chordal fluency in common-practice tonality, applied chords.

**MUTH 151 Theory and Analysis 2.**

(3) (Pre- or Co-requisites: MUTH 150, MUSP 140 and MUSP 170) (Corequisites: MUSP 141 and MUSP 171) Sequences and modulation, chromatic vocabulary, analysis of simple theme types (sentence, period, hybrids) and fugal techniques.

**MUTH 202 Modal Counterpoint 1.**

(3) (3 hours) (Prerequisites: MUSP 140, MUSP 170, MUTH 150) (Restriction: Not open to students who have taken MUTH 301.) Polyphonic techniques of the Renaissance period studied through analysis of works by Palestrina and others and through written exercises in two to three voices.

**MUTH 204 Tonal Counterpoint 1.**

(3) (3 hours) (Prerequisites: MUSP 141, MUSP 171, MUTH 151) (Restriction: Not open to students who have taken MUTH 303) The contrapuntal techniques of Baroque composers studied through detailed technical analysis of their works and through written exercises in strict style.

**MUTH 210 Tonal Theory and Analysis 1.**

(3) (3 hours) (Prerequisites: MUTH 110 and MUTH 111) (Corequisite: MUSP 229) (Prerequisite or corequisite: MUSP 171) Compositional resources of early and mid-18th Century music. Thorough review of elementary harmonic procedure. Introduction to chromatic alteration and linear chords, and to analysis of imitative and invertible counterpoint. Analysis of common forms of the period c.1700 - 1770, including principal Baroque forms, but not including the Classical sonata.

**MUTH 211 Tonal Theory and Analysis 2.**

(3) (3 hours) (Prerequisite: MUTH 210) (Corequisite: MUSP 231) Compositional resources of late 18th and early 19th Century music. Analysis of forms common to the period c.1770 - 1830, including Classical sonata forms in several media. Writing of short pieces for keyboard, piano and voice, and string quartet.

**MUTH 250 Theory and Analysis 3.**

(3) (3 hours) (Prerequisite: MUTH 151) (Corequisite: MUSP 240) Compositional resources of late 18th and early 19th century music. Analysis of forms common to the period c. 1770 - 1840, including Classical sonata forms in several media.

**MUTH 251 Theory and Analysis 4.**

(3) (3 hours) (Prerequisite: MUTH 250) (Corequisite: MUSP 241) Expanded harmonic resources of the 19th century (e.g., advanced chromaticism including enharmonic reinterpretation and symmetrical division). Analysis of characteristic small and large forms. Writing and analytical skills with a goal toward perceiving how levels of musical structure interact.

**MUTH 302 Modal Counterpoint 2.**

(3) (3 hours) (Prerequisite: MUTH 202) Continuation of Modal Counterpoint I. Study of more advanced techniques through further analysis and written exercises in three or more voices.

**MUTH 304 Tonal Counterpoint 2.**

(3) (3 hours) (Prerequisite: MUTH 204) Further analysis and written exercises with special emphasis on fugal techniques in free style.

**MUTH 310 Mid and Late 19th-Century Theory and Analysis.**

(3) (3 hours) (Prerequisites: MUTH 211 or MUCO 240 and MUSP 231 and MUSP 171) Expanded harmonic resources of the late 19th Century (e.g., foreign modulation, chromatic harmony). Analysis of characteristic small and large forms. Development of writing and analytical skills with a goal toward perceiving how levels of musical structure interact.

**MUTH 311 20th-Century Theory and Analysis.**

(3) (3 hours) (Prerequisite: MUTH 310) Exploration of 20th-Century systems of pitch organization and attitudes toward counterpoint (e.g., polytonality, modal systems, neo-classical tonality, serialism, linear counterpoint, etc.). Examination of

**MUTH 350 Theory and Analysis 5.**

(3) (3 hours) (Prerequisite: MUTH 251) Exploration of 20th and 21st century organizations of pitch, rhythm, timbre etc. Written and analytical skills for the purpose of gaining insight into the compositional techniques and aesthetics of this repertoire.

**□MUTH 426 Topics in Early Music Analysis.**

(3) (3 hours) (Prerequisite: MUTH 250) Music from before 1700 is analyzed using recently developed techniques as well as materials gathered from treatises contemporaneous with the music. The implications of analysis for performance are considered.

**MUTH 427D1 (2), MUTH 427D2 (2) 20th-Century Analysis.**

(2 hours) (Students must register for both MUTH 427D1 and MUTH 427D2.) (No credit will be given for this course unless both MUTH 427D1 and MUTH 427D2 are successfully completed in consecutive terms) (Prerequisites: MUTH 211 or MUCO 240 and MUSP 231 and MUSP 171) Analysis of a cross-section of 20th Century music from Debussy and Mahler to the present to: 1) provide analytical tools necessary for the understanding of pitch organization, form, rhythm, timbre, etc., in individual works; 2) introduce salient theoretical approaches pertaining to 20th Century music.



**RELG 306 Rabbinic Judaism.**

(3) (Prerequisite: RELG 202 or RELG 204 or permission of

**RELG 345 Religion and the Arts 1.**

(3) (Fall and Winter) Topics of current interest in Religion and the Arts.

**RELG 346 Myth and Symbol in Hindu and Buddhist Art.**

(3)

**RELG 347 Topics in Religion and the Arts.**

(3)

**★RELG 348 Classical Hinduism.**

(3) (Prerequisite: RELG 252 or permission of the instructor)  
The study of classical Hindu values in historical context with reference to the goals and stages of life, traditional Hindu











● **ANAT 432 Honours Research Project.**

(9) (Summer) (Restriction: For students in the Honours program.) (Course opened to all Anatomy & Cell Biology students and other BSc students by special permission only.) Supervised honours research project in biological sciences.

**ANAT 432D1 (4.5), ANAT 432D2 (4.5) Honours Research Project.**

(Restriction: For students in the Honours program.) (Course opened to all Anatomy & Cell Biology students and other BSc students by special permission only.) (Students must register for both ANAT 432D1 and ANAT 432D2.) (No credit will be given for this course unless both ANAT 432D1 and ANAT 432D2 are successfully completed in consecutive terms) (ANAT 432D1 and ANAT 432D2 together are equivalent to ANAT 432) Supervised honours research project in biological sciences.

**ANAT 458 Membranes and Cellular Signaling.**

(3) (Winter) (3 hours lectures) (Prerequisites: BIOC 212 or

and procedures.) Independent research project with a final written report.

● **ATOC 400 Indep Study of an Env Problem.**

(3) (Restriction: students taking a joint program in Atmospheric and Environmental Science or with permission of Department.) A reading or research project, conducted under the guidance of an instructor, on the meteorological processes related to an environmental problem. A written report will be required. Students should consult the departmental undergraduate student adviser for the names of available supervisors.

● **ATOC 412 Atmospheric Dynamics.**

(3) (Fall) (Prerequisites: MATH 314, MATH 315.) Equations of motion in rotating coordinates, elementary applications, circulation and vorticity, the planetary boundary layer, synoptic scale motions, Rossby waves and inertial oscillations.

★ ● **ATOC 419 Advances in Chemistry of Atmosphere.**

(3) (Winter) (3 hours lecture) (Prerequisites: CHEM 243, and CHEM 263 or CHEM 213 and CHEM 273, MATH 222 and MATH 315 (or equivalents) or permission of instructor.) (Restriction: Not open to students who have taken CHEM 419, CHEM 619, and ATOC 619) (Offered in odd years. Students should register in CHEM 419 in even years) Selected areas of atmospheric chemistry from field and laboratory to theoretical modelling are examined. The principles of atmospheric reactions (gas, liquid and heterogeneous phases in aerosols and clouds) and issues related to chemical global change will be explored.

● **ATOC 480 Honours Research Project.**

(3) (Restriction: U3 Honours students) The student will carry out a research project under the supervision of a member of the staff. The student will be expected to write a report and present a seminar on the work.

● **ATOC 512 Atmospheric and Oceanic Dynamics.**

(3) (Fall) (3 hours lecture) (Prerequisite (Undergraduate): Permission of instructor) Introduction to the fluid dynamics of large-scale flows of the atmosphere and oceans. Stratification of atmosphere and oceans. Equations of state, thermodynamics and momentum. Kinematics, circulation, and vorticity. Hydrostatic and quasi-geostrophic flows. Brief introduction to wave motions, flow over topography, Ekman boundary layers, turbulence.

● **ATOC 513 Waves and Stability.**

(3) (Winter) (3 hours lecture) (Prerequisite (Undergraduate): Permission of instructor) Linear theory of waves in rotating and stratified media. Geostrophic adjustment and model initialization. Wave propagation in slowly varying media. Mountain waves; waves in shear flows. Barotropic, baroclinic, symmetric, and Kelvin-Helmholtz instability. Wave-mean flow interaction. Equatorially trapped waves.

★ ● **ATOC 515 Turbulence in Atmosphere and Oceans.**

(3) (Winter) (3 hours lecture) (Prerequisite (Undergraduate): ATOC 512 or permission of instructor) Application of statistical and semi-empirical methods to the study of geophysical turbulence. Reynolds' equations, dimensional analysis, and similarity. The surface and planetary boundary layers. Oceanic mixed layer. Theories of isotropic two- and three- dimensional turbulence: energy and enstrophy inertial ranges. Beta turbulence.

★ ● **ATOC 530 Paleoclimate Dynamics.**

(3) (Winter) (3 hours lecture) (Prerequisite (Undergraduate): Permission of instructor) (Restriction: Graduate students and final-year Honours Atmospheric Science students. Others by special permission.) Introduction to the components of the climate system. Review of paleoclimates. Physical processes and models of climate and climate change.

● **ATOC 531 Dynamics of Current Climates.**

(3) (Fall) (3 hours lecture) (Prerequisite (Undergraduate): Permission of instructor) (Restriction: Graduate students and final-year Honours Atmospheric Science students. Others by special permission.) The general circulation of the atmosphere and oceans. Atmospheric and oceanic general circulation models. Observations and models of the El Niño and Southern Oscillation phenomena.

● **ATOC 540 Synoptic Meteorology 1.**

(3) (Fall) (2 hours lecture; 2 hours laboratory) (Prerequisite (Undergraduate): Permission of instructor) Analysis of current meteorological data. Description of a geostrophic, hydrostatic atmosphere. Ageostrophic circulations and hydrostatic instabilities. Kinematic and thermodynamic methods of computing vertical motions. Tropical and extratropical condensation rates. Barotropic and equivalent barotropic atmospheres.

● **ATOC 541 Synoptic Meteorology 2.**

(3) (Winter) (2 hours lecture; 2 hours laboratory) (Prerequisite (Undergraduate): ATOC 412 and ATOC 540 or permission of instructor.) Analysis of current meteorological data. Quasi-geostrophic theory, including the omega equation, as it relates to extratropical cyclone and anticyclone development. Frontogenesis and frontal circulations in the lower and upper troposphere. Cumulus convection and its relationship to tropical and extratropical circulations. Diagnostic case study work.

● **ATOC 546 Current Weather Discussion.**

(1) (Winter) (2 hours) (Prerequisite (Undergraduate): ATOC 540 or permission of instructor) (Restriction: Graduate students and final-year Honours Atmospheric Science students. Others by special permission.) Half-hour briefing on atmospheric general circulation and current weather around the world using satellite data, radar observations, conventional weather maps, and analyses and forecasts produced by computer techniques.

● **ATOC 550 Special Topics Meteorology and Oceanography.**

(1) (Fall) (1 hour lecture) (Prerequisite (Undergraduate): Permission of instructor) (Restriction: Graduate students and final-year Honours Atmospheric Science students. Others by special permission.) Lectures and seminars on special topics such as hydrology, agricultural meteorology, the limits of predictability, planetary atmospheres, atmospheric and oceanic pollution, coastal currents, and research reviews.

● **ATOC 551 Selected Topics 1.**

(3) (Restriction: Course restricted to students in U3 undergraduate or graduate programs in ATOC or in closely related disciplines, and permission of the instructor.) Topics in atmospheric and oceanic sciences.

● **ATOC 552 Selected Topics 2.**

(3) (Restrictions: Course restricted to students in U3 undergraduate or graduate programs in ATOC or in closely related disciplines, and permission of the instructor.) Topics in atmospheric and oceanic sciences.

● **ATOC 555 Field Course 1.**

(3) (Restrictions: Course restricted to students in U3 undergraduate or graduate programs in ATOC or in closely related disciplines, and permission of the instructor.) Field studies in selected topics of the atmospheric and oceanic sciences.

● **ATOC 556 Field Course 2.**

(3) (Restrictions: Course restricted to students in U3 undergraduate or graduate programs in ATOC or in closely related disciplines, and permission of the instructor.) Field studies in selected topics of the atmospheric and oceanic sciences.



Always check at [www.mcgill.ca/study/](http://www.mcgill.ca/study/) for the most up-to-date information on whether a course is offered.

★ Denotes courses taught only in alternate years.

‡ Professional Practice (Stage) in Dietetics involving special prerequisites



**ATOC 558 Numerical Methods and Laboratory.**

(3) (Winter) (1 hour lecture; 4 hours laboratory) (Prerequisite (Undergraduate): Permission of instructor) (Restriction: Graduate students and final-year Honours Atmospheric Science students. Others by special permission.) Numerical simulation of atmospheric and oceanic processes. Finite difference, finite element, and spectral modelling techniques. Term project including computer modelling of convection or large-scale flows in the atmosphere or ocean.

**★ ● ATOC 568 Ocean Physics.**

(3) (Winter) (3 hours lecture) (Prerequisite (Undergraduate): ATOC 512 or permission of instructor) (Restriction: Graduate students and final-year Honours Atmospheric Science students. Others by special permission.) Research methods in physical oceanography including data analysis and literature review.

**BIOC 503 Immunochemistry.**

(3) (Winter) (Prerequisites: BIOC 311, BIOC 312) This course, presented in lecture format, emphasizes the molecular, genetic and structure function events that occur in the humoral immune response. Interleukins and other mediators of inflammation, a field in which rapid changes are occurring, are discussed. The clinical significance of fundamental biochemical findings is described.

**●BIOC 570 Biochemistry of Lipoproteins.**

(3) (Winter) (Prerequisite: BIOC 311 or equivalent) (Restriction: Open to U3 and graduate students) Structure, function and metabolism of lipids and lipoproteins as they relate to lipid storage diseases, obesity, diabetes and heart disease.

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**BIOL-Biology**

Offered by: Biology

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**BIOL 101 Organismal Biology Laboratory.**

(1) (Fall) (3 hours laboratory) (Prerequisite: Permission of the Biology Program Advisor) (Restriction: Not open to students who have taken, or are taking BIOL 111.) (Attendance at first lab is mandatory to confirm registration in the course.) Laboratory component of BIOL 111. May be taken only by transfer students who have completed elsewhere the lecture component but not the laboratory of BIOL 111 and only with permission of the Associate Dean (Student Affairs) of Science.

**BIOL 102 Cell and Molecular Biology Methods.**

(1) (Winter) (3.5 hours laboratory) (Prerequisite: Permission of the Biology Program Advisor) (Restriction: Not open to students who are taking, or have taken BIOL 112.) (Attendance at first lab is mandatory to confirm registration in the course.) The laboratory component of BIOL 112. May be taken only by transfer students who have completed elsewhere the lecture component but not the laboratory of BIOL 112 and only with permission of the Associate Dean (Student Affairs) of Science.

**BIOL 111 Principles: Organismal Biology.**

(3) (Fall) (2 hours lecture and 3 hours laboratory) (Restriction: Not open to students who have taken CEGEP objective 00UK or equivalent; or BIOL 115.) (This course serves as an alternative to CEGEP objective code 00UK) (May require departmental approval.) (Open to all students wishing introductory biology.) (Attendance at first lab is mandatory to confirm registration in the course.) (This class will use a Student Response System (clicker) which can be obtained from the Bookstore.) An introduction to the phylogeny, structure, function and adaptation of unicellular organisms, plants and animals in the biosphere.

**BIOL 112 Cell and Molecular Biology.**

● **BIOL 240 Monteregian Flora.**

(3) (Summer) (Prerequisite: BIOL 111 or permission)  
(Restriction: Not open to students who have taken PLNT 358)  
(Note: Taught at the Gault Nature Reserve. Contact instructor for specific dates, logistics: (martin.lechowicz@mcgill.ca.)  
Field studies of ferns, fern allies, conifers and flowering plants; the use of keys for species identification.

**BIOL 300 Molecular Biology of the Gene.**

(3) (Fall) (3 hours lecture, optional tutorials) (Prerequisites: BIOL 200 and one of BIOL 201 or ANAT/BIOC 212.) A survey of current knowledge and approaches in the area of regulation of gene expression, post-transcriptional control of gene expression, and signal transduction.

**BIOL 301 Cell and Molecular Laboratory.**

(4) (Fall or Winter) (1 hour lecture and one 6-hour laboratory) (Prerequisites: PHYS 102 or PHYS 142, BIOL 200, BIOL 201 or ANAT/BIOC 212, and BIOL 202. BIOL 206 recommended.) (Restrictions: Not open to students who have taken or are taking BIOC 300. Requires departmental approval.) (For approval email anne-marie.sdicu@mcgill.ca. Specify your ID number as well as the term and lab day.) An introduction to laboratory techniques with a focus on methods used to investigate fundamental questions in modern cell and molecular biology. Techniques including gene cloning, DNA and protein isolation and manipulation are covered, along with functional analysis of genes and proteins, basic bioinformatics, and computer-based experimental design and data analysis.

**BIOL 303 Developmental Biology.**

(3) (Winter) (3 hours lecture and 1 hour optional tutorial) (Prerequisites: BIOL 200, and BIOL 201 or ANAT/BIOC 212.) (Corequisites: BIOL 202. BIOL 300 strongly recommended.) A consideration of the fundamental processes and principles operating during embryogenesis. Experimental analyses at the molecular, cellular, and organismal levels will be presented and discussed to provide an overall appreciation of developmental phenomena.

**BIOL 304 Evolution.**

(3) (Fall) (3 hours lecture) (Prerequisite: BIOL 205 and BIOL 215 or ENVR 202) This course will show how the theory of evolution by natural selection provides the basis for understanding the whole of biology. The first half of the course describes the process of selection, while the second deals with evolution in the long term.

**BIOL 305 Animal Diversity.**

(3) (Winter) (2 hours lecture and 1 three-hour laboratory) (Prerequisite: BIOL 215 or both ENVR 200 and ENVR 202) The characteristics of the major groups of animals, their ancestry, history and relationship to one another. The processes of speciation, adaptive radiation and extinction responsible for diversity. Methods for constructing of phylogenies, for comparing phenotypes, and for estimating and analyzing diversity.

**BIOL 306 Neural Basis of Behaviour.**

(3) (Fall) (3 hours lecture) (Prerequisite: ANAT 212/BIOC 212 or BIOL 201 and PHYS 102 or PHYS 142 or CEGEP Physics.) (Restriction: Not open to students who have taken PSYC 308.) Neural mechanisms of animal behaviour; neuroethology; cellular neurophysiology, integrative networks within nervous systems; neural control of movement; processing of sensory information.

**BIOL 307 Behavioural Ecology/Sociobiology.**

(3) (Winter) (2 hours lecture and 1 hour conference) (Prerequisites: BIOL 205 and BIOL 215 or permission) The relationship between animal behaviour and the natural environment in which it occurs. This course introduces the subject of ecology at the level of the individual organism. Emphasis on general principles which relate to feeding, predator avoidance, aggression, reproduction and parental care of animals including humans.

**BIOL 308 Ecological Dynamics.**

(3) (Fall) (3 hours lecture, optour confeter-babora/orial)









Caenorhabditis, Drosophila and mouse, as well as on the characterization of long-lived people.

**BIOL 551 Molecular Biology: Cell Cycle.**

(3) (Winter) (3 hours lecture) (Prerequisites: BIOL 200, BIOL 201, BIOL 300) (Restriction: Not open to students who have taken 177-451) Cytological studies, biochemical and genetical information are integrated to explain molecular form and function in the eukaryotic cell. The mitotic cell cycle and its coordination with cell growth and division; maintenance of cellular architecture, protein targeting, self-assembly of macromolecular complexes, organelle biogenesis, and DNA replication and segregation are examined.

**BIOL 553 Neotropical Environments.**

(3) (Winter) (24 hours lecture and 36 hours field work over a 4-week period) (Prerequisites: HISP 218, MATH 203, and BIOL 215) (Corequisites: ENVR 451; GEOG 404 and HIST 510 alternating with GEOG 498 and AGRI 550) (Restriction: location in Panama. Students must register for a full semester of studies in Panama) Ecology revisited in view of tropical conditions. Exploring species richness. Sampling and measuring biodiversity. Conservation status of ecosystems, communities and species. Indigenous knowledge.

**★ ● BIOL 555D1 (1.5), BIOL 555D2 (1.5) Functional Ecology of Trees.**

(Fall and Winter) (Prerequisites: BIOL 304, BIOL 308 or permission.) (Students must register for both BIOL 555D1 and BIOL 555D2.) (No credit will be given for this course unless both BIOL 555D1 and BIOL 555D2 are successfully completed in consecutive terms.) (BIOL 555D1 and BIOL 555D2 together are equivalent to BIOL 555.) Discussion of the interactions among traits that underpin the survival of woody plants in diverse environments: physiology, anatomy, architecture, seasonality and phenology, reproductive ecology, life history trade-offs, and the phylogenetic basis of functional diversification.

**BIOL 568 Topics on the Human Genome.**

(3) (Winter) (3 hours lecture) (Prerequisites BIOL 202, BIOL 300, BIOL 370, or permission.) Cellular and molecular approaches to characterization of the human genome.

**★ ● BIOL 569 Developmental Evolution.**

(3) (Winter) (3 hours lecture) (Prerequisites: BIOL 303 and BIOL 304; or permission of instructor.) The influence of developmental mechanisms on evolution. This course draws on recent examples from plants and invertebrate and vertebrate animals. Topics include homology, modularity, dissociation, co-option, evolutionary novelty, evolution of cis-regulation and gene regulatory networks, developmental constraint and evolvability, heterochrony, phenotypic plasticity, and canalization.

**BIOL 570 Advanced Seminar in Evolution.**

(3) (Fall or Winter) (3 hours seminar) (Restriction: Open to undergraduates by permission) Detailed analysis of a topic in evolutionary biology, involving substantial original research.

**★ ● BIOL 571 Experimental Evolution/Ecology.**

(3) (Winter) (1 hour lecture, 4 hours laboratory) (Prerequisite: BIOL 435 or equivalent) (Restriction: Restricted to U3 and





**CHEM 362 Advanced Organic Chemistry Laboratory.**

(2) (Fall, Winter) (Prerequisite or corequisite: CHEM 302.

Not open to Honours or Majors in Chemistry) An advanced laboratory with experiments related to the theoretical principles and synthetic methods of modern organic chemistry.

**CHEM 365 Statistical Thermodynamics.**

(2) (Winter) (Prerequisite: CHEM 345) Molecular basis of thermodynamics with applications to ideal gases and simple solids. Topics to be covered will include: calculation of thermodynamic functions, chemical equilibrium constants, Einstein and Debye models of solids, absolute reaction rate theory, Debye-Hückel theory of strong electrolytes.

**CHEM 367 Instrumental Analysis 1.**

(3) (Fall) (Prerequisite: CHEM 257 or CHEM 277 or CHEM

(gas, liquid and heterogeneous phases in aerosols and clouds) and issues related to chemical global change will be explored.

**CHEM 462 Green Chemistry.**

(3) (Fall) (Prerequisites: CHEM 302 and CHEM 381) New reactions and methods which can be used for the production of chemicals from renewable feedstocks; the use of new environmentally benign solvents, catalysts and reagents; organic reactions in aqueous media and in supercritical carbon dioxide; bio-catalysis and bio-processes.

●**CHEM 470 Research Project 1.**

(6) (Fall, Winter) (Prerequisite: registration by Departmental permission only) A course designed to give students research experience. The student will be assigned a project supervisor and a research project at the beginning of the session. The project will consist of a literature survey, experimental and/or theoretical work, a written research report and an oral examination.

**CHEM 470D1 (3), CHEM 470D2 (3) Research Project 1.**

(Fall, Winter) (Students must register for both CHEM 470D1 and CHEM 470D2.) (No credit will be given for this course unless both CHEM 470D1 and CHEM 470D2 are successfully completed in consecutive terms) (CHEM 470D1 and CHEM 470D2 together are equivalent to CHEM 470) A course designed to give students research experience. The student will be assigned a project supervisor and a research project at the beginning of the session. The project will consist of a literature survey, experimental and/or theoretical work, a written research report and an oral examination.

**CHEM 480 Research Project 2.**

(3) (Fall) (Prerequisite or Corequisite: CHEM 490. Registration by Departmental permission only.) A course designed to give Honours students research experience. The student will be assigned a project supervisor and a research project at the beginning of the session. The project will consist of a literature survey, experimental or theoretical work, a written research report and an oral examination.

**CHEM 480D1 (1.5), CHEM 480D2 (1.5) Research Project 2.**

(Fall, Winter) (Students must register for both CHEM 480D1 and CHEM 480D2.) (No credit will be given for this course unless both CHEM 480D1 and CHEM 480D2 are successfully completed in consecutive terms) (CHEM 480D1 and CHEM 480D2 together are equivalent to CHEM 480) A course designed to give Honours students research experience. The student will be assigned a project supervisor and a research project at the beginning of the session. The project will consist of a literature survey, experimental or theoretical work, a written research report and an oral examination.

**CHEM 490D1 (1.5), CHEM 490D2 (1.5) Research Project 3.**

(Fall) (Prerequisite or Corequisite: CHEM 480. Registration by Departmental permission only.) (Students must register for both CHEM 490D1 and CHEM 490D2.) (No credit will be given for this course unless both CHEM 490D1 and CHEM 490D2 are successfully completed in consecutive terms.) A course designed to give Honours students research experience. The student will be assigned a project supervisor and a research project at the beginning of the session. The project will consist of a literature survey, experimental or theoretical work, a written research report and an oral examination.

**CHEM 502 Advanced Bio-Organic Chemistry.**

(3) (Winter) (Prerequisite: CHEM 302) (Restriction: Not open to students who have taken CHEM 402.) This course will cover biologically relevant molecules, particularly nucleic acids, proteins, and their building blocks. In each case, synthesis and biological functions will be discussed. The topics include synthesis of oligonucleotides and peptides; chemistry of phosphates; enzyme structure and function; coenzymes, and enzyme catalysis; polyketides; antiviral and anticancer agents.

**CHEM 503 Drug Design and Development 1.**

(3) (Fall) (Prerequisites: CHEM 302, BIOL 200, BIOL 201 or BIOC 212, or permission of instructor) (Restriction: U3 and graduate students. Students can register only with permission of coordinators.) Interdisciplinary course in drug design and development covering combinatorial chemistry, process chemistry, structure-activity relationship, pharmacokinetics and metabolism, mechanisms of action and steps

in drug development, and principles and problems in drug design.

●**CHEM 504 Drug Design and Development 2.**

(3) (Winter) (Prerequisite: CHEM 503 and permission of instructor) (Restriction: U3 and graduate students. Students can register only with permission of coordinators) Computational methods used in drug design and discovery including QSAR, docking/scoring, molecular mechanics and molecular dynamics, QM/MM, library profiling and library design.

**CHEM 514 Biophysical Chemistry.**

(3) (Winter) (Prerequisite: CHEM 203 or CHEM 204 or CHEM 223 and CHEM 243, or permission of instructor.) (Restriction: Not open to students who have taken CHEM 404.) Physical chemistry concepts needed to understand the function of biological systems at the molecular level, including the structure, stability, transport, and interactions of biological macromolecules.

**CHEM 520 Methods in Chemical Biology.**

(3) (Fall) (Prerequisite(s): BIOL 200 CHEM 345 CHEM 302 Or permission of instructor) An overview of advanced techniques at the leading edge of Chemical Biology, including some or all of: biological imaging, kinetics of enzyme inhibition, combinatorial synthesis, atomic force microscopy of biological molecules, self assembling biomimetic structures, oligonucleotide therapeutics, biomolecular X-ray crystallography, computational methods, and nuclear magnetic resonance applied to protein interactions.

**CHEM 522 Stereochemistry.**

(3) (Winter) (Prerequisite: CHEM 302) (Restriction: Not open to students who have taken CHEM 623) Stereoisomers, their nomenclature and configuration. Conformational analysis, separation of stereoisomers, and stereocontrol in organic synthesis.

**CHEM 531 Chemistry of Inorganic Materials.**

(3) (Winter) (Prerequisite: CHEM 381) Structure, bonding, synthesis, properties and applications of covalent, ionic, metallic crystals, and amorphous solids. Defect structures and their use in synthesis of specialty materials such as electronic conductors, semiconductors, and superconductors, and solid electrolytes. Basic principles of composite materials and applications of chemistry to materials processing.

●**CHEM 533 Small Molecule Crystallography.**

(3) (Winter) (Prerequisite: CHEM 355 or permission of instructor.) Fundamentals of x-ray diffraction related to small molecule structure resolution, space groups, diffraction theory, strategies for structure solution, and refinement will be covered.

**CHEM 534 Nanoscience and Nanotechnology.**

(3) (Fall) (Prerequisites: CHEM 334 or PHYS 334 or permission of instructor) (Corequisites: one of CHEM 345, PHYS 357, or PHYS 446 or permission of instructor) (Restriction: Not open to students who have taken or are taking PHYS 534) Topics discussed include scanning probe microscopy, chemical self-assembly, computer modelling, and





topics are computability, complexity, geometry, vision, AI, pattern recognition, machine models, cryptography and security and social implications of computing.

**COMP 202 Introduction to Computing 1.**

(3) (3 hours) (Prerequisite: a CEGEP level mathematics course) (Restrictions: COMP 202 and COMP 208 cannot both be taken for credit. COMP 202 is intended as a general introductory course, while COMP 208 is intended for students interested in scientific computation. COMP 202 cannot be taken for credit with or after COMP 250) Overview of components of microcomputers, the internet design and implementation of programs using a modern high-level language, an introduction to modular software design and debugging. Programming concepts are illustrated using a variety of application areas.

**●COMP 203 Introduction to Computing 2.**

(3) (3 hours) (Prerequisites: MATH 133 and COMP 202) (Restrictions: COMP 203 and COMP 250 are considered to be equivalent from a prerequisite point of view, and cannot both be taken for credit. Students who are registered in the following programs: Major or Honours in Computer Science, Major in Software Engineering, any of the joint major programs offered through the Faculty of Science and the Major Concentration in Foundations of Computing, in the Faculty of Arts, may not take this course.) Basic data structures. Representation of arrays, stacks, and queues. Linked lists and their applications to binary trees. Internal sorting. Graph representation. Elementary graph algorithms.

**COMP 206 Introduction to Software Systems.**

**COMP 350 Numerical Computing.**

(3) (3 hours) (Prerequisites: MATH 222 and MATH 223 and one of: COMP 202, COMP 208, COMP 250; or equivalents.) Computer representation of numbers, IEEE Standard for Floating Point Representation, computer arithmetic and rounding errors. Numerical stability. Matrix computations and software systems. Polynomial interpolation. Least-squares approximation. Iterative methods for solving a nonlinear equation. Discretization methods for integration and differential equations.

**COMP 360 Algorithm Design Techniques.**

(3) (3 hours) (Prerequisite: Either COMP 251 or COMP 252, and either MATH 240 or MATH 235 or MATH 363.) (Restriction: Not open to students who have taken or are taking COMP 362.) A study of techniques for the design and analysis of algorithms.

**COMP 361D1 (3), COMP 361D2 (3) Software Engineering Project.**

(Prerequisites: COMP 206, COMP 250) (Corequisite: COMP 303) (Restriction: Not open to students who have taken the 3 credit version of COMP 361.) (Students must register for both COMP 361D1 and COMP 361D2) (No credit will be given for this course unless both COMP 361D1 and COMP 361D2 are successfully completed in consecutive terms) Software development process in practice: requirement elicitation and analysis, software design, implementation, integration, test planning, and maintenance. Application of the core concepts and techniques through the realization of a large software system.

**COMP 362 Honours Algorithm Design.**

(3) (3 hours) (Prerequisite: COMP 252) (Restriction: Not open to students who have taken or are taking COMP 360.) (Note: COMP 362 can be used instead of COMP 360 to satisfy prerequisites.) Basic algorithmic techniques, their applications and limitations. Problem complexity, how to deal with problems for which no efficient solutions are known.

**COMP 364 Computer Tools for Life Sciences.**

(3) (3 hours) (Prerequisite: BIOL 200.) (Restrictions: Not available to students in Computer Science or Joint Computer Science programs. Not available to students who have taken Comp 208 or Comp 250, or who are taking either of these at the same time.) (Note: It is recommended that students have already taken a laboratory course (e.g., BIOL 301 Cell and Molecular Laboratory). Topics motivated by biological questions.) Basic concepts and tools for storing, retrieving, and analyzing large biological data sets: relational databases, on-line databases, structured query language, scripting for automating interaction with databases and data analysis, digital images and movies, advanced topics.

**COMP 396 Undergraduate Research Project.**

(3) (Summer) (3 hours) (Restrictions: This course cannot be taken under the S/U option. Departmental permission required. Students cannot be supervised by the same instructor for two 396 Science courses. Open to students in programs offered by the Faculty of Science only.) (Note: Enrolment may be limited. Students are advised to start the application process well before the start of the term and to plan for an alternative o start the applicR 5fbF1 7.rerequisites.) Basic alg mno





**EPSC 201 Understanding Planet Earth.**

(3) (Fall or Winter) (3 hours lectures; afternoon field trips)

(Restriction: Not open to students who have taken or are taking  
EPSC 233.) Learn about Earth's origin, its place in the



● **EPSC 530 Volcanology.**

(3) (Winter) (2 hours lectures, 3 hours laboratory)

(Prerequisites: EPSC 212 and EPSC 312, or equivalent, or permission of instructor.) The physical mechanisms which drive volcanoes and volcanic activity are presented. Descriptive, practical and theoretical approaches to the study of volcanoes are discussed.

**EPSC 542 Chemical Oceanography.**

(3) (Fall) (3 hours lectures) (Prerequisites: CHEM 213, CHEM 257 or equivalents, or registration in the Graduate Program in Oceanography.) History of chemical oceanography. Seawater composition and definition of salinity/chlorinity. Minor and trace-element distribution in the ocean. Geochemical mass balance. Dissolved gases in sea water. CO<sub>2</sub> and the carbonate



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**EXMD-Experimental Medicine**

Offered by: Medicine

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**EXMD 401 Physiology and Biochemistry Endocrine Systems.**

add the Internship Option to their transcript.) Paid, fulltime work-term intended to complement the student's undergraduate studies.

● **FSCI 400 Field Practicum.**

(0) Field work intended to complement the student's undergraduate study.

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## **GEOG-Geography**

Offered by: Geography

● **GEOG 199 FYS: Geo-Environments.**

(3) (Fall) (Restriction: Open only to newly admitted students in U0 or U1, who may take only one FYS. Students who register for more than one will be obliged to withdraw from all but one of them.) (Maximum 25. Closed to Geography Majors) Geography studies the complex but crucial relationships between people and their physical and socio-cultural environments. The course is constructed around field trips and preparatory seminars which provide an opportunity for students to learn about a variety of physical environments and their utilisation.

● **GEOG 200 Geographical Perspectives: World Environmental Problems.**

(3) (Fall) (3 hours) Introduction to geography as the study of nature and human beings in a spatial context. An integrated approach to environmental systems and the human organization of them from the viewpoint of spatial relationships and processes. Special attention to environmental problems as a constraint upon Third World development.

● **GEOG 201 Introductory Geo-Information Science.**

(3) (Fall) (3 hours and lab) An introduction to Geographic Information Systems. The systematic management of spatial data. The use and construction of maps. The use of microcomputers and software for mapping and statistical work. Air photo and topographic map analyses.

● **GEOG 202 Statistics and Spatial Analysis.**

(3) (Fall) (2.5 hours and lab) (You may not be able to receive credit for this course and other statistic courses. Be sure to check the Course Overlap section under Faculty Degree Requirements in the Arts or Science section of the Calendar.) Exploratory data analysis, univariate descriptive and inferential statistics, non-parametric statistics, correlation and simple regression. Problems associated with analysing spatial data such as the 'modifiable areal unit problem' and spatial autocorrelation. Statistics measuring spatial pattern in point, line and polygon data.

● **GEOG 203 Environmental Systems.**

(3) (Fall) (3 hours) (Restriction: Because of quantitative science content of course, not recommended for B.A. and B.Ed. students in their U0 year.) An introduction to system-level interactions among climate, hydrology, soils and vegetation at the scale of drainage basins, including the study of the global geographical variability in these land-surface systems. The knowledge acquired is used to study the impact on the environment of various human activities such as deforestation and urbanisation.

● **GEOG 205 Global Change: Past, Present and Future.**

(3) (Winter) (3 hours) An examination of global change, from the Quaternary Period to the present day involving changes in the physical geography of specific areas. Issues such as climatic change and land degradation will be discussed, with speculations on future environments.

● **GEOG 210 Global Places and Peoples.**

(3) (Winter) (3 hours) Introduction to key themes in human geography. Maps and the making, interpretation and contestation of landscapes, 'place', and territory. Investigation of globalization and the spatial organization of human geo-politics, and urban and rural environments.

● **GEOG 216 Geography of the World Economy.**

(3) (Fall) (3 hours) The course introduces the geography of the world economic system. It describes the spatial distribution of economic activities and examines the factors which influence their changing location. Case studies from both "developed" and "developing" countries will test the different geographical theories presented in lectures.

● **GEOG 217 Cities in the Modern World.**

(3) (Note: Winter) (Note: 3 hours) An introduction to urban geography. Uses a spatial/geographic perspective to understand cities and their social and cultural processes. Addresses two major areas. The development and social dynamics in North American and European cities. The urban transformations in Asian, African, and Latin American societies that were recently predominantly rural and agrarian.

● **GEOG 221 Environment and Health.**

(3) (Winter) (3 hours) (Restriction: Not open to students who have taken or are taking NRSC 221.) (Note: This course is also offered as NRSC 221. Students enrolled in downtown campus programs register in GEOG 221; students enrolled in Macdonald campus programs register in NRSC 221. In Winter 2011, GEOG221/NRSC 221 will be taught on the Macdonald campus.) This course introduced physical and social environments as factors in human health, with emphasis on the physical properties of the atmospheric environment as they interact with diverse human populations in urban settings.

● **GEOG 272 Earth's Changing Surface.**

(3) (Fall) (3 hours) Introduction to the study of landforms as products of geomorphic and geologic systems acting at and near the Earth's surface. The process geomorphology approach will be used to demonstrate how landforms of different geomorphic settings represent a dynamic balance between forces acting in the environment and the physical properties of materials present.

**GEOG 306 Raster Geo-Information Science.**

(3) (Winter) (2 hours and laboratory) (Prerequisite: GEOG 201) Formal introduction to a computer-based Geographical Information System (GIS). Topics will focus on map analysis and on transforming and displaying spatial data. GIS will be used by students to solve problems in both physical and human geography.

**GEOG 307 Socioeconomic Applications of GIS.**

(3) (Winter) (2 hours and laboratory) (Prerequisites: GEOG 201, MATH 203 or equivalent) GIS applied to the spatial analysis of socioeconomic and market data. Topics include geographic market segmentation, geodemographics, spatial decision-support systems and modelling applications of GIS. Empirical focus is on analysing spatial patterns of population and consumption characteristics in cities and on facility location problems. Emphasis on visualization and problem solving.

**GEOG 308 Principles of Remote Sensing.**

(3) (Fall) (3 hours and laboratory periods) (Corequisite(s): GEOG 201) (Restriction: Not open to students who have taken ATOC 308) A conceptual view of remote sensing and the underlying physical principles. Covers ground-based, aerial, satellite systems, and the electromagnetic spectrum, from visible to microwave. Emphasis on application of remotely sensed data in geography including land cover change and ecological processes.

**GEOG 309 Geography of Canada.**

(3) (Winter) (3 hours) (Restriction: Cannot be taken by students who have taken CANS 303 after 2007.) An introduction to the geography of Canada. A comprehensive geographical interpretation of Canada's salient physical and human characteristics, including landscapes and their evolution, climate, vegetation, society/land relationships and socio-economic attributes of the population.

**GEOG 310 Development and Livelihoods.**

(3) (Prerequisite(s): GEOG 210 or 216 or ENVR 251 or INTD 200) (Restriction(s): 796 0 1 0 1 2m 7TD) Geographical dimensions of rural/urban livelihoods in the face of socioeconomic and environmental change in developing regions. Emphasis on household natural resource use, survival strategies and vulnerability, decision-making, formal and informal institutions, migration, and development experience in contrasting global environments.

**GEOG 311 Economic Geography.**

(3) (Fall) (3 hours) (Prerequisite: GEOG 216 or permission of instructor) Different theories and approaches to understanding the spatial organization of economic activities. Regional case studies drawn from North America, Europe and Asia used to reinforce concepts. Emphasis also on city-regions and their interaction with the global economy.

**●GEOG 315 Urban Transportation Geography.**

(3) (Winter) (3 hours) (Prerequisite: GEOG 217 or permission of instructor) Discusses the urban transportation problem and proposed solutions from a geographic perspective. Specific topics include an analysis of the land use-transportation system in North American cities; its social environmental impacts; the analysis of urban travel behaviour; and the geographical implications of various policy alternatives.

**GEOG 316 Political Geography.**

(3) (Fall) (3 hours) The study of the 0 0 1 21Yi228 of 26 2282rfppTm 7.5 TLnization otitutions, migraotiinstr r 0 1 21,Emph 1 21.0 0 1 21Yi228 of 2ts 3 houfrom a geo0



**GEOG 491D1 (3), GEOG 491D2 (3) Honours Research.**

(Fall) (Prerequisite: 183-381) (Restriction: For U3 B.A. and B.Sc. Honours and Joint Honours Geography students) (Students must register for both GEOG 491D1 and GEOG 491D2.) (No credit will be given for this course unless both GEOG 491D1 and GEOG 491D2 are successfully completed in consecutive terms) Supervised reading, research and preparation of an undergraduate thesis under the direction of a member of staff.

**GEOG 491N1 (3), GEOG 491N2 (3) Honours Research.**

(Winter) (Restriction: For U3 B.A. and B.Sc. Honours and Joint Honours Geography students) (Students must also register for GEOG 491N2) (No credit will be given for this course unless both GEOG 491N1 and GEOG 491N2 are successfully completed in a twelve month period) Supervised reading, research and preparation of an undergraduate thesis under the direction of a member of staff.

**GEOG 492D1 (1.5), GEOG 492D2 (1.5) Joint Honours Research.**

(Fall) (Restriction: Only for those U3 Joint Honours students in Geography who opt to enrol in a parallel course in another department) (Students must register for both GEOG 492D1 and GEOG 492D2.) (No credit will be given for this course unless both GEOG 492D1 and GEOG 492D2 are successfully completed in consecutive terms) Supervised reading, research and preparation of an undergraduate thesis under the direction of a member of staff.

**●GEOG 492N1 (1.5), GEOG 492N2 (1.5) Joint Honours Research.**

(Winter, Fall) (Students must also register for GEOG 492N2) (No credit will be given for this course unless both GEOG 492N1 and GEOG 492N2 are successfully completed in a twelve month period) Supervised reading, research and preparation of an undergraduate thesis under the direction of a member of staff.

**GEOG 493**

(3)

**GEOG 494 Urban Field Studies.**

(3) (Fall) (Prerequisites: One of the following: GEOG 201, GEOG 203, GEOG 210, GEOG 216, GEOG 217, GEOG 272, or permission of instructor.) (A fee of \$225 is charged to all students registered in GEOG 494 Urban Field Studies. The fee is used to support the cost of transportation, accommodations, local fees and all meals for a three day field trip. The Department of Geography will subsidize a portion of the cost of this compulsory activity for students registered in Geography Honours and Majors programs.) Geographical research in urban public and semi-public spaces. Demonstration of techniques of mapping, sampling, measurement, photography, interviewing. Attention to research design.

**GEOG 495 Field Studies - Physical Geography.**

(3) (2-week field school) (Prerequisites: 6 credits from the following list of Systematic Physical Geography courses: GEOG 305, GEOG 321, GEOG 322, GEOG 350, GEOG 372) Field research projects in physical geography. Held locally in Monteregean or Eastern Township regions. The course is organised around field projects designed to formulate and test scientific hypotheses in a physical geography discipline. May Summer session. Preregistration in Department required by March 16.

**●GEOG 496 Geographical Excursion.**

(3) (Winter) (Prerequisites: GEOG 290 and permission of instructor) Lecture course on the geography of a region and excursion through the selected country or region including landscape interpretation and field study projects.

**●GEOG 498 Humans in Tropical Environments.**

(3) (Winter) (6 hours lecture for 4 weeks, 3 hours seminar, 2 hours laboratory, 8 hours conference) (Restriction: Location in Panama. Student must register for a full semester of studies in Panama) (Prerequisites: HISP 218, MATH 203 or equivalents) Focus on understanding of inter-relations between humans and neotropical environments represented in Panama. Study of contemporary rural landscapes, their origins, development and change. Impacts of economic growth and inequality, social organization, and politics on natural resource use and environmental degradation. Site visits and field exercises in peasant/colonist, Amerindian, and plantation communities.

**GEOG 499 Subarctic Field Studies.**

(3) (Fall) (Prerequisite: GEOG 203 or GEOG 301) An introduction to the geography of the subarctic with emphasis on the application of field methods in physical and/or human geography.

**●GEOG 500 Geography of Regional Identity.**

(3) (Fall) (3 hours) (Restriction: Graduate students and final year undergraduates and/or those who have taken GEOG 408) The response of diverse regional groups in Europe to the centripetal tendencies of national institutions. The course draws upon examples from a variety of European regions. Contemporary regional issues will be contextualised within a spatial framework of historical geography.

**GEOG 501 Modelling Environmental Systems.**

(3) (Fall) (1.15 hours lecture, 0.58 hours seminar, 0.69 hours project, 0.58 hours laboratory) (Restriction: open only to U2 or U3 students who have completed six or more credits from courses at the 300 level of Atmospheric and Oceanic Sciences, Biology, Chemistry, Earth and Planetary Sciences, Geography, Natural Resource Sciences, or a McGill School of Environment domain, or permission of the instructor) (Prerequisites: MATH 139 or MATH 140, MATH 141, and MATH 203, or equivalent) (Enrolment limited to 20 students by availability of workstations) Most problems in environmental science deal with weak relationships and poorly defined systems. Model development and simulation will be used in this course to help improve understanding of environmental systems. Simulation of environmental systems is examined, focusing on problem definition, model development and model validation.

**GEOG 502 Geography of Northern Development.**

(3) (Fall) (3 hours) (Prerequisite (Undergraduate): GEOG 301 •

Key themes: technological and managerial change, changing labour processes, industrial re-location.

**GEOG 505 Global Biogeochemistry.**

(3) (Winter) (2 hours and research) (Prerequisite: GEOG 305 or GEOG 322 and permission of instructor) An examination of the storage, transfers and cycling of major elements and substances, with an emphasis on the global scale and the linkages between the atmosphere, hydrosphere, lithosphere and biosphere.

**GEOG 506 Advanced Geographic Information Science.**

(3) (Winter) (2 hours and laboratory) (Prerequisite (Undergraduate): GEOG 201 and GEOG 307 and permission of instructor.) Critically analyse major themes in geographic information science and draw out the practical ramifications for spatial technologies and research. Topics such as spatial interoperability, data quality, scale, visualization, location based services and ontologies are covered.

**GEOG 507 Advanced Social Geography.**

(3) (Prerequisite: GEOG 331 or equivalent, and permission of instructor.) Current theories and themes in social geography, such as relations between society and space, social and spatial relations of inequality, difference and diversity, situated and embodied identities, social issues and problems, connections between society and nature, all within a spatial framework.

**●GEOG 508 Resources, People and Power.**

(3) (Fall) (3 hours) (Prerequisite: GEOG 408 or GEOG 410 or permission of instructor) Addresses how different groups of people struggle over natural resources and environmental change. Politics of conservation in resource-dependent local communities, struggles over resource access and character, questions of power, resistance, class, and gender, and to "nature" as a socially-constructed yet active player.

**GEOG 509 Qualitative Methods.**

(3) (Fall) (Prerequisite: Permission of instructor.) Qualitative methods that geographers use and the debates surrounding their use; epistemological underpinnings of methodological choices.

**GEOG 510 Humid Tropical Environments.**

(3) (Fall) (3 hours) (Prerequisite: GEOG 203 or equivalent and written permission of the instructor) Focus on the environmental and human spatial relationships in tropical rain forest and savanna landscapes. Human adaptation to variations within these landscapes through time and space. Biophysical constraints upon "development" in the modern era.

**GEOG 511 Advanced Political Geography.**

(3) (Restriction(s): Undergraduate students require the permission of the instructor to enroll.) (To obtain permission, students should email the instructor, Prof. Forest, benjamin.forest@mcgill.ca. The class is intended to appeal broadly to graduate students in human geography.) Questions of space and power in contemporary political geography. Range of topics, including territoriality, the state, the politics of space, critical geopolitics, symbolic landscapes, and GIS and mapping. Emphasizes theoretical issues but includes empirical and/or case studies.

**●GEOG 513 Behavioural Geography.**

(3) (3 hours) (Prerequisite (Undergraduate): a course in introductory statistics) The development of behavioural approaches in geography. A survey of methods and findings in the area of environmental and spatial cognition, preference and choice behaviour. Models of disaggregate and aggregate travel demand.

**●GEOG 515 Contemporary Dilemmas of Development.**

(3) (Prerequisite(s): GEOG 310, GEOG 408, or a 400-level course in development) (Restriction(s): Only open to U3 students with permission of instructor.) Analysis of acute geographic dilemmas of international development. Emphasis on 1) rural systems and the problems of agrobiodiversity, land tenure, conflict, food relief, refugees and migration, the peace process, geopolitics and diplomacy; 2) role of development programs and agendas of the international community, the workings of development On the Ground (TM).

**●GEOG 522 Advanced Environmental Hydrology.**

(3) (2 hours and 1 tutorial) (Prerequisite: GEOG 322, or permission of instructor) (Cross-listed with CASN 300) Surface and shallow ground water determine the availability of moisture and many chemical elements at the Earth's surface. This course discusses the link between surface water and ground water flow systems and the role this link plays in stream flow production and biogeochemical cycling in lake, riparian and terrestrial ecosystems.

**●GEOG 523 Global Ecosystems and Climate.**

(3) (Fall) (3 hours) (Prerequisite: GEOG 203 and 321 or equivalent, or permission of the instructor) Linkages and feedbacks among climate, ecosystems, and human land use at global scales. How global-scale ecological processes (primary production, carbon cycle, etc.) are driven by variations in climate and land use practices such as agriculture and deforestation. How natural and human-modified ecosystems exchange carbon and water with the atmosphere.

**GEOG 530 Global Land and Water Resources.**

(3) (Prerequisite(s): GEOG 203 or ESYS 200 or ENVR 200 or equivalent; GEOG 322 or BREE 217 or equivalent; or permission of instructor.) Linkage of physical processes (hydrology and ecosystems) with issues of societal and socio-economic relevance (land, food, and water use appropriation for human well-being). Application of a holistic perspective on land, food and water issues in an international setting, highlighting linkages, feedbacks and trade-offs in an Earth system context.

**GEOG 535 Remote Sensing and Interpretation.**

(3) (Winter) (3 hours) (Prerequisite: GEOG 308 and written permission of instructor) Basic photogrammetry and interpretation procedures for aircraft and space craft photography and imagery.

**GEOG 536 Geocryology.**

(3) (Fall) (3 hours) (Prerequisite: GEOG 272 and any 300-level geomorphology course approved by instructor) Study of the unique geomorphic aspects of periglacial and permafrost environments. The focus will be on processes in cold climates, the impact of human activity on permafrost landscapes and potential impacts of climatic change.

**●GEOG 537 Advanced Fluvial Geomorphology.**

(3) (Winter) (Prerequisite (Undergraduate): permission of instructor) An examination of current advances in fluvial geomorphology: sediment entrainment and transport, alluviation and river channel evolution.

**GEOG 540 Topics in Geography 1.**

(3) (Fall) (Prerequisite: Permission of instructor.) (Note: This course is offered on an irregular basis. See Geography website ([www.geog.mcgill.ca](http://www.geog.mcgill.ca)) for current status.) In-depth review of a current topic in physical geography.

**●GEOG 541 Topics in Geography 2.**

(3) (Prerequisite: Permission of instructor.) (Note: This course is offered on an irregular basis. See Geography website ([www.geog.mcgill.ca](http://www.geog.mcgill.ca)) for current status.) In-depth review of a current topic in human geography.

**●GEOG 542 Advanced Studies in Geography 1.**

● **GEOG 551 Environmental Decisions.**

(3) (Fall) (2 hours seminar, 1 hour tutorial) (Prerequisites: GEOG 302, GEOG 306 or equivalents) This course deals with the role of geographic information, paradigms and modes of analysis - including but not restricted to GIS - in environmental impact assessment and decision making. The focus will be on community-based decision making, particularly where conservation issues are involved. Cross-cultural situations, developing areas and the role of non-government organizations.

● **GEOG 555 Ecological Restoration.**

(3) (Prerequisites: GEOG 350 or BIOL 308 or PLNT 460 and permission of instructor.) (Note: Requires participation in a field trip over reading week. Offered in alternate years.) A broad overview of ecological restoration. Considers causes of environmental degradation, why and what we restore, how restoration goals are set, and standards in restoration practice, as well as critiques and philosophies of ecological restoration, such as "ecocultural" restoration.

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## **MATH-Mathematics & Statistics**

Offered by: Mathematics and Statistics

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**MATH 111 Mathematics for Education Students.**

(3) (Winter) (Restriction: Open only to students in the B.Ed. program, not open to students who have successfully completed CEGEP course 201-101 or an equivalent. Not available for credit with MATH 112) (Offered by the Faculty of Science. Note: all Science courses have limited enrolment) An overview of the nature of mathematics and its applications. Manipulative algebra, inequalities, linear and quadratic equations. Transformational geometry and symmetry. An intuitive discussion of area and volume. Sets and functions. A brief introduction to probability and statistics.

**MATH 112 Fundamentals of Mathematics.**

(3) (Fall) (Restriction: Not open to students who have taken CEGEP course 201-101) (Restriction: Open only to those who have taken

exponential and logarithmic functions, trigonometric functions and their use, mathematical induction, binomial theorem, complex numbers.

**MATH 122 Calculus for Management.**

(3) (3 hours lecture, 1 hour tutorial.) (Prerequisite: A course in functions.) (Restrictions: Not open to students who have taken or are taking MATH 130, MATH 131, MATH 139, MATH 140, MATH 150. MATH 139, MATH 140, MATH 141, MATH 150 and MATH 151 are not open to students who have taken or are taking MATH 122, except by special permission of the Department of Mathematics and Statistics.) (Open

of Science. Students intending to pursue one of the major or minor concentrations in Mathematics and Statistics in the Faculty of Management should take MATH 140 [or MATH 139] and MATH 141 instead.) Review of functions, exponents and radicals, exponential and logarithm. Examples of functions in business applications. Limits, continuity and derivatives. Differentiation of elementary functions. Antiderivatives. The definite integral. Techniques of Integration. Applications of differentiation and integration including differential equations. Trigonometric functions are not discussed in this course.

**MATH 123 Linear Algebra and Probability.**

(3) (3 hours lecture, 1 hour tutorial.) (Restrictions: Not open

Faculty of Management students only. Offered by the Faculty of Science. Students intending to pursue one of the major or minor concentrations in Mathematics and Statistics in the Faculty of Management should take MATH 133 instead.) Geometric vectors in low dimensions. Lines and planes. Dot and cross product. Linear equations and matrices. Matrix operations, properties and rank. Linear dependence and independence. Inverses and determinants. Linear programming and tableaux. Sample space, probability, combination of events. Conditional probability and

distributions.

**MATH 133 Linear Algebra and Geometry.**

to students who have taken MATH 221 or CEGEP objective 00UQ or equivalent.) (Restriction Note B: Not open to students who have taken or are taking MATH 123, MATH 130 or MATH 131, except by permission of the Department of Mathematics and Statistics.) Systems of linear equations, matrices, inverses, determinants; geometric vectors in three dimensions, dot product, cross product, lines and planes; introduction to vector spaces, linear dependence and independence, bases; quadratic loci in two and three dimensions.

**MATH 139 Calculus 1 with Precalculus.**

(4) (Fall) (4 hours lecture; 1 hour tutorial) (Prerequisite: a course in functions) (Requires Departmental Approval) (Restriction: Not open to students who have taken CEGEP objective 00UN or equivalent.) (Restriction Note B: Not open to students who have taken or are taking MATH 122, except by permission of the Department of Mathematics and Statistics.) (Students continue in MATH 141) (Each Tutorial section is enrolment limited) Review of trigonometry and other Precalculus topics. Limits, continuity, derivative. Differentiation of elementary functions. Antidifferentiation. Applications.

**MATH 140 Calculus 1.**

(3) (3 hours lecture, 1 hour tutorial) (Prerequisite: High School Calculus) (Restriction: Not open to students who have taken MATH 120, MATH 139 or CEGEP objective 00UN or equivalent) (Restriction: Not open to students who have taken or are taking MATH 122 or MATH 130 or MATH 131, except by permission of the Department of Mathematics and Statistics) (Each Tutorial section is enrolment limited) Review of functions and graphs. Limits, continuity, derivative. Differentiation of elementary functions. Antidifferentiation. Applications.

**MATH 141 Calculus 2.**

(4) (Prerequisites: MATH 139 or MATH 140 or MATH

Note B: Not open to students who have taken or are taking MATH 122 or MATH 130 or MATH 131, except by permission of the Department of Mathematics and Statistics.) (Each Tutorial section is enrolment limited) The definite integral. Techniques of integration. Applications. Introduction to sequences and series.

**MATH 150 Calculus A.**

(4) (Fall) (3 hours lecture, 2 hours tutorial) (Students with no prior exposure to vector geometry are advised to take MATH 133 concurrently. Intended for students with high school calculus who have not received six advanced placement credits) (Restriction: Not open to students who have taken CEGEP objective 00UN or equivalent) (Restriction Note B: Not open to students who have taken or are taking MATH 122 or MATH 130 or MATH 131, except by permission of the Department



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- ‡ Professional Practice (Stage) in Dietetics involving special prerequisites
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of Mathematics and Statistics) (MATH 150 and MATH 151 cover the material of MATH 139, MATH 140, MATH 141, MATH 222) Functions, limits and continuity, differentiation, L'Hospital's rule, applications, Taylor polynomials, parametric curves, functions of several variables.

**MATH 151 Calculus B.**

(4) (Winter) (3 hours lecture; 2 hours tutorial) (Prerequisite: MATH 150) (Restriction: Not open to students who have taken CEGEP objective 00UP or equivalent) (Restriction: Not open to students in the Faculty of Engineering) (Restriction: Not open to students who have taken or are taking MATH 122 or MATH 130 or MATH 131, except by permission of the Department of Mathematics and Statistics) (Restriction: Not open to students who have taken MATH 152) (Each Tutorial section is enrolment limited) Integration, methods and applications, infinite sequences and series, power series, arc length and curvature, multiple integration.

**MATH 203 Principles of Statistics 1.**

(3) (No calculus prerequisites) (Restriction: This course is intended for students in all disciplines. For extensive course restrictions covering statistics courses see Section 3.6.1 of the Arts and of the Science sections of the calendar regarding course overlaps.) (You may not be able to receive credit for this course and other statistic courses. Be sure to check the Course Overlap section under Faculty Degree Requirements in the Arts or Science section of the Calendar. Students should consult <http://www.mcgill.ca/student-records/transfercredits/> for information regarding transfer credits for this course.) Examples of statistical data and the use of graphical means to summarize the data. Basic distributions arising in the natural and behavioural sciences. The logical meaning of a test of significance and a confidence interval. Tests of significance and confidence intervals in the one and two sample setting (means, variances and proportions).

**MATH 204 Principles of Statistics 2.**

(3) (Winter) (Prerequisite: MATH 203 or equivalent. No calculus prerequisites) (Restriction: This course is intended for students in all disciplines. For extensive course restrictions covering statistics courses see Section 3.6.1 of the Arts and of the Science sections of the calendar regarding course overlaps.) (You may not be able to receive credit for this course and other statistic courses. Be sure to check the Course Overlap section under Faculty Degree Requirements in the Arts or Science section of the Calendar.) The concept of degrees of freedom and the analysis of variability. Planning of experiments. Experimental designs. Polynomial and multiple regressions. Statistical computer packages (no previous computing experience is needed). General statistical procedures requiring few assumptions about the probability model.

**MATH 222 Calculus 3.**

(3) (Prerequisite: MATH 141. Familiarity with vector geometry or Corequisite: MATH 133) (Restriction: Not open to students who have taken CEGEP course 201-303 or MATH 150, MATH 151 or MATH 227) Taylor series, Taylor's theorem in one and several variables. Review of vector geometry. Partial differentiation, directional derivative. Extreme of functions of 2 or 3 variables. Parametric curves and arc length. Polar and spherical coordinates. Multiple integrals.

**MATH 223 Linear Algebra.**

(3) (Fall and Winter) (Prerequisite: MATH 133 or equivalent) (Restriction: Not open to students in Mathematics programs nor to students who have taken or are taking MATH 236, MATH 247 or MATH 251. It is open to students in Faculty Programs) Review of matrix algebra, determinants and systems of linear equations. Vector spaces, linear operators and their matrix representations, orthogonality. Eigenvalues and eigenvectors, diagonalization of Hermitian matrices. Applications.

**MATH 235 Algebra 1.**

(3) (Fall) (3 hours lecture; 1 hour tutorial) (Prerequisite: MATH 133 or equivalent) Sets, functions and relations. Methods of proof. Complex numbers. Divisibility theory for integers and modular arithmetic. Divisibility theory for polynomials. Rings, ideals and quotient rings. Fields and construction of fields from polynomial rings. Groups, subgroups

and cosets; group actions on sets.

**MATH 236 Algebra 2.**

(3) (Winter) (Prerequisite: MATH 235) Linear equations over a field. Introduction to vector spaces. Linear mappings. Matrix representation of linear mappings. Determinants. Eigenvectors and eigenvalues. Diagonalizable operators. Cayley-Hamilton theorem. Bilinear and quadratic forms. Inner product spaces, orthogonal diagonalization of symmetric matrices. Canonical forms.

**MATH 240 Discrete Structures 1.**

(3) (Fall) (Corequisite: MATH 133.) (Restriction: For students in any Computer Science program. Others only with the instructor's permission. Not open to students who have taken or are taking MATH 235.) Mathematical foundations of logical thinking and reasoning. Mathematical language and proof techniques. Quantifiers. Induction. Elementary number theory. Modular arithmetic. Recurrence relations and asymptotics. Combinatorial enumeration. Functions and relations. Partially



**MATH 255 Honours Analysis 2.**

(3) (Winter) (Prerequisites: MATH 242 or permission of the Department) Series of functions including power series. Riemann integration in one variable. Elementary functions.

**MATH 262 Intermediate Calculus.**

(3) (3-1-5) (Prerequisites: MATH 141, MATH 133 or equivalent.) (Restrictions: Open only to students in the Faculty of Engineering. Not open to students who are taking or have taken MATH 151, MATH 152, OR MATH 222.) Series and power series, including Taylor's theorem. Brief review of vector geometry. Vector functions and curves. Partial differentiation and differential calculus for vector valued functions. Unconstrained and constrained extremal problems. Multiple integrals including surface area and change of variables.

**MATH 263 Ordinary Differential Equations for Engineers.**

(3) (3-1-5) (Corequisite: MATH 262.) (Restrictions: Open only to students in the Faculty of Engineering. Not open to students who are taking or have taken MATH 315 or MATH 325.) First order ODEs. Second and higher order linear ODEs. Series solutions at ordinary and regular singular points. Laplace transforms. Linear systems of differential equations with a short review of linear algebra.

**MATH 264 Advanced Calculus for Engineers.**

(3) (3-1-5) (Prerequisite: MATH 262 or MATH 151 or MATH 152 or equivalent.) (Corequisite: MATH 263) (Restrictions: Open only to students in the Faculty of Engineering. Not open to students who are taking or have taken MATH 319 or MATH 375.) Review of multiple integrals. Differential and integral calculus of vector fields including the theorems of Gauss, Green, and Stokes. Introduction to partial differential equations, separation of variables, Sturm-Liouville problems, and Fourier series.

**MATH 270 Applied Linear Algebra.**

(3) (Winter) ((3-1-5)) (Prerequisite: MATH 263) Introduction. Review of basic linear algebra. Vector spaces. Eigenvalues and eigenvectors of matrices. Linear operators.

**MATH 271 Linear Algebra and Partial Differential Equations.**

(3) (Fall and Winter) ((3-1-5)) (Prerequisites: MATH 263, MATH 264.) (Not open to students who have taken MATH 266.) Applied Linear Algebra. Linear Systems of Ordinary Differential Equations. Power Series Solutions. Partial Differential Equations. Sturm-Liouville Theory and Applications. Fourier Transforms.

**MATH 314 Advanced Calculus.**

(3) (Prerequisites: MATH 133, MATH 222) (Restriction: Not open to students who have taken or are taking MATH 248) Derivative as a matrix. Chain rule. Implicit functions. Constrained maxima and minima. Jacobians. Multiple integration. Line and surface integrals. Theorems of Green, Stokes and Gauss.

**MATH 315 Ordinary Differential Equations.**

(3) (Prerequisite: MATH 222.) (Corequisite: MATH 133.) (Restriction: Not open to students who have taken or are taking MATH 325.) First order ordinary differential equations including elementary numerical methods. Linear differential equations. Laplace transforms. Series solutions.

**MATH 316 Complex Variables.**

(3) (Fall) (Prerequisites: MATH 314 and MATH 243) (Restriction: Not open to students who have taken or are taking MATH 249, MATH 366, MATH 381 or MATH 466.) Algebra of complex numbers, Cauchy-Riemann equations, complex integral, Cauchy's theorems. Taylor and Laurent series, residue theory and applications.

**MATH 317 Numerical Analysis.**

(3) (Fall) (Prerequisites: MATH 315 or MATH 325 or MATH 261 or MATH 263 and COMP 202 or permission of instructor.) Error analysis. Interpolation. Numerical solutions of equations by iteration. Numerical integration. Introduction to numerical solutions of differential equations. Programming assumed. Some lab work necessary.

**MATH 318 Mathematical Logic.**

(3) (Fall) (Restriction: Not open to students who are taking or have taken PHIL 210) Propositional calculus, truth-tables, switching circuits, natural deduction, first order predicate calculus, axiomatic theories, set theory.

**MATH 319 Introduction to Partial Differential Equations.**

(3) (Winter) (Prerequisites: MATH 223 or MATH 236, MATH 314, MATH 315) First order equations, geometric theory; second order equations, classification; Laplace, wave and heat equations, Sturm-Liouville theory, Fourier series, boundary and initial value problems.

**★ ● MATH 320 Differential Geometry.**

(3) (Fall) (Prerequisites: MATH 236 or MATH 223 or MATH 247, and MATH 314 or MATH 248) Review of Euclidean geometry. Local theory of plane and space curves: the Frenet formulas. Local theory of surfaces: the first and second fundamental forms, the shape operator, the mean and Gaussian curvatures, surfaces of revolution with prescribed curvature, ruled and developable surfaces. Geodesic curves on surfaces of revolution. The Gauss-Codazzi equations, rigidity.

**MATH 323 Probability.**

(3) (Prerequisites: MATH 141 or equivalent.) (Restriction: Intended for students in Science, Engineering and related disciplines, who have had differential and integral calculus) (Restriction: Not open to students who have taken or are taking MATH 356) Sample space, events, conditional probability, independence of events, Bayes' Theorem. Basic combinatorial probability, random variables, discrete and continuous univariate and multivariate distributions. Independence of random variables. Inequalities, weak law of large numbers, central limit theorem.

**MATH 324 Statistics.**

(3) (Fall and Winter) (Prerequisite: MATH 323 or equivalent) (Restriction: Not open to students who have taken or are taking MATH 357) (You may not be able to receive credit for this course and other statistic courses. Be sure to check the Course Overlap section under Faculty Degree Requirements in the Arts or Science section of the Calendar.) Sampling distributions, point and interval estimation, hypothesis testing, analysis of variance, contingency tables, nonparametric inference, regression, Bayesian inference.

**MATH 325 Honours Ordinary Differential Equations.**

(3) (Fall and Winter) ((3-0-6)) (Prerequisite: MATH 222.) (Restriction: Intended for Honours Mathematics, Physics and Engineering programs.) (Restriction: Not open to students who have taken MATH 263 (formerly MATH 261), MATH 315) First and second order equations, linear equations, series solutions, Frobenius method, introduction to numerical methods and to linear systems, Laplace transforms, applications.

**MATH 326 Nonlinear Dynamics and Chaos.**

(3) (Fall) (Prerequisites: MATH 222, MATH 223) (Restriction: Not open to students who have taken or are taking MATH 376) Linear systems of differential equations, linear stability theory. Nonlinear systems: existence and uniqueness, numerical methods, one and two dimensional flows, phase space, limit cycles, Poincare-Bendixson theorem, bifurcations, Hopf bifurcation, the Lorenz equations and chaos.



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◆ Indicates that departmental approval/permission must be obtained by a student prior to registration.

† Denotes courses not available as Education electives.

□ Denotes courses with limited enrolment.

● Denotes courses not offered by the Faculty of Arts or Faculty of Science in 2010-11.

▲ Denotes courses offered by the Faculty of Education which, if appropriate to the student's program, may be included in the academic concentration.

\* Denotes courses which, because they are scheduled around practice teaching, are open only to Bachelor of Education students.



★ **MATH 377 Honours Number Theory.**

(3) (Winter) (Prerequisite: Enrolment in Mathematics Honours program or consent of instructor) (Restriction: Not open to students who have taken or are taking MATH 346.) (Note: Additionally, a special project or projects may be assigned.) This course consists of the lectures of MATH 346, but will be assessed at the honours level.

**MATH 380 Honours Differential Geometry.**

(3) (Winter) (Prerequisites: MATH 251 or MATH 247, and MATH 248 or MATH 314) In addition to the topics of MATH 320, topics in the global theory of plane and space curves, and in the global theory of surfaces are presented. These include: total curvature and the Fary-Milnor theorem on knotted curves, abstract surfaces as 2-d manifolds, the Euler characteristic, the Gauss-Bonnet theorem for surfaces.

**MATH 381 Complex Variables and Transforms.**

(3) (Fall and Winter) ((3-1-5)) (Prerequisite: Math 264 or MATH 265) (Restriction: Open only to students in the Faculty of Engineering.) Analytic functions, Cauchy-Riemann equations, simple mappings, Cauchy's theorem, Cauchy's integral formula, Taylor and Laurent expansions, residue calculus. Properties of one and two-sided Fourier and Laplace transforms, the complex inversion integral, relation between the Fourier and Laplace transforms, application of transform techniques to the solution of differential equations. The Z-transform and applications to difference equations.

★ ● **MATH 387 Honours Numerical Analysis.**

(3) (Winter) (Prerequisites: MATH 325 or MATH 315, COMP 202 or permission of instructor.) (Corequisites: MATH 255 or MATH 243.) (Restriction: Intended primarily for Honours students.) Error analysis. Interpolation. Nonlinear equations. Numerical integration. Introduction to numerical solutions of differential equations.

**MATH 396 Undergraduate Research Project.**

(3) (Restrictions: This course cannot be taken under the S/U option. Departmental permission required. Students cannot be supervised by the same instructor for two 396 Science courses. Open to students in programs offered by the Faculty of Science only.) (Note: Enrolment may be limited. Students are advised to start the application process well before the start of the term and to plan for an alternative course in the case that no suitable project is available. Individual projects will be suggested each term which may have project-specific prerequisites. Some projects may be accessible to students in other disciplines. See <http://www.mcgill.ca/science/ours> for more information about available projects and application forms and procedures.) Independent research project with a final written report.

★ **MATH 397 Honours Matrix Numerical Analysis.**

(3) (Winter) (Prerequisites: MATH 251 or MATH 247, COMP 202 or permission of the instructor.) The course consists of the lectures of MATH 327 plus additional work involving theoretical assignments and/or a project. The final examination for this course may be different from that of MATH 327.

★ ● **MATH 407 Dynamic Programming.**

● **MATH 470D1 (1.5), MATH 470D2 (1.5) Honours Research Project.**

(Requires Departmental Approval) (Please see regulations concerning Project Courses under Faculty Degree Requirements) (Students are advised to start contacting potential project supervisors early during their U2 year.) (Prerequisite: appropriate honours courses with approval of the project supervisor) (Students must register for both MATH 470D1 and MATH 470D2.) (No credit will be given for this course unless both MATH 470D1 and MATH 470D2 are successfully completed in consecutive terms) (MATH 470D1 and MATH 470D2 together are equivalent to MATH 470) The project will contain a significant research component that requires substantial independent work consisting of a written report and oral examination or presentation.

**MATH 480 Honours Independent Study.**

(3) (Fall and Winter and Summer) (Please see regulations concerning Project Courses under Faculty Degree Requirements) (Requires approval by the chair before registration) Reading projects permitting independent study under the guidance of a staff member specializing in a subject where no appropriate course is available. Arrangements must be made with an instructor and the Chair before registration.

● **MATH 487 Honours Mathematical Programming.**

(3) (Prerequisites: MATH 248, MATH 251 and COMP 202 or COMP 250 or permission of instructor.) (Restriction: Intended primarily for honours students. Not open to students who have taken or are taking MATH 417.) (Note: Additionally, a special project or projects may be assigned.) The course consists of the lectures of MATH 417, but will be assessed at the honours level.

★ ● **MATH 488 Honours Set Theory.**

(3) (Fall) (Prerequisites: MATH 251 or MATH 255 or permission of instructor) Axioms of set theory. Operations on sets. Ordinal and cardinal numbers. Well-orderings, transfinite induction and recursion. Consequences of the axiom of choice. Boolean algebras. Cardinal arithmetic.

● **MATH 490 Honours Mathematics of Finance.**





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## **NEUR-Neurology and Neurosurgery**

Offered by: Neurology and Neurosurgery

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### **NEUR 310 Cellular Neurobiology.**

(3) (Winter) (2 lectures each week) (Prerequisite or corequisite: BIOL 200 and BIOL 201, or PHGY 209, or PHGY 210) A survey of the functional organization of nerve cells, signalling in the nervous system, and principles of neural development. Topics include cell polarity, neurotransmitters, neurotrophins, receptors and second messengers, cell lineage, guidance of axon outgrowth, and nerve regeneration. Emphasis will be placed on analysis of neurons at the molecular level.

### **NEUR 507 Topics in Radionuclide Imaging.**

**NSCI 420N1 (4.5), NSCI 420N2 (4.5) Independent Research 2.**

(Prerequisites: NSCI 200 and NSCI 201) (Restrictions: Only open to students registered in the B.Sc. Neuroscience Major. Not open to students who have taken or are taking NSCI 410.) (Students must register for both NSCI 420N1 and NSCI 420N2.) (NSCI 420N1 and NSCI 420N2 together are equivalent to NSCI 420.) (No credit will be given for this course unless both NSCI 420N1 and NSCI 420N2 are successfully completed in a twelve month period.) Independent laboratory research in neuroscience.

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**PATH-Pathology**

Offered by: Pathology

**PATH 300 Human Disease.**

(3) (Winter) (Prerequisites: BIOL 200, BIOL 201 or BIOC 212, PHGY 209. Pre-/co-requisite: PHGY 210) Provides a fundamental understanding of the diseases prevalent in North America, for upper level students in the biological sciences. Includes: general responses of cells and organ systems to injury; assessment of individual diseases by relating the causes, symptoms, diagnosis, treatment and prevention to the primary biological abnormalities in each disorder.

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**PHAR-Pharmacology and Therapeutics**

Offered by: Pharmacology and Therapeutics

**PHAR 300 Drug Action.**

(3) (Fall) (Prerequisites: BIOL 200, PHYG 209, PHYG 210 and one of BIOL 201 or ANAT/BIOC 212 or permission of instructor.) Principles of pharmacology and toxicology. Frequently encountered drugs will be used as a focus to illustrate sites and mechanisms of action, distribution, metabolism, elimination and adverse side effects.

**PHAR 301 Drugs and Disease.**

(3) (Winter) (Prerequisite: PHAR 300 or permission of instructor.) This course further explores the basic principles of pharmacology as illustrated by drugs used in the treatment of disease. Emphasis is placed on drugs used for diseases prevalent in North America.

**PHAR 303 Principles of Toxicology.**

(3) (Winter) (Prerequisites: BIOL 200, BIOL 201 or BIOC 212, PHGY 209 and PHGY 210) Fundamental mechanisms by which toxic compounds damage a biological system (organelle, cell, organ, organism, ecosystem). Detection and quantification of toxicity and risk/benefit analysis are considered. Selected agents of current risk to human health or the environment are evaluated in depth.

**PHAR 503 Drug Design and Development 1.**

(3) (Fall) (Prerequisites: PHAR 301 and PHAR 303; or permission of instructor.) Chemistry, mechanisms of action and steps in drug development.

**PHAR 504 Drug Design and Development 2.**

(3) (Winter) (Prerequisites: PHAR 503, or permission of coordinator) (Restriction: U3 and graduate students. Students can register only with permission of coordinators.) Possible untoward effects and reasons for drug (dis)approval.

**PHAR 558 Pharmacology Selected Topics.**

(3) (Prerequisite: PHAR 562 or permission of the instructor.) (Corequisite: PHAR 563 or permission of the instructor.) Changing nature of selected drug targets in light of advances in studying proteins in their native cellular milieu, in the context of intact tissues, organs and whole animals, highlighting several conceptual advances in pharmacological theory with bearing on how drug targets are viewed and characterized.

**PHAR 562 General Pharmacology 1.**

(3) (Fall) (Prerequisite: PHAR 301.) (Restriction: Open to U3 students in the minor, major or honours program in Pharmacology, or with permission of instructor.) Topics in pharmacology with an emphasis on molecular aspects and the nervous system; topics include molecular mechanisms of drug-action, cellular targets and rationale for therapeutics.

**PHAR 563 General Pharmacology 2.**

(3) (Winter) (Prerequisite: PHAR 301.) (Restriction: Open to U3 students in the minor, major or honours program in Pharmacology, or with permission of instructor.) Selected topics in pharmacology of the endocrine, metabolic, and cardiovascular systems. Additional topics include: pharmacogenetics/pharmacogenomics, chronopharmacology, molecular structure in pharmacology, epigenetic targets in cancer chemotherapy, and stem cell therapies.

**PHAR 599 Pharmacology Research Project.**

(6) (Minimum of 18 hours/week to be spent in the lab and/or library.) (Pre-/Co-requisite: PHAR 562 and PHAR 563.) (Restrictions: U3 students with permission of instructors; students should consult instructors 3 - 4 weeks before



**PHGY 210 Mammalian Physiology 2.**

(3) (Winter) (3 hours lectures weekly) (Prerequisites: BIOL 112, CHEM 110, CHEM 120, PHYS 101 or PHYS 131, and PHYS 102 or PHYS 142. Pre-/co-requisite: BIOL 200, BIOL 201, BIOC 212, CHEM 212 or equivalent.) (Restriction: Not open to students who have taken PHGY 202.) (Restriction: For students in the Faculty of Science, and other students by permission of the instructor) (Although PHGY 210 may be taken without the prior passing of PHGY 209, students should note that they may have some initial difficulties because of lack of familiarity with some basic concepts introduced in PHGY 209) Physiology of cardiovascular, respiratory, digestive, endocrine and renal systems.

**PHGY 212 Introductory Physiology Laboratory 1.**

(1) (One 3-hour lab and one 1-hour lecture every second week.) (Corequisite: PHGY 209.) (Restrictions: Required for Physiology students enrolled in PHGY 209. Open to BA &Sc. students and to others by permission of the instructor. Not open to students who have taken PHGY 212D1/D2.) (Note: For students in a Physiology program, PHGY 212 should be taken concurrently with PHGY 209.) Exercises illustrating fundamental principles in physiology: Biological Signals Acquisitions, Blood, Immunology, Neurophysiology, Neuromuscular Physiology.

**PHGY 213 Introductory Physiology Laboratory 2.**

(1) (One 3-hour lab and one 1-hour lecture every second week.) (Prerequisite: PHGY 212) (Corequisite: PHGY 210.) (Restrictions: Required for Physiology students enrolled in PHGY 210. Open to BA &Sc. students and to others by permission of the instructor. Not open to students who have taken PHGY 212D1/D2.) (Note: For students in a Physiology program, PHGY 213 should be taken concurrently with PHGY 210.) Exercises illustrating fundamental principles in physiology: Central Nervous System, Cardiovascular, Respiration, Exercise Physiology, Molecular Endocrinology.

**PHGY 311 Channels, Synapses & Hormones.**

(3) (Fall) (3 hours of lectures per week; 1-3 hours optional lab/demonstration/tutorial arranged for a maximum of 3 afternoons per term) (Prerequisite: PHGY 209 or permission of the instructor.) In-depth presentation of experimental results and hypotheses on cellular communication in the nervous system and the endocrine system.

**PHGY 312 Respiratory, Renal, & Cardiovascular Physiology.**

(3) (Winter) (3 hours of lectures per week; 1-3 hours optional lab/demonstration/tutorial arranged for a maximum of 3 Wednesday afternoons per term) (Prerequisites: PHGY 209 and PHGY 210 or equivalent, PHGY 311 or permission of the instructor) In-depth presentation of experimental results and hypotheses underlying our current understanding of topics in renal, respiratory and cardiovascular functions explored beyond the introductory level.

**PHGY 313 Blood, Gastrointestinal, & Immune Systems Physiology.**

(3) (Winter) (3 hours of lectures per week; 1-3 hours optional lab/demonstration/tutorial arranged for a maximum of 3 Wednesday afternoons per term) (Prerequisites: PHGY 209 and PHGY 210 or equivalent, PHGY 311 or permission of the instructor) In-depth presentation of experimental results and hypotheses underlying our current understanding of topics in immunology, blood and fluids, and gastrointestinal physiology.

**PHGY 314 Integrative Neuroscience.**

(3) (Fall) (3 hours of lectures per week) (Prerequisites: PHGY 209) In depth presentation of experimental results and hypotheses underlying our current understanding of how single neurons and ensembles of neurons encode sensory information, generate movement, and control cognitive functions such as

emotion, learning, and memory, during voluntary behaviours.

**PHGY 351 Research Techniques: Physiology.**

(3) (Winter) (2 hour lecture and 3 hour lab weekly) (Prerequisites: PHGY 209, PHGY 210 and PHGY 311.) (Corequisites: PHGY 312 and PHGY 313) (Restriction: Honours Physiology students) Provides an overview of common research methods in Physiology, including critical analysis and practical experience with some of the methods. Topics include research ethics of animal experimentation, data analysis, membrane biophysics, radioimmunoassay, ion sensitive dyes, immunocytochemistry, localization techniques, protein transport, cell sorting and molecular biology.

**PHGY 359D1 (0.5), PHGY 359D2 (0.5) Tutorial in Physiology.**

(Fall) (Prerequisites: PHGY 209 and PHGY 210 or equivalent.) (Corequisites: PHGY 311, PHGY 312 and PHGY 313.) (Restriction: Enrolment restricted to Honours Physiology students) (Students must register for both PHGY 359D1 and PHGY 359D2.) (No credit will be given for this course unless both PHGY 359D1 and PHGY 359D2 are successfully completed in consecutive terms) The course consists of regularly scheduled meetings between each individual student and a chosen staff member, to consider current problems in biomedical research and to develop background for a research project to be carried out in U3. Brief written summaries of each meeting are required.

**PHGY 396 Undergraduate Research Project.**

**PHGY 459D1 (3), PHGY 459D2 (3) Physiology Seminar.**  
(Fall) (2 hours seminar) (Prerequisite: permission of  
instructors) (Required course for U3 Honours students.)  
(Students must register for both PHGY 459D1 and PHGY  
459D2.) (No credit will be given for this course unless both  
PHGY 459D1 and PHGY 459D2 are successfully completed in



**PHYS 251 Honours Classical Mechanics 1.**

(3) (Fall) (3 hours lectures) (Prerequisite: CEGEP physics or PHYS 131.) (Corequisite: MATH 222) (Restriction: Not open to students taking or having taken PHYS 230.) Newton's laws, work energy, angular momentum. Harmonic oscillator, forced oscillations. Inertial forces, rotating frames. Central forces, centre of mass, planetary orbits, Kepler's laws.

**PHYS 253 Thermal Physics.**

(3) (Fall) (3 hours lectures) (Prerequisites: CEGEP physics or PHYS 131, and CEGEP chemistry or CHEM 120.) (Corequisite: MATH 222) (Restriction: Not open to students taking or having taken PHYS 232.) Energy, work, heat; first law. Temperature, entropy; second law. Absolute zero; third law. Equilibrium, equations of state, gases, liquids, solids, magnets; phase transitions.



**PHYS 534 Nanoscience and Nanotechnology.**

(3) (Fall) Topics include scanning probe microscopy, chemical self-assembly, computer modelling, and microfabrication/micromachining.

**PHYS 551 Quantum Theory.**

(3) (Fall) (3 hours lectures) (Restriction: Honours students, or permission of the instructor) General formulation, scattering theory, WKBJ approximation, time-dependent perturbation, theory and applications, angular momentum, relativistic wave equations.

**PHYS 557 Nuclear Physics.**

(3) (Fall) (3 hours lectures) (Restriction: Honours students, or permission of the instructor) General nuclear properties, nucleon-nucleon interaction and scattering theory, radioactivity, nuclear models, nuclear reactions.

**PHYS 558 Solid State Physics.**

(3) (Fall) (3 hours lectures) (Restriction: Honours students, or permission of the instructor) Properties of crystals; free electron model, band structure; metals, insulators and semi-conductors; phonons; magnetism; selected additional topics in solid-state (e.g. ferroelectrics, elementary transport theory).

**PHYS 559 Advanced Statistical Mechanics.**

(3) (Fall) (3 hours lectures) (Restriction: Honours students, or permission of the instructor) Scattering and structure factors. Review of thermodynamics and statistical mechanics; correlation functions (static); mean field theory; critical phenomena; broken symmetry; fluctuations, roughening.

**PHYS 562 Electromagnetic Theory.**

(3) (Winter) (3 hours lectures) (Restriction: Honours students, or permission of the instructor) (Prerequisites (Graduate): U1 or U2 Honours Physics or permission of instructor.) Electrostatics, dielectrics, magnetostatics, timevarying fields, relativity, radiating systems, fields of moving charges.

**PHYS 567 Particle Physics.**

(3) (Winter) (3 hours lectures) (Restriction: Honours students, or permission of the instructor) Survey of elementary particles; hadrons, leptons and hadrons' constituents (quarks). Invariance principles and conservation laws. Detectors and accelerators. Phenomenology of strong, electromagnetic and weak interactions.

**PHYS 580 Introduction to String Theory.**

(3) (Fall) (Prerequisite: Permission of instructor.) (Restriction: Honours students.) Introduction to bosonic string theory, with application to fundamental theories of particle physics. Gravity and electromagnetism in extra dimensions, dynamics of classical and quantum strings, worldsheet parametrization, conserved currents, light-cone gauge, string thermodynamics and black holes, D-branes.

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**PSYC-Psychology**

Offered by: Psychology

**PSYC 100 Introduction to Psychology.**

(3) (2 lectures; 1 conference) (Restriction: Not open to students who have passed an Introductory Psychology course in CEGEP: 350-101 or 350-102 or equivalent) Introduction to the scientific study of mind and behavior, including basic concepts and methods in psychology while also highlighting the relevance of psychology to everyday life; attachment, aggression, depression, parenting and personality change.

**PSYC 199 FYS: Mind-Body Medicine.**

(3) (Limit 25 students) (Restriction: Not open to students who have taken SSMD 199. Open only to newly admitted students in U0 or U1, who may take only one FYS. Students who register for more than one will be obliged to withdraw from all but one of them.) Health is influenced by biological, psychological and social factors. The interaction between these determinants in the onset, course and recovery from a variety of diseases (e.g. AIDS) will be highlighted. Students will select one phase of a particular illness (e.g. remission following breast cancer treatment) and explore the related biopsychosocial factors.

**PSYC 204 Introduction to Psychological Statistics.**

(3) (Restriction: Not open to students who have passed a CEGEP statistics course(s) with a minimum grade of 75%: Mathematics 201-307 or 201-337 or equivalent or the combination of Quantitative Methods 300 with Mathematics 300) (This course is a prerequisite for PSYC 305, PSYC 406, PSYC 310, PSYC 336) (You may not be able to receive credit for this course and other statistic courses. Be sure to check the Course Overlap section under Faculty Degree Requirements in the Arts or Science section of the Calendar.) The statistical analysis of research data; frequency distributions; graphic representation; measures of central tendency and variability; elementary

**PSYC 310 Human Intelligence.**

(3) (Winter) (2 lectures) (Prerequisite: PSYC 204 or any equivalent course) An introduction to the measurement, structure, development, and correlates of human intelligence; the role of environment and heredity in its formation; social, cultural, and race differences will be explored.

**PSYC 311 Human Cognition and the Brain.**

(3) (Fall) (2 lectures; 1 conference) The course is an introduction to the field studying how human cognitive processes, such as perception, attention, language, learning and memory, planning and organization, are related to brain processes. The material covered is primarily based on studies of the effects of different brain lesions on cognition and studies of brain activity in relation to cognitive processes with modern functional neuroimaging methods.

**PSYC 315 Computational Psychology.**

(3) (Fall) (Prerequisite: Permission of instructor.) (Restriction: Not open to U0 or U1 students.) Application of computational methods to the simulation of psychological phenomena. Comparison of natural and artificial intelligence. Symbolic and neural network techniques. Methods for evaluating simulations.

**●PSYC 316 Psychology of Deafness.**

(3) (Fall) (2 lectures; 1 conference) (Prerequisite: PSYC 100 or equivalent or permission of instructor) Basic introduction to the field of deafness from a psychological perspective. Topics include effect of deafness on sensory, perceptual, cognitive, intellectual and linguistic processes. Impact of deafness on children and families.

**●PSYC 317 Genes and Behaviour.**

(3) (Fall) (Pre-requisite: PSYC 211 or PSYC 308 or BIOL 306 or PHGY 314 or permission of instructor.) Focuses on current techniques employed to study which genes influence behaviour, and how they do so.

**PSYC 318 Behavioural Neuroscience 2.**

(3) (Winter) (2 lectures, 1 conference) (Prerequisite: PSYC 308 or PSYC 311 or BIOL 306 or PHGY 314) The physiological bases of motivational states, with respect to feeding, drinking, sexual behavior, drug use, and aggression. Physiological bases of learning and memory.

**●PSYC 329 Introduction to Auditory Cognition.**

(3) (3 lecture hours per week.) (Prerequisites: PSYC 212 or PSYC 213 or permission of the instructor.) Listener's response to sound. Higher-level mental principles including perception, attention, memory, motor control, and emotion. Sensation and perceptual organization of sound. Perception/production of speech, music, and other auditory events.

**●PSYC 331 Inter-Group Relations.**

(3) (Winter) (2 lectures) (Prerequisite: PSYC 215) The course focuses on the social psychology of societal groups such as racial minorities, aboriginal groups and women. The ideological biases of current theories is first established. This is followed by a review of current theories and finally current controversies are explored including new forms of racism and affirmative action.

**PSYC 332 Introduction to Personality.**

(3) (Winter) (3 lectures) (Prerequisite: PSYC 100) This course examines some of the major theories of personality, e.g., those of Freud, Rogers, and Bandura. Empirical research inspired by these theories will also be examined. Topics include the nature of human motivation, the role of the self-concept, and the consistency and stability of personality.

analysis techniques, and will have the opportunity to design and carry out their own experiments. Research topics include: visual acuity, form and motion perception, and visual search. Evaluation based on individually written reports on lab experiments.

**PSYC 380D1 (4.5), PSYC 380D2 (4.5) Honours Research Project Seminar.**

(3 hour seminar) (Restriction: For U2 honours students only. Requires departmental approval.) (Students must register for both PSYC 380D1 and PSYC 380D2.) (No credit will be given for this course unless both PSYC 380D1 and PSYC 380D2 are successfully completed in consecutive terms) First laboratory research project.

**PSYC 395 Psychology Research Project 1.**

(6) (Fall or Winter) (Prerequisites: 24 credits of the psychology program, PSYC 305 or equivalent and CGPA above 3.00.) (Restriction: Requires departmental approval.) (Restriction: Registration is by special arrangement with Psychology staff, and project proposals must be approved by the Department before registration.) (For more information see the Psychology Department website.) Supervised research project.

**PSYC 396 Undergraduate Research Project.**

(3) (Restrictions: This course cannot be taken under the S/U option. Departmental permission required. Students cannot be supervised by the same instructor for two 396 Science courses. Open to students in programs offered by the Faculty of Science only.) (Note: Enrolment may be limited. Students are advised to start the application process well before the start of the term and to plan for an alternative course in the case that no suitable project is available. Individual projects will be suggested each term which may have project-specific prerequisites. Some projects may be accessible to students in other disciplines. See <http://www.mcgill.ca/science/ours> for more information about available projects and application forms and procedures.) Independent research project with a final written report.

**PSYC 403 Modern Psychology in Historical Perspective.**

(3) (Fall) (2 lectures) A survey of the scientific and ideological influences on psychology from its philosophical beginnings through the period of the schools to its modern situation.

**PSYC 406 Psychological Tests.**

(3) (Winter) (2 lectures) (Prerequisite: PSYC 204 or equivalent) An introduction to the theory and practice of psychological measurement in health, educational, clinical and industrial/organizational settings. Attention to procedures for developing and validating tests and questionnaires. Techniques include: intelligence tests, projective tests, questionnaires, structured interviews, rating scales, and behavioural/performance tests.

**●PSYC 408 Principles of Cognitive Behaviour Therapy.**

(3) (2 lectures) (Prerequisites: PSYC 337 and PSYC 211 or permission of instructor) An introduction to the theory, research and practice of cognitive behaviour therapy. The experimental approach to understanding human behaviour is used to follow basic principles of learning and their clinical application. Certain psychiatric disorders such as alcoholism and depression are highlighted to illustrate how a behaviour therapist conceptualizes problems and formulates treatments.

**●PSYC 409 Positive Psychology.**

(3) (Prerequisites: PSYC 215 Social Psychology) (Note: Permission from instructor is required.) Didactic instruction and experiential learning in its coverage of three issues central to this field: positive emotions, positive individual traits, and positive institutions. Topics covered include sensory savoring, expressing gratitude, optimism, identifying and building strengths, kindness, and meaning.

**PSYC 410 Special Topics in Neuropsychology.**

(3) (Fall) (2 lectures) (Prerequisites: PSYC 311 or PSYC 308. Knowledge of basic neuropsychology at the level covered in PSYC 311 is assumed) Developments in cognitive neuroscience and cognitive neuropsychiatry via readings from primary sources. Topics include the neural bases of memory, emotion, social cognition and neuropsychiatric diseases. Integrating knowledge from studies in clinical populations and

functional neuroimaging studies.

**PSYC 412 Developmental Psychopathology.**

(3) (Winter) (2 lectures; 1 conference) (Corequisite: PSYC 304 or PSYC 337 or permission of instructor) Introduction to the field of behavior disorders of childhood and adolescence, including core issues, theoretical and methodological underpinnings, descriptions and discussions of many disorders, clinical and research data, and treatment approaches. Three major assumptions will be woven through the course.

**●PSYC 413 Cognitive Development.**

(3) (Fall) (3 hours) (Prerequisite: PSYC 304 or PSYC 213 or equivalent) In-depth exploration of cognitive development in infants and children including knowledge representation and processing, conceptual development, language development, and theories and principles of cognitive development.

**●PSYC 414 Social Development.**

(3) (Fall) (Prerequisites: PSYC 304 and PSYC 305) Advanced study of the development of social behaviour and social cognition in children. Topics include: socialization, attachment, aggression, exploration, role taking, communication, family and peer relations, self and person perception. The development of these social processes within the framework of three general theories of development: behaviour genetics, learning, and cognitive-developmental.

**PSYC 427 Sensorimotor Behaviour.**

(3) (Winter) (2 lectures) (Prerequisite: PSYC 308 or permission of instructor) A systematic examination of the sensorimotor system, drawing on models and data from both behavioural and physiological studies. Topics include: cortical motor areas, cerebellum, basal ganglia, spinal mechanisms, motor unit properties and force production, proprioception, muscle properties.

**PSYC 429 Health Psychology.**

(3) (Fall) (2 lectures; 1 conference) A survey of major issues in the developing field of health psychology: historical perspective; health effects of stress; pain mechanisms and management; prevention and management of chronic diseases, hypertension, coronary heart disease, cancer, and immunological disorders. Behaviour change strategies for smoking, overeating, physical inactivity, and sexual risk behaviour.

**●PSYC 436 Human Sexuality and Its Problems.**

(3) (Fall) (Prerequisite: either PSYC 337 or permission of the instructor) This course will deal with typical sexual behavior and its variations. Topics will include the history of sex research, the sexual response cycle, sexual dysfunction, gender identity, sexual orientation, etc. Current research and theory will be emphasized.

**PSYC 450D1 (4.5), PSYC 450D2 (4.5) Research Project and Seminar.**

(Prerequisites: PSYC 204, PSYC 305.) (Restriction: Requires departmental approval.) (Restriction: Only for Major or





**PSYC 499 Reading Project.**

(1) (Prerequisites: PSYC 211, 212, 214, 215 and 305.)  
(Restriction: Open only to U3 students.) Under the guidance of an instructor with the relevant expertise, the student explores the literature on a special topic.

**PSYC 501 Auditory Perception.**

(3) (2 lectures) (Prerequisite: Undergraduate courses in perception or sound or neuroscience and permission of instructor.) (Restrictions: For U3 and graduate students.) Auditory perception and its neural correlates, covering acoustics, auditory anatomy and neurobiology, and the neural correlates of perception of loudness, pitch, spatial location, frequency specificity, musical, speech sounds, and segregation of component sounds in multi-sound environments in both humans and animals.

● **PSYC 502 Psychoneuroendocrinology.**

(3) (Fall) (Prerequisite: One of PSYC 308, PSYC 311, PSYC 318, PSYC 342, or permission of the instructor.) Neuroendocrinological mechanisms of action that underlie specific behaviors and their disorders. Hormones and cognitive functioning, sexual functioning, aggression, mood and stress in humans and will focus on methods of hypothesis-testing in these areas.

● **PSYC 504 Computational Modelling, Reasoning.**

(3)

**PSYC 505 The Psychology of Pain.**

● **PSYC 537 Advanced Seminar in Psychology of Language.**

(3) (Fall) (Prerequisites: PSYC 213 and one of: PSYC 340, LING 200, or LING 201.) (Note: Prior background in the psychology of language, cognitive psychology, or linguistics is essential.) Topics may include: the neural basis of language, evolutionary approaches to language, pragmatics and figurative language processing, disordered language processing, models of spoken word recognition.

**PSYC 541 Multilevel Modelling.**

(3) (Winter) (Prerequisite: PSYC 305 or equivalent or permission of the instructor.) (Limited enrollment.) Basic concepts of multilevel linear and nonlinear models and applying these methods to empirical data. Topics include: depression, anxiety, aggression, and other behavioral and psychological phenomena.

**PSYC 545 Topics in Language Acquisition.**

(3) (Fall) Psychological mechanisms and theories of first language acquisition in infancy and early childhood. Topics such as: infant speech perception, acquisition of grammar, word learning, pidgin and Creole languages, critical and sensitive periods, genetic and evolutionary bases of language.

**PSYC 561 Methods: Developmental Psycholinguistics.**

(3) (Winter) (3 hour lectures) (Prerequisites: PSYC 340 and LING 355 or equivalent or permission of instructor.) Approaches and methods used in the development of multilingual and bilingual children and adolescents.

and to plan for an alternative course in the case that no