This publication provides guidance to prospects, applicants, students, faculty and staff.

1. McGill University reserves the right to make changes to the information contained in this online publication - including correcting errors, altering fees, schedules of admission, and credit requirements, and revising or cancelling particular courses or programs - without prior notice.

2. In the interpretation of academic regulations, the Senate is the final authority.

3. Students are responsible for informing themselves of the University's procedures, policies and regulations, and the specific requirements associated with the degree, diploma, or certificate sought.

4. All students registered at McGill University are considered to have agreed to act in accordance with the University procedures, policies and regulations.

5. Although advice is readily available on request, the responsibility of selecting the appropriate courses for graduation must ultimately rest with the student.

6. Not all courses are offered every year and changes can be made after publication. Always check the Minerva Class Schedule link at https://horizon.mcgill.ca/pban1/bwcksched.p_disp_dyn_sched for the most up-to-date information on whether a course is offered.

7. The academic publication year begins at the start of the Fall semester and extends through to the end of the Winter semester of any given year. Students who begin study at any point within this period are governed by the regulations in the publication which came into effect at the start of the Fall semester.

8. Notwithstanding any other provision of the publication, it is expressly understood by all students that McGill University accepts no responsibility to provide any course of instruction, program or class, residential or other services including the normal range of academic, residential and/or other services in circumstances of utility interruptions, fire, flood, strikes, work stoppages, labour disputes, war, insurrection, the operation of law or acts of God or any other cause (whether similar or dissimilar to those enumerated) which reasonably prevent their provision.

Note: Throughout this publication, "you" refers to students newly admitted, readmitted or returning to McGill.
Publication Information

Published by

Enrolment Services
McGill University
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1 About the Faculty

The Faculty of Education serves approximately 2,000 students enrolled in undergraduate, graduate, and professional development programs. The Faculty is organized into three departments, and has a number of research and service centres, including several of an interdisciplinary nature.

Like other faculties of education in Quebec and Canada, the Faculty has had a traditional role in the initial training of teachers and leaders in education-allied occupations. It is also concerned with constructing knowledge through research and scholarship, and with providing professional development services to the wider educational community.

In recent years, a number of links have been established with counterparts in other countries for teaching, research, and development purposes. Current active projects, some of which involve students as well as staff, include those in Japan, Indonesia, South Africa, and Mexico.

2 History

The Faculty of Education traces its beginnings back to 1857, when the McGill Normal School was established at McGill by agreement between the University and the Government of Quebec. In 1907, it was renamed the School for Teachers and was moved to Sainte-Anne-de-Bellevue, where it became part of Macdonald College. At this time also, the Macdonald Chair of Education was endowed at McGill University and a Department of Education was created in the Faculty of Arts and Science for the purpose of preparing candidates for the High School Diploma. The first graduate program was inaugurated in 1930, and in 1953, the University established the B.Ed. degree.

In 1955, the School for Teachers and the Department of Education were combined to become the Institute of Education within the Faculty of Arts and Science. To these was joined, in 1957, the McGill School of Physical Education (founded in 1912).

The Institute was reconstituted as the Faculty of Education in 1965 and the work continued on both the McGill and Macdonald campuses. The St. Joseph Teachers College and the Faculty of Education were amalgamated in 1970 and relocated in a new building on the McGill campus. In 1996, the School of Information Studies became affiliated with the Faculty, until it moved to the Faculty of Arts in 2014.

3 Faculty of Education Facilities

3.1 Education Curriculum Resources Centre

The Education Curriculum Resources Centre, located on the first floor of the Education Building, provides materials and services to support the teaching and research programs of the Faculty.

The Curriculum Resources Centre collection includes:

- elementary and secondary school textbooks;
- teachers' resource guides;
- videos;
- DVDs;
- CDs;
- puppets;
- big books;
- equipment for viewing and listening.

The Children's & Young Adult Literature Collection contains over 11,000 fiction, non-fiction, poetry, folklore, and picture books. Students can also find course reserve materials for their education classes.

Instructional workshops are offered at the beginning of each term to individual students and to classes. These provide an introduction to library resources and information skills that will help in preparing course assignments and writing research papers. They cover topics such as searching the library catalogue, finding course materials on reserve, and locating articles and other materials via databases such as ERIC, PsycINFO, Education Full Text, and others. Workshops on EndNote and other citation management programs provide help on how to easily create in-text citations, notes, and reference lists.

Liaison librarians hold regular office hours; for further details, refer to the Education Curriculum Resources Centre website listed below.

Lending Services for laptops, digital still and video cameras, digital audio recorders, and tripods are now handled by the Education Computer Lab & Audiovisual Loan Service.
Visit the McGill Library website (below) to learn more about library loans, hours, reserve readings, and links to important education sites. We look forward to seeing you in the Education Curriculum Resources Centre.


### 3.2 Education Undergraduate Society (EDUS)

The Society is the undergraduate students' voice of undergraduates within the Faculty and its primary purpose is to serve and to inform the students. It also attempts to unify students through sponsorship of activities such as:

- career placement;
- student orientation;
- participation in teachers' conventions;
- library donations; and
- the organization of an Education Career Fair.

Other activities include the assignment of lockers for students, selling merchandise in the Spirit Store, the coordination of the Graduation Ball, as well as fundraising and events throughout the academic year. Students are encouraged to participate and to make their opinions known. The Society Office is located in Room B179 of the Education Building.

Telephone: 514-398-7048  
Fax: 514-398-2476  
Email: president.edus@mail.mcgill.ca  
Website: www.edusmcgill.com

### 3.3 Education Computer Lab & Audiovisual Loan Service

#### Computer Lab

The Faculty of Education Computer Lab is located on the third floor of the Education Building (Room 328), and consists of a large microcomputer complex that houses a 35-seat PC lab with presentation equipment; a 35-seat Mac lab with presentation equipment; and a central 16-seat walk-in lab. The lab houses a colour uPrint copier that can be used for scanning as well as printing. There is a charge for printing through the uPrint service, while scanning is free. Computer Lab assistants will help you get started and answer brief questions (no consulting is done over the phone or outside of the lab).

The lab is available for courses, workshops, and individual walk-in use by students and university staff (except when reserved for classes – a class reservation schedule is posted near the entrance). To request a reservation for class lab time, please email jim.harris@mcgill.ca. Be sure to include any special software needs well in advance of reserved class time.

#### Audiovisual Equipment Loan Service

Audiovisual equipment loans are available with priority access to the Faculty of Education community. This service operates from inside the Education Computer Lab (Room 328). Students, faculty and staff may borrow:

<table>
<thead>
<tr>
<th>Available equipment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Laptops</td>
<td>Webcam/audio system conderencing kits</td>
</tr>
<tr>
<td>Data projectors</td>
<td>Portable public address system</td>
</tr>
<tr>
<td>Mac adaptors</td>
<td>Digital video cameras</td>
</tr>
<tr>
<td>PC HDMI adaptors</td>
<td>Video tripods</td>
</tr>
<tr>
<td>iPad adaptors</td>
<td>Digital still cameras</td>
</tr>
<tr>
<td>Document cameras</td>
<td>Digital audio recorders</td>
</tr>
<tr>
<td>Microphones</td>
<td>Extension cords and power bars</td>
</tr>
</tbody>
</table>

You can send in an equipment reservation request using the Reservation Request Form. Note that this form does not guarantee a reservation; please wait for email confirmation of the reservation.

For information about our hours of operation please consult www.mcgill.ca/education/technology (under “Education Computer Lab & Audiovisual Loan Service”).

**ICS McGill Central Audiovisual Equipment Loan Services**

Audiovisual equipment loan services are also available centrally through ICS Audiovisual.
### 3.4 McGill Career Planning Service (CaPS)

Refer to University Regulations and Resources > Undergraduate > Student Services > Student Services – Downtown Campus and Student Services – Macdonald Campus for further information on this service.

Career Adviser: Andrea Taylor  
Telephone: 514-398-2484  
Email: career.education@mcgill.ca  
Website: www.mcgill.ca/isa

### 3.5 McGill Journal of Education

The McGill Journal of Education/Revue des sciences de l'Éducation de McGill is an open-access, online journal that is published three times a year: Winter, Spring, and Fall. It includes work in English and French from local, national, and international contexts. The MJE publishes peer-reviewed research articles and essays, as well as non-peer-reviewed (editorial) notes from the field, discussion forums, and book reviews. It is concerned with major issues in formal, non-formal, and incidental teaching and learning from a variety of perspectives, practical and theoretical, personal and collective. Its policy is to bring new ideas and research into a context open to teacher educators and scholars, as well as to parents, teachers, popular educators, community workers, and administrators.

Editorial Collective: Dr. Anila Asghar, Dr. Aziz Choudry, Dr. Teresa Strong-Wilson  
Managing Editor: Ms. Sylvie Wald

McGill Journal of Education  
Faculty of Education  
3700 McTavish Street, Room 346  
Montreal QC H3A 1Y2  
Telephone: 514-398-4246  
Website: mje.mcgill.ca

### 3.6 A.S. Lamb Learning Centre

The A.S. Lamb Learning Centre, consisting of the computer laboratory 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 network is available for laptops equipped with a wireless card.

LAN Tech.: Mr. Sanjeev Panigrahy  
Location: McGill Sports Complex, Room 207A  
475 Pine Avenue West  
Website: www.mcgill.ca/edu-kpe/facilities/asllc

#### Hours

Monday to Friday 09:00–16:00

### 3.7 Internships & Student Affairs Office (ISA)

The Internship and Student Affairs Office (ISA) in the Faculty of Education is responsible for the planning and implementation of the practice teaching component of undergraduate (B.Ed) and graduate (MATL) Teacher Education programs, as well as career advising and undergraduate student affairs. Student Affairs includes:

- student records;  
- registration;  
- general academic information and advice on undergraduate program and degree requirements;  
- course change;  
- withdrawal;  
- supplemental and deferred exams;
• rereads;
• academic standing;
• inter-faculty transfer;
• readmission;
• study away;
• scholarships and awards;
• graduation;
• teacher certification.

At McGill, ISA works closely with students, departments, and other faculties, as well as externally in close partnership with schools, boards, and the larger community.

Office: Education Building, Room 243
Telephone: 514-398-7042 (Student Affairs); 514-398-7046 (Student Teaching Placement Coordinators)
Fax: 514-398-4679
Email: sao.education@mcgill.ca
Website: www.mcgill.ca/isa

3.8 Faculty Institutes, Offices, and Centres

3.8.1 The Institute for Human Development and Well-Being

The Institute for Human Development and Well-Being (IHDW) is a newly forming research institute led by the Faculty of Education that encourages a trans-disciplinary and multidisciplinary approach to the study of human development and well-being.

It works across three main axes:

• human development across the life span;
• the role of family, community, and schools in supporting human development and well-being;
• social policy and planning in relation to children and youth.

Director: Dr. Claudia Mitchell (James McGill Professor)
Email: claudia.mitchell@mcgill.ca
Website: www.mcgill.ca/ihdw

3.8.2 The International Centre for Youth Gambling Problems and High-Risk Behaviors

McGill University’s International Centre for Youth Gambling Problems and High-Risk Behaviors has been attempting to identify and understand the underlying determinants and critical factors related to youth gambling problems and their relationship with other adolescent addictive and high-risk behaviours. The ongoing research efforts conducted by Drs. Derevensky and Gupta, along with their graduate students, have been crucial in helping to identify the determinants placing youth at risk for gambling problems, and in the development of empirically based treatment and prevention programs. Of importance has been the Centre’s role in impacting public health and social policy in an effort to reduce and minimize the harms associated with excessive, problematic gambling.

Directors: Dr. Jeffrey Derevensky and Dr. Rina Gupta
Website: www.youthgambling.com

3.8.3 The Research Centre for Physical Activity and Health

The Research Centre for Physical Activity and Health brings together specialists from different areas of research to investigate the implications of physical activity on health and well-being. The Centre’s researchers examine physiological, neuromechanical, or behavioural aspects of physical activity and healthy living, in an attempt to bridge the gap between basic sciences (e.g., cellular physiology) and applied sciences (e.g., clinical exercise physiology) through multidisciplinary research.

Director: Dr. Russell Hepple
Website: www.mcgill.ca/path/welcome-path
4 About the Faculty of Education (Undergraduate)

4.1 Location

3700 McTavish Street
Montreal QC H3A 1Y2
Canada

Telephone: 514-398-7042
Fax: 514-398-4679
Email: info@education.mcgill.ca
Website: www.mcgill.ca/education

4.2 Department of Integrated Studies in Education

The Department of Integrated Studies in Education (DISE) 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.

The Department offers:

• Bachelor of Education Secondary English
• Bachelor of Education Secondary Mathematics
• Bachelor of Education Secondary Science & Technology
• Bachelor of Education Secondary Social Sciences
• Concurrent Bachelor of Music and Bachelor of Education in Music (Music Education)
• Concurrent Bachelor of Science and Bachelor of Education (Secondary) (New students are no longer being admitted to this program.)
• Bachelor of Education Kindergarten and Elementary Education
• Bachelor of Education Kindergarten and Elementary Education First Nations and Inuit Studies
• Bachelor of Education Kindergarten and Elementary Education Jewish Studies
• Bachelor of Education Kindergarten and Elementary Pédagogie de l’immersion française (PIF) [French Immersion]
• Bachelor of Education Teaching English as a Second Language
• Programs for First Nations and Inuit

For more information and full program details, refer to section 8.2: Integrated Studies in Education.

4.3 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 neuroscience; and the design and evaluation of learning environments and instructional practices.

The Department offers:

• Minor concentrations for undergraduate students

For more information and full program details, refer to section 8.1: Educational and Counselling Psychology.
4.4 Department of Kinesiology and Physical Education

The mission of the Department of Kinesiology and Physical Education (KPE) is to generate, advance, and disseminate knowledge about human health and physical activity, and to prepare professionals to engage in related employment.

The Department offers:

• Bachelor of Education Major in Physical and Health Education
• Bachelor of Science (Kinesiology) Major and Honours
• Minor in Kinesiology for Bachelor of Science students

For more information and full program details, refer to section 8.4: Kinesiology and Physical Education.

4.5 Administrative Officers

Dean
Dilson Rassier; B.P.E.(Fed. de Pelotas), M.Sc.(UFRGS), Ph.D.(Calg.)

Associate Deans
Anila Asghar; M.S.(Punjab), M.A.(Col.), M.Ed., Ed.D.(Harv.) (Research and Graduate Studies)
Alain Breuleux; B.Sc., M.Sc., Ph.D.(Montr.) (Administration and Infrastructure)

Unit Heads
Jeffrey L. Derevensky; B.A.(C. W. Post), M.A., Ph.D.(McG.) – Chair, Educational and Counselling Psychology
Steven Jordan; B.A.(Kent), M.Sc.(Lond.), Ph.D.(McG.) – Chair, Integrated Studies in Education
Julie Côté; B.Sc., M.Sc.(Wisc., Madison), Ph.D.(Montr.) – Chair, Kinesiology and Physical Education

Director, Internships and Student Affairs
Fiona Benson; B.A.(Ott.), B.Ed., M.Ed., Ph.D.(McG.)

Internships and Student Affairs Officer
Vanessa Smith

Senior Adviser, Finance and Resource Planning
Daniela Frischer

Faculty Administrator
Allyson Noftall

Human Resources Adviser
Simona Lupu

Building Director
Vanessa Bridgman

Communications Associate
Stephen Lalla

Development Officer
Melissa Margles
Overview of Faculty Programs

The Faculty of Education offers three different kinds of programs.

Undergraduate Programs: The Faculty offers programs leading to the Bachelor of Education (B.Ed.) degree for those wishing to become teachers, and a Bachelor of Science (B.Sc.) – Kinesiology degree.

Programs of Professional Development: For qualified teachers wishing to enhance their knowledge and skills, the Faculty offers programs of professional development leading to specialized certificates and diplomas. Most courses that are required to complete these programs are offered in the evenings and in the summer.

Graduate Programs: The Faculty offers graduate programs for those already holding a university degree who wish to pursue advanced study and research leading to master’s and doctoral degrees in various fields of education and psychology. A new Master of Arts in Teaching and Learning, which leads to teacher certification, is also offered; more information is available at www.mcgill.ca/dise/grad.

Undergraduate programs of initial teacher education are described in this publication; programs of professional development are described in the most current School of Continuing Studies eCalendar publication, and graduate programs are described in the most current Graduate and Postdoctoral Studies eCalendar publication, both available at www.mcgill.ca/study.

Undergraduate Education Programs

The Faculty of Education offers the following undergraduate programs. Details of each program may be found in this publication under the headings of the appropriate department.

All Bachelor of Education programs have been accredited by the Comité d’agrément des programmes de formation à l’enseignement (CAPFE).

The credit weights given are for students who have completed a Quebec CEGEP degree, or have been granted 30 credits of Advanced Standing. 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-credit program) for a total of 150 credits.

Undergraduate Education Programs Leading to Certification

section 8.2.4.1: Bachelor of Education: Secondary Program (120 credits), offered by the Department of Integrated Studies in Education.

section 8.2.4.4: Bachelor of Education (Kindergarten and Elementary) (120 credits), offered by the Department of Integrated Studies in Education.

section 8.2.21: Bachelor of Education (B.Ed.) - Kindergarten and Elementary Education - First Nations and Inuit Studies (120 credits), offered by the Department of Integrated Studies in Education.

section 8.2.22.1: B.Ed. Kindergarten and Elementary Program (Jewish Studies Option), offered by the Department of Integrated Studies in Education.

section 8.2.23: Bachelor of Education (B.Ed.) - Kindergarten and Elementary Pédagogie de l’Immersion Française (120 credits), offered by the Department of Integrated Studies in Education.

section 8.2.4.5: Bachelor of Education in Teaching English as a Second Language (120 credits), offered by the Department of Integrated Studies in Education.

section 8.2.25: Bachelor of Education (B.Ed.) - Teaching English as a Second Language - TESL Elementary and Secondary:Teaching Greek Language & Culture (120 credits), offered by the Department of Integrated Studies in Education.

section 8.4.4: Bachelor of Education (B.Ed.) - Physical and Health Education (120 credits), offered by the Department of Kinesiology and Physical Education.

section 8.2.4.2: Concurrent Bachelor of Music (Music Education)/Bachelor of Education in Music program (137 credits), offered jointly by the Department of Integrated Studies in Education and the Schulich School of Music.

See also: Concurrent Bachelor of Music (B.Mus.) - Major Music Education and Bachelor of Education (B.Ed.) - Music Elementary and Secondary (137 credits) under Schulich School of Music.

section 8.2.4.3: Concurrent Bachelor of Science/Bachelor of Education (Secondary) (135 credits), offered jointly by the Department of Integrated Studies in Education and the Faculty of Science.

Note: The Concurrent B.Sc. and B.Ed. program is no longer accepting new students as of Fall 2012.

A student who successfully completes any of the above programs, (and meets other requirements set out by the Ministère de l’Éducation, du Loisir et du Sport (MELS)) is recommended for certification as a teacher in the province of Quebec; see section 5.1.3: Quebec Teacher Certification.
Other Undergraduate Education Programs

section 8.4.5: Bachelor of Science (Kinesiology) (B.Sc.(Kinesiology)) - Kinesiology (90 credits), 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.

5.1.1 General Admission Requirements

For information about admission requirements to the B.Ed., B.Sc.(Kinesiology), or Concurrent B.Mus. and B.Ed. programs, refer to the Undergraduate Admissions Guide, found at www.mcgill.ca/applying.

- It is recommended, but not required, that applicants to the B.Ed. – Secondary Science and Technology meet the same requirements as for the B.Sc. (Kinesiology), and that B.Ed. – Secondary Mathematics applicants have completed math courses equivalent to linear algebra and vector geometry, as well as integral and differential calculus. It is also recommended that applicants to the B.Ed. – Secondary Science & Technology, B.Ed. – Secondary Mathematics, and B.Ed. – Physical & Health Education programs have appropriate background in 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.
- Specific prerequisite courses are required for the B.Sc.(Kinesiology) program, described in the Undergraduate Admissions Guide.
- Applicants to the Concurrent B.Mus. and B.Ed. must apply through the Schulich School of Music.

5.1.1.1 Letter of Intent Requirement for B.Ed. Kindergarten/Elementary, Secondary, TESL, and Music Programs

Applicants to all Bachelor of Education programs, except Physical Education, are required to submit a letter of intent. This document is mandatory and must follow the guidelines indicated on the Faculty of Education’s website at www.mcgill.ca/dise/files/dise/2017_letter_of_intent_instructions_dise_bed_admission-en-fr_final.pdf. This document must be provided by the supporting document submission deadline as indicated in the Admissions Guide; otherwise, the application will be cancelled.

Note: Special, Visiting, and Exchange applicants are exempted from this requirement.

For information about interfaculty transfers or readmission, see University Regulations and Resources > Undergraduate > Registration > : Interfaculty Transfer or > Readmission, as well as information posted on the Internships and Student Affairs Office website: www.mcgill.ca/ssa/faculty-advising.

5.1.1.2 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.

5.1.2 Credit Requirements

The Bachelor of Education (B.Ed.) 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-credit program) for a total of 150 credits. The Bachelor of Science (B.Sc.) – Kinesiology is a 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.

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 coursework. 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 have been substantial content changes, nor in any pedagogy courses specific to the Quebec K-11 curriculum. Courses more than five (5) years old in other subject areas may be considered on an individual subject basis by the Program Director. For more details, see the Undergraduate Admissions Guide, found at www.mcgill.ca/applying.

5.1.3 Quebec Teacher Certification

Teacher Certification in Quebec is the responsibility of the Quebec Ministry of Education. Students who complete requirements for the Bachelor of Education degree and who meet the Ministry requirements (specified below) are recommended by the University for certification.

Language Proficiency
Fluency (oral and written) in the language of instruction is a requirement for all those seeking certification.

Confidential declaration concerning judicial record

In June 2005, the National Assembly of Quebec adopted an Act amending the Education Act and the Act respective of private education. The amendments concern the verification of judicial antecedents of persons holding or applying for a permit to teach in the youth, adult, and vocational sectors. Anyone seeking teacher certification in the Province of Quebec is required to submit a confidential declaration concerning their judicial record to the Minister of Education. This document is available on the Ministry website at www.education.gouv.qc.ca/fileadmin/site_web/documents/reseau/formation_titularisation/declaration_antecedents_judiciaires_EN.PDF.

Teacher Certification

All graduates of the Bachelor of Education Teacher Education programs who are Canadian citizens or permanent residents may apply for a permanent Teaching Diploma (Brevet) immediately upon graduation. International students may apply for a Temporary Permit (Permis d'enseigner).

Holders of a Quebec Teaching Diploma or Temporary Permit wishing to teach in another province or country must apply directly to the Teacher Certification Agency in the relevant province or country. It is recommended that applicants intending to teach outside of Quebec obtain information beforehand concerning the requirements for certification.

Teachers from other provinces or countries who wish to teach in Quebec must apply to the Ministry of Education. Consult the Ministry's guides and forms, available at www.education.gouv.qc.ca/en/teachers/teaching-in-quebec/teaching-authorizations.

5.1.3.1 International Students

In addition to the CAQ and Study Permit, international students in Bachelor of Education programs must hold a valid "Internship/Co-op Work Permit" issued by Citizenship and Immigration Canada as a requirement for the mandatory Field Experiences. Consult International Student Services for more information: www.mcgill.ca/internationalstudents/work/work-permits/co-opinternship-work-permit.

International students who are applying for a temporary Quebec Teaching permit as described above must hold a different type of temporary work permit; most commonly the "Post-Graduation Work Permit". For more information, see www.mcgill.ca/internationalstudents/work/work-permits/post-graduation-work-permit.

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.

5.2.1 Department of Educational and Counselling Psychology

Programs Offered

- Certificate in Inclusive Education
- Diploma in Human Relations and Family Life Education
- Graduate Certificate in Counselling Applied to Teaching

Further information is available from:

Department of Educational and Counselling Psychology
Education Building, Room 614
Telephone: 514-398-4242
Fax: 514-398-6968
Email: Prospective students: admissions.ecp@mcgill.ca; Current students: ecpundergrad.education@mcgill.ca
Website: www.mcgill.ca/edu-ecp

5.2.2 Department of Integrated Studies in Education

The Office of First Nations and Inuit Education (OFNIE): 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, OFNIE delivers field-based teacher education programs leading to initial teacher certification and to the Bachelor of Education for Certified Teachers or the Bachelor of Education Kindergarten/Elementary First Nations and Inuit degree. OFNIE also works with departments to meet other educational needs of Indigenous peoples.

Director of Programs in First Nations and Inuit Education
Professor James Howden
Courses offered through the School of Continuing Studies 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 the School of Continuing Studies and Summer Studies. For courses offered, please check Minerva.

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:

Office of First Nations and Inuit Education (OFNIE)
3700 McTavish Street, Room 244
Montreal QC H3A 1Y2
Telephone: 514-398-4527
Fax: 514-398-4679
Website: www.mcgill.ca/dise/fnie

Bachelor of Education – Kindergarten and Elementary First Nations and Inuit Studies Option

Detailed information about this program may be found at section 8.2.21: 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 8.3: Programs for First Nations and Inuit

Bachelor of Education for Certified Teachers Elementary Education
Certificate in Education for First Nations and Inuit
Certificate in First Nations and Inuit Student Personnel Services (This program is offered by the Department of Educational and Counselling Psychology through the Office of First Nations and Inuit Education. Restrictions apply to enrolment.)
Certificate in Middle School Education in Indigenous Communities
Certificate in First Nations and Inuit Educational Leadership
Certificate in Indigenous Language and Literacy Education

Certificate in Inclusive Education

Detailed information about this program may be found at: Certificate (Cert.) Inclusive Education (30 credits) (This program is offered by the School of Continuing Studies and the Department of Educational and Counselling Psychology through the Office of First Nations and Inuit Education. Restrictions apply to enrolment.)

Faculty Regulations for Undergraduate Programs

Please consult University Regulations and Resources > Undergraduate for regulations and procedures regarding registration, fees, course load, course change (add/drop), withdrawal, verification, examinations, inter-university transfer, and graduation. In addition, the following section provides regulations specific to Faculty of Education students.

Note: Each student in the Faculty of Education must be aware of and comply with the Faculty regulations as stated in this publication. While departmental and Faculty advisers and staff are always available to give advice and guidance, the ultimate responsibility—for complete and correct course selection and registration; for compliance with, and completion of, program and degree requirements; for the observance of regulations and deadlines; and for academic records—rests with the student. It is the student’s responsibility to seek guidance. Misunderstanding will not be accepted as cause for dispensation from any regulation, deadline, program, or degree requirement.
6.1 Advising

Refer to University Regulations and Resources > Undergraduate > Undergraduate Advising and the Internships and Student Affairs website for further information. Assistance is also available by emailing sao.education@mcgill.ca.

All newly admitted students are required to consult with an academic adviser prior to the start of the Fall term. For a detailed description of advising and registration procedures, students should refer to Welcome to McGill at www.mcgill.ca/newstudents. Additional advising material is also available on the Internships and Student Affairs website, www.mcgill.ca/isa/faculty-advising/orientation.

Academic advising for all returning students takes place in March for the upcoming academic year. Links to departmental (program) advising websites and detailed information on registration and important Faculty of Education policies are posted on the Internships and Student Affairs website: www.mcgill.ca/isa/faculty-advising. Students entering their graduating year are encouraged to meet with their departmental (program) adviser during this Advising period.

A list of courses for Freshman (Year 0) students is available for each program at section 5.1: Undergraduate Education Programs.

6.2 Code of Professional Conduct (Faculty Regulations for Undergraduate Programs)

Faculty of Education programs have professional components and field placements. In all aspects of any program, on and off campus, students are expected to demonstrate ethical, responsible, and professional behaviour in the performance of their duties, to conduct themselves in accordance with the law (e.g., Youth Protection), and to meet the expectations of schools, boards, and other host institutions receiving them for field placements. This applies to all aspects 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.

6.3 English Language Requirement

The Quebec Ministry of Education requires that all students in teacher education programs demonstrate their proficiency in the language of instruction. To fulfil this obligation, B.Ed. 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 (CEETC). McGill assists with the administration and scheduling of the examination.

To write this examination, students must:

1. register on Minerva for a section of EDEC 215;
2. register with the CEETC (www.ceetc.ca);
3. pay a fee to the CEETC prior to writing the test.

Students who do not pass the examination the first time are expected to take EDEC 202 in the Winter term of their first year. After successful completion of EDEC 202, students are required to take the EETC again. A fee is charged each time the examination is written. Students who do not pass the examination on their fourth attempt must request permission from the Director of Internships and Student Affairs to write the examination again.

Note: This requirement does not apply to students in Certificate in Education for First Nations and Inuit programs.

6.4 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 be required to withdraw from the program.
6.5 Course and Program Regulations

6.5.1 Course Load

Undergraduate Education programs can normally be followed only on a full-time basis. Students must take a minimum of twelve (12) credits per term unless the Director of Internships and 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 Director of Internships and 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.

6.5.2 Time Limit and Credits for Completion of Degrees

Students are expected to complete their program no more than:

- five (5) years after their initial registration and within 150 credits for the B.Ed. degree;
- four (4) years after their initial registration and within 120 credits 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 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 Director of Internships and Student Affairs. Students who wish to exceed the specified minimum number of credits required for their degree must also seek permission of the Director of Internships and Student Affairs. If permission is granted, credits over the 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.

6.5.3 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 level of Field Experience places a student in Unsatisfactory Standing, requiring withdrawal from the program. Further details on requirements for Field Experience are listed in Faculty of Education > Undergraduate > section 7: Student Teaching/Field Experience.

6.5.4 Electives

Any courses taught at McGill University may be used towards elective credits, with the following exceptions:

- School of Continuing Studies courses with a teaching unit that starts with C are not for credit (except for CHEM courses, and courses offered by the McGill Writing Centre).
- Online Education: Refer to the section 6.5.7: Online Courses section below.

6.5.5 Courses Taken as Transfer Credit

Students wishing to study away at a university outside of Quebec must obtain approval from their academic adviser and the Internships and Student Affairs Office prior to taking a transfer course. Students will only be permitted to take courses required to complete their program. Students are not permitted to take transfer courses during their graduating term. Please refer to University Regulations and Resources > Undergraduate > Student Records > : Transfer Credits for further information.

6.5.6 Inter-University Transfer Credit

Students may, with the permission of their academic adviser, register at any university in the province of Quebec for three (3) or, exceptionally, six (6) credits per term in addition to their registration at McGill. Students will only be permitted to take courses required to complete their program. Students are not permitted to take transfer courses during their graduating term. Please refer to University Regulations and Resources > Undergraduate > Registration > : Quebec Inter-University Transfer Agreement for further information.
6.5.7 **Online Courses**

A maximum of 18 credits of courses taught as online courses may be used toward the B.Ed. or B.Sc.(Kinesiology) degree at McGill. Requests to take online courses at another university must be assessed for equivalency and approved by an academic adviser and the Internships and Student Affairs Office. Please refer to section 6.5.5: Courses Taken as Transfer Credit above.

6.5.8 **Courses Taken under Satisfactory/Unsatisfactory Option**

Required or complementary courses, including subject area courses for B.Ed. students, cannot be taken under this option. Please consult University Regulations and Resources > Undergraduate > Registration > : Courses Taken under the Satisfactory/Unsatisfactory (S/U) Option.

6.5.9 **Course Equivalencies and Overlap**

Students will not receive additional credit toward their degree for any course that is considered equivalent or that overlaps in content with a course for which they have already received credit at McGill, or any other institution. It is the student's responsibility to be aware of exclusion clauses specified in the course description in this publication and Minerva. Students should also refer to the following website for specific information about Advanced Standing credits and McGill course exemptions: www.mcgill.ca/students/courses/plan/transfer, as well as the following website for Faculty-specific information: www.mcgill.ca/isa.

6.5.10 **Dress Regulations**

All students enrolled in teacher certification programs are advised that school boards and individual schools may have regulations concerning acceptable attire. Students must adhere to any such regulations.

Students in Kinesiology and Physical Education programs are required to wear appropriate clothing for activity courses as approved by the instructor(s). Students may also be responsible for providing some items of personal equipment.

6.6 **Registration**

All students register by Minerva, McGill’s web-based registration system. For detailed information about registration, refer to University Regulations and Resources > Undergraduate > Registration; Welcome to McGill at www.mcgill.ca/newstudents; the Internships and Student Affairs website, www.mcgill.ca/isa; and to the Student Records website, www.mcgill.ca/students/records.

Students who fall into Unsatisfactory Standing at the end of the academic year will have their registration cancelled and may not re-register in the Faculty. Students who can provide proof of extenuating circumstances may appeal to the Director of Internships and Student Affairs for readmission. Please refer to University Regulations and Resources > Undergraduate > : Readmission and to www.mcgill.ca/isa for Faculty-specific information.

Students who have an outstanding fee balance from a previous term or outstanding fines will not be permitted to register. Students with financial problems should consult the Student Aid Office, Brown Student Services Building.

Students who decide not to return to McGill must withdraw from all of their courses on Minerva or inform the Internships and Student Affairs Office in writing. For further information, refer to University Regulations and Resources > Undergraduate > : Course Withdrawal and : University Withdrawal.

6.6.1 **Course Registration**

Students in Faculty of Education programs should register for the courses as outlined in the individual program overviews and advising material available on the Internships and Student Affairs Office website at www.mcgill.ca/isa for new and current students. For more information on registration, see University Regulations and Resources > Undergraduate > : Registration.

Students in the B.Ed. programs who are required to be registered for Field Experience should consult section 7: Student Teaching/Field Experience for more information.

Some courses may require special permission. Students should consult the eCalendar 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 that must be completed prior to course registration. Permission to waive a prerequisite requirement must be given in writing by an academic adviser.

6.6.2 **Withdrawals**

There are three course withdrawal periods, published on the University website, www.mcgill.ca/importantdates, and in University Regulations and Resources > Undergraduate > : Course Withdrawal. Students may, under exceptional circumstances, be granted permission to withdraw after the published deadlines. Such students should contact the Internships and Student Affairs Office for further information.

Students withdrawing from a Field Experience should refer to section 7: Student Teaching/Field Experience.
6.7 Attendance

The class attendance necessary to satisfy course requirements varies from course to course. All students are expected to apprise themselves of and 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 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 student's responsibility to consult the Class Schedule on Minerva. In the case of a conflict with a final exam, students will be excused from the Field Experience or professional seminar on the exam date.

6.8 Grading

During the first week of lectures, each instructor will provide students with a course outline that should include a description of the means of evaluation to be used in the course.

For further information on Grading, see University Regulations and Resources > Undergraduate > Student Records > : Grading and Grade Point Averages (GPA).

6.9 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 Internships and Student Affairs Office are as follows:

- April 30 for Fall term courses;
- July 30 for Winter term courses;
- November 30 for Summer courses.

It is important to note that instructors may impose earlier deadlines than those listed. Please refer to University Regulations and Resources > Undergraduate > Student Records > : Incomplete Courses for more information.

6.10 Examinations

Students should see University Regulations and Resources > Undergraduate > : Examinations: General Information for more information about final examinations and deferred examinations. The exam schedules are posted at www.mcgill.ca/students/exams, 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 make travel arrangements to leave Montreal prior to the scheduled end of any examination period.

6.10.1 Supplemental Examinations

Students who wish to write a supplemental examination for a course in which a supplemental examination is available must apply on Minerva within the published deadline. Please refer to www.mcgill.ca/students/exams for important information.

Students must be in Satisfactory or Probationary Standing and have received a final grade of D, J, F, or U in the course.

6.10.2 Reassessment and Rereads

In accordance with the Charter of Student Rights, and subject to the conditions stated therein, students have the right to consult any written submission for which they have received a mark and the right to discuss this submission with the examiner (see University Regulations and Resources > Undergraduate > Examinations: General Information > Final Examinations > : Final Examinations: Reassessments and Rereads).

The Faculty recognizes two types of reassessments or rereads:

1. Reassessment of coursework (term papers, mid-terms, assignments, quizzes, etc.)
2. Reread of a final exam

6.10.3 Reassessment of Course Work

Reassessment of course work is administered by the course instructor or the offering department. Requests, made by students, must be made within 10 working days of the date of return of the graded materials. The reviewer will assess the fairness of the original grade rather than remark the assignment as he or she would have graded it. Reassessments should normally be completed within 20 working days of the request. Grades may be lowered or raised, or they may remain the same, as a result of the reassessment. The grade obtained on the reassessment takes precedence over the original grade.

6.10.4 Rereads of Final Exams or Final Term Papers or Projects

These rereads are administered by the Internships and Student Affairs Office, but conducted by the units involved. Students must apply in writing to the Internships and Student Affairs Office by:

- March 31 for courses in the Fall term
- June 30 for courses in the Winter term
- September 30 for courses in the Summer term

These deadlines are strictly enforced and no requests will be accepted past them. Students are assessed a fee for such rereads; for fee amount and details, please refer to the Student Accounts website. It is strongly recommended, but not required, that students consult with the instructor of the course before requesting an official reread. The reviewer will assess the fairness of the original grade rather than remark the assignment as he or she would have graded it. Grades may be lowered or raised, or they may remain the same, as a result of the reread. The grade obtained on the reread takes precedence over the original grade.

Reassessments and rereads in courses not in the Faculty of Education are subject to the deadlines, rules, and regulations of the particular faculty.

6.11 Academic Standing

Academic Standing is based primarily on students’ Cumulative Grade Point Average (CGPA), but may also be affected by their Term Grade Point Average (TGPA). For students in the B.Ed. programs, it is also based on their performance in the Field Experience courses. Academic Standing, which is assessed after the end of term, determines if students will be allowed to continue their studies in the next term and if any conditions will be attached to their registration.

Decisions about Academic Standing in the Fall term are based only on grades that are available in January. Grades for courses in which students have deferred examinations and Fall term grades for courses that span the Fall and Winter terms do not affect Academic Standing for the Fall term, even though they will ultimately affect students’ Fall TGPA. Therefore, Academic Standing for the Fall term is designated as “Interim” and should be interpreted as advisory. **Interim Standing decisions are mentioned below only if the rules for them differ from those for regular Standing decisions.** Students who do not receive a Pass grade for a Fall term EDFE (Field Experience course) are placed in Unsatisfactory Standing. Permission may be granted to allow them to continue taking courses during the Winter term only.

6.11.1 Satisfactory/Interim Satisfactory Standing

Students in Interim Satisfactory or Satisfactory Standing:

- may continue in their program;
- have a CGPA of 2.00 or greater.

6.11.2 Probationary/Interim Probationary Standing

6.11.2.1 Interim Probationary Standing at the end of the Fall term

Students in Interim Probationary Standing at the end of the Fall term:

- may continue in their program;
- should evaluate their course load and reduce it;
- should consult with their program adviser before the withdrawal deadlines;
- are permitted to proceed with the next scheduled Field Experience course, i.e., Winter or Spring, for First- or Second-Year Field Experiences only.

6.11.2.2 Probationary Standing at the end of the Winter term

Students in Probationary Standing at the end of the Winter term:

- may continue in their program;
must carry a reduced load (maximum of 12 credits per term);
are not permitted to take student teaching/Field Experience courses of any level during the next academic year;
must raise their TGPA and CGPA to return to Satisfactory;
should see their departmental adviser to discuss their course selection.

6.11.2.3 Students will be placed in Probationary Standing

- if their CGPA falls between 1.50 and 1.99, and if they were previously in Satisfactory Standing;
- if they receive a grade of D for a Field Experience course of any level and were previously in Satisfactory Standing;
- if their CGPA falls between 1.50 and 1.99 and their TGPA in Fall or Winter is 2.50 or higher, and if they were previously in Probationary or Interim Unsatisfactory Standing;
- if their CGPA is between 1.50 and 1.99 and their TGPA is 2.50 or higher, they were previously in Unsatisfactory Readmitted Standing, and have satisfied the relevant conditions specified in their letter of readmission.

6.11.3 Unsatisfactory/Interim Unsatisfactory Standing

6.11.3.1 Interim Unsatisfactory standing at the end of the Fall term

Students in Interim Unsatisfactory standing at the end of the Fall term:

- may continue in their program;
- should evaluate their course load and reduce it as appropriate;
- should consult a departmental adviser, before the withdrawal deadlines, about their course selection for the Winter term;
- will not be permitted to proceed with the next normally scheduled Field Experience.

6.11.3.2 Unsatisfactory Standing at the end of the Winter term

Students in Unsatisfactory Standing at the end of the Winter term:

- have failed to meet the minimum standards set by the Faculty;
- may not continue in their program.

6.11.3.3 Readmitted Unsatisfactory Standing

Students who were previously in Unsatisfactory Standing and who were readmitted to the Faculty by the Director, Internships and Student Affairs or the Student Affairs Committee will have their standing changed to Readmitted Unsatisfactory Standing. Their course load is specified at the time of readmission, as are the conditions they must meet to be allowed to continue in their program. They should see their departmental adviser to discuss their course selection.

6.11.3.4 Students will be placed in Unsatisfactory Standing (Winter or Summer term) or Interim Unsatisfactory Standing (Fall term)

- if their CGPA falls or remains below 1.50;
- if their TGPA falls below 2.50 and their CGPA is below 2.00 and they were previously in Probationary, Unsatisfactory Readmitted, or Interim Unsatisfactory Standing;
- if they receive a failure (F, J, KF, WF) in a student teaching/Field Experience course of any level;
- if they were previously in Unsatisfactory Standing and were readmitted to the Faculty by the Director, Internships and Student Affairs or the Student Affairs Committee and have not at least satisfied the conditions to attain Probationary Standing that were specified in the letter of readmission.

Note: Students in either the Concurrent B.Sc. and B.Ed. or the B.Mus. and B.Ed. program who receive an F or J in any Education Field Experience course are placed in Unsatisfactory Standing. Although they may complete their term, they are required to withdraw from the Concurrent program. They may, however, contact the Faculties of Science or Music regarding application to a Bachelor of Science or a Bachelor of Music degree.

6.11.3.5 Readmission

Students should apply on Minerva by July 1 for readmission to the Fall term or by November 15 for the Winter term. Appeals for readmission by students in Unsatisfactory Standing should be addressed to the Director, Internships and Student Affairs. Readmission will be considered only when proof of extenuating circumstances that affected academic performance can be provided (e.g., medical or other documentation). Additional conditions may apply.

Students in Unsatisfactory Standing for the second time must withdraw permanently. Students who were placed in Unsatisfactory Standing due to a failure in student teaching/Field Experience cannot apply for readmission for at least one full year and are advised to apply for Fall readmission by April 15. Appeals for readmission due to failure in a field experience are heard by the Faculty of Education Student Affairs Committee. Please refer to the Internships and Student Affairs Office website for further information: www.mcgill.ca/isa.
6.11.3.6 Incomplete Standings

- Must clear Ks, Ls, or Supplementals
- To Be Determined
- Incomplete

Students with Incomplete Standings in the Winter or Summer term may register for the Fall term, but their Standing must be resolved by the end of the Course Change period for that term. Students whose Incomplete Standing changes to Satisfactory, Probationary, or Interim Unsatisfactory Standing may continue in the program. Students whose Standing changes to Unsatisfactory may not continue in their program.

Students whose Standing changes to Unsatisfactory and who wish to ask for permission to continue in their program must make a request to the Director, Internships and Student Affairs as soon as they are placed in Unsatisfactory Standing. Readmission will be considered only when proof of extenuating circumstances that affected academic performance can be provided (e.g., medical or other documentation). Additional conditions may apply.

Students whose Standing is still Incomplete by the end of the Course Change period should immediately consult with the Internships and Student Affairs Office.

6.12 Graduation Requirements

To be eligible for a B.Ed. or the B.Sc.(Kinesiology) degree, students must fulfill 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 toward the fulfillment 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 program are allowed a maximum of 12 years to complete the requirements for the degree.

It is the student’s responsibility to ensure that all Faculty requirements are met before graduation.

Early in their graduating year, all students should check with their adviser to make sure that they will meet all program requirements in time for graduation. It is essential that students in their final year indicate the expected date of graduation by applying for graduation on Minerva; see University Regulations and Resources > Undergraduate > Graduation for more information. During the graduation approval process, students can query their graduation record on Minerva to verify that the Faculty has approved their graduation. When a final-year student changes the expected date of graduation, the student must notify the Internships and Student Affairs Office immediately. It is also the student’s responsibility to complete the required forms for teacher certification, and to check that his/her graduation has been approved. Further information is available on the Internships and Student Affairs Office website: www.mcgill.ca/isa.

Students are not permitted to take courses outside McGill University during the last term prior to graduation. Students who fail to graduate as expected and who do not re-register must apply to the Director of Internships and Student Affairs to graduate. Application to graduate must be made sufficiently in advance of the expected graduation date to allow the Faculty to verify the student’s record.

Information pertaining to the convocation ceremonies can be obtained on the McGill website: www.mcgill.ca/students/graduation/convocation.

6.13 Undergraduate Program Awards

6.13.1 Dean’s Honour List Designation for Graduating Students

The designation Dean's Honour List may be awarded to graduating students under the following conditions:

- Students must be among the top 10% of the Faculty's graduating students.
- Students must have completed a minimum of 60 McGill credits to be considered.
- The designation is based on the cumulative academic record (CGPA).

6.13.2 Dean’s Honour List Designation for In-course Students

The designation Dean's Honour List may be awarded to in-course students under the following conditions:

- Students must be among the top 10% of the Faculty's students.
- Students must have completed at least 27 graded credits during the academic year.
- The designation is based on the sessional (Fall and Winter) GPA.
6.13.3 Scholarships and Awards

Various scholarships and awards are open to both graduating and in-course students. For more information, consult the Scholarships and Student Aid website at www.mcgill.ca/studentaid/scholarships-aid.

7 Student Teaching/Field Experience

The Internships and Student Affairs Office (ISA), www.mcgill.ca/isa, is responsible for arranging the placement and evaluation of all student teachers in supervised Field Experiences.

7.1 About Field Experiences

Field Experiences:

- are required courses (with the subject code EDFE) for all students in B.Ed. programs from first through fourth year;
- are the sole responsibility of the Faculty of Education and are organized by the Internships and Student Affairs Office. Under no circumstances should students make their own placement arrangements;
- must be taken in the required sequence;
- require that newly admitted and returning students follow registration procedures (see Faculty of Education > Undergraduate > Faculty Regulations for Undergraduate Programs > section 6.6: Registration) or risk not being placed in a host school;
- 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 ISA 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;
- may begin before the first day of lectures or end after the last day of lectures;
- may continue during the University-scheduled Study Break in the Winter term;
- may continue through May into the Summer term (refer to the ISA website or Minerva for exact dates).

7.2 Registration for the Student Teaching/Field Experience

7.2.1 Newly Admitted Students

Newly admitted students:

- in B.Ed. K/Elementary, B.Ed. TESL, B.Ed. Secondary programs must be registered for Field Experience 1 by the end of August (see www.mcgill.ca/importantdates for deadline);
- in B.Ed. Secondary Science and Math programs should consult an adviser during the August advising sessions prior to registering for Field Experience courses; Field Experience 1 is offered in the Summer term for these B.Ed Secondary subjects only;
- in B.Ed. Music, and B.Ed. Physical and Health Education programs must register in February for Field Experience 1 (Summer term);
- who are registered for a Field Experience will receive instructions for accessing the online Student Teaching Placement Form at their official @mail.mcgill.ca email address. Forms must be submitted by the date indicated in the email.

7.2.2 Returning Students

Returning students:

- must register for Field Experience 3 on Minerva by mid-April of the preceding academic year (see www.mcgill.ca/importantdates for deadline). Field Experience 3 begins in late August before the start of lectures. (See Minerva or ISA website for details.)
- must register for Field Experience 4 on Minerva by the beginning of October (see www.mcgill.ca/importantdates for deadline);
- who are registered for a Field Experience will receive instructions for accessing the online Student Teaching Placement Form at their official @mail.mcgill.ca email address. Forms must be submitted by the date indicated in the email;
- must be in Satisfactory Standing and have satisfied all prerequisite and corequisite course requirements (refer to www.mcgill.ca/isa/student-teaching). B.Ed. Secondary program students must have successfully completed 24 credits in their official subject area prior to Field Experience 3. All B.Ed. students must successfully pass the English Exam for Teacher Certification (EETC; EDEC 215) prior to Field Experience 3. Minerva does not necessarily
prevent students from registering for courses that they should not take. It is the student's responsibility to be aware of prerequisites, corequisites, restrictions, and Faculty regulations that apply to the courses in which they register. Students should consult an academic adviser for assistance. Students missing any of these requirements will be removed from their field placement. (See section 7.4.1: Termination of Field Experience.)

- in B.Ed. K/Elementary, Secondary, and TESL programs who wish to transfer within these programs will not be required to repeat Field Experience 1.

### 7.3 Student Responsibilities

Students are responsible for familiarizing themselves with the policies and rules governing all aspects of Field Experience, including pedagogical and professional behaviour, available at www.mcgill.ca/isa/policies/placements.

Students should not engage in any type of employment during Field Experience, nor register for any course that might interfere with the successful outcome of a Field Experience.

### 7.3.1 Guidelines (Syllabus)

Detailed guidelines and evaluation forms for every Field Experience are posted on the ISA website, arranged by program and year. Students are responsible for familiarizing themselves with the objectives, evaluation criteria, and forms for each level of Field Experience, and must submit all completed evaluation forms to the ISA on the first business day following the end of the Field Experience in order to receive a grade.

### 7.3.2 Attendance and Absences

Punctual attendance is required at the assigned school for the entire Field Experience. Alternate dates cannot be arranged at the request of the student. Unexcused absences from intensive courses and professional seminars may result in exclusion from the course, course failure, and/or removal from any associated Field Experience.

Days absent due to illness or McGill exams must be made up at the end of the Field Experience. Absences due to illness require a valid medical note (see www.mcgill.ca/studenthealth/notes) to be submitted to the ISA, and the outcome of the Field Experience will be evaluated on an individual basis. Student teachers must contact the following people as soon as possible on the morning of the day of their absence:

- School office
- Cooperating teacher
- ISA placement coordinator, 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/importantdates/holy-days-0. Students must notify the ISA, cooperating teacher, and field supervisor before the Field Experience begins if possible, or at least two 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 Internships and Student Affairs on a case-by-case basis. Student teachers must submit a signed copy of the Intercollegiate Sport Event Accommodation form to the ISA at least two 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.

### 7.3.3 Judicial Record Verification

See Faculty of Education > Undergraduate > Faculty Regulations for Undergraduate Programs > section 6.4: 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 ISA website.

### 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 (CIC) as a requirement for their mandatory Field Experiences. This is not the same as an off-campus work permit, and it is not automatically included in your study permit. The internship/co-op work permit is free of charge, but takes time to obtain and requires a medical exam by a designated CIC physician; medical exam fees vary. Detailed instructions are available on the ISA website. For assistance with the application students should contact International Student Services: www.mcgill.ca/internationalstudents. Students must submit a copy of their valid permit to the ISA before the Field Experience starts, or the placement will be cancelled and the student must withdraw from the course.
7.4 Grading and Credit

Field Experiences are graded “Pass/Fail.” Students must submit all completed evaluation forms to the ISA 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 may be granted a “D” grade. In this case, the Director of Internships and Student Affairs 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 Faculty of Education Student Affairs Committee.

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 Internships and Student Affairs. 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 Internships and Student Affairs.

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, requiring withdrawal from the B.Ed. program.

If a student cannot continue the Field Experience due to illness, see section 7.4.2: Withdrawal from Field Experience.

If a student chooses to end his or her Field Experience, the Director of Internships and Student Affairs will evaluate the circumstances and determine an outcome. Possible outcomes are the same as those listed above.

7.4.2 Withdrawal from Field Experience

Withdrawal (with refund) for any reason must be done at least two weeks before the start date of the Field Experience. The student is responsible for notifying the ISA in writing by this deadline.

Students having to withdraw for any reason, including illness, from a Field Experience that begins in less than two weeks or that is underway must immediately inform the ISA. Based on the circumstances of the withdrawal, the Director of Internships and Student Affairs will determine the final outcome of the Field Experience and eligibility for refund.

7.4.3 Transfer Credit

Students who previously completed a Field Experience at another local university may be eligible for transfer credit (Advanced Standing) for Field Experience 1 only. Contact an academic adviser to discuss this possibility. Students may need to submit a syllabus for the course so that the ISA can determine equivalency.

For general information about transfer credits at McGill, see www.mcgill.ca/students/transfercredit, as well as Faculty-specific information at www.mcgill.ca/isa/faculty-advising/orientation.
7.5 Code of Professional Conduct: Code of Ethics for Student Teachers

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, as a matter of sound ethical reasoning, to understand and respect the contexts in which they work and accommodate the needs of others.
  4. The Code seeks to encourage continued reflection and thoughtful response to ethical issues. It does not seek definitive answers to all ethical questions or situations. Rather, it seeks to outline the guiding principles to ethical conduct and to identify major issues that are essential to the development and implementation of this Code.

- **Context of an Ethics Framework for Student Teachers**

  The principles and norms guiding ethical conduct are developed within an ever-evolving complex societal context, elements of which include the need for reflective action and ethical principles.

  Education is premised on a fundamental moral commitment to advance and construct knowledge and to ensure human understanding and respect for individual and collective well-being and integrity.

  The moral imperative of respect translates into the following ethical principles that assume a student-centred perspective as articulated in the Quebec Curriculum Reform and Competencies outlined for Teacher Education.

7.5.2 Academic Freedom and Responsibilities

Teachers enjoy, and should continue to enjoy, important freedoms and privileges. However, with freedoms come responsibilities and ethical challenges. This Code of Ethics is in keeping with the philosophy and spirit of the New Directions that are embedded in the document “Teacher Training: Orientations, Professional Competencies” (MEQ 2001) and the reflective practice literature.

The role of the teacher and the contexts of teaching have changed. Thus, new resources (knowledge, skills, attitudes) are required to practice the profession and to meet the challenges of teaching and learning in whatever contexts student teachers may find themselves, and to engage in professional development individually and with others.

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, and 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.

7.5.4 Guiding Ethical Principles

Ethical student teachers should respect the following guiding ethical principles:

1. **Respect for Human Dignity**
   - Speaks and acts toward 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 toward 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 all information related to students and their families and will share such information in an appropriate manner only with those directly concerned with their welfare.
   • Respects the confidential nature of all information related to all school personnel and will share such information in an appropriate manner.

4. Respect for Justice
   • Respects and recognizes the right of individuals to be treated with fairness and equity and the importance of avoiding conflicts of interest.

5. Respect for Safety of Students
   • Respects the right of individuals to expect that student teachers will engage in practices that aim to ensure the physical, psychological, and emotional safety of students.

6. Respect for Existing Ethical Codes and Professional Standards
   • Respects the authority, roles, and responsibilities of the cooperating teacher, and agrees to adhere to the responsibilities and obligations for teachers as outlined in the Education Act, Faculty, and University handbooks as well as all local agreements by host school boards and schools.

7. Balancing Harm and Benefits
   • Acknowledges that any potentially harmful practices (e.g., science labs and physical education activities) must be balanced with anticipated benefits and conducted in a prudent, informed manner.

7.5.5 Putting Principles into Practice: Venues for Communication

More than one principle may apply to a given case or situation. For meaningful and effective implementation of these principles, they must be widely communicated and applied in appropriate contexts.

8. Browse Academic Units & Programs

The programs and courses in the following sections have been approved for the 2016–2017 session as listed; the Faculty reserves the right to introduce changes as may be deemed necessary or desirable.

8.1 Educational and Counselling Psychology

8.1.1 Location

Educational and Counselling Psychology, Faculty of Education
3700 McTavish Street, Room 614
Montreal QC H3A 1Y2
Telephone: 514-398-4242
Fax: 514-398-6968
Website: [www.mcgill.ca/edu-ecp](http://www.mcgill.ca/edu-ecp)

8.1.2 About the Department of Educational and Counselling Psychology

Educational Psychology encompasses:

- the theoretical and applied study of learning, cognition, and instruction in a variety of educational settings across ages and domains;
- instructional technology and computers as cognitive tools in learning;
- cognitive and social processes in learning;
- evaluation and enhancement of learning and teaching;
- methods for fostering inclusive education;
- relationships of phenomena related to teaching, learning, and assessment in human development; and
- 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 the Faculty of Arts > Undergraduate > Browse Academic Units & Programs > Educational Psychology 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, or contact the Department:

Telephone: 514-398-4242
Email: ecuundergrad.education@mcgill.ca

Special services offered by the Department include the School and Counselling Psychology Clinic and the International Centre for Youth Gambling and High-Risk Behaviour.

Graduate and Postdoctoral Studies

At the graduate level, the Department of Educational and Counselling Psychology offers Master of Arts degrees (M.A.) in:

- Counselling Psychology – with major concentrations in Project (Research-based) or in Professional/Internship (Practitioner-based)
- Educational Psychology – with streams in Health Professions Education, Human Development, Learning Sciences, and School/Applied Child Psychology
- School/Applied Child Psychology

Also offered are Master of Education degrees (M.Ed.) in:

- Educational Psychology – with streams in Family Life Education, General Educational Psychology, Inclusive Education, and Learning Sciences.

Students can also obtain Doctoral degrees (Ph.D.) in:

- Counselling Psychology
- School/Applied Child Psychology
- Educational Psychology – with streams in Human Development or Learning Sciences

The Department also offers a Postdoctoral Degree Graduate Diploma in School/Applied Child Psychology and a Graduate Certificate in Counselling Applied to Teaching.

For further information, consult the Faculty of Education's Graduate and Postdoctoral Studies section.

8.1.3 Educational and Counselling Psychology Faculty

Chair
Jeffrey Derevensky

Program Directors
Marilyn Fitzpatrick – Counselling Psychology
Tara Flanagan – Human Development, M.Ed. Concentrations in Educational Psychology
Alenoush Saroyan – Health Professions Education, Learning Sciences
Steven R. Shaw – School/Applied Child Psychology
Ada Sinacore – Graduate Certificate in Counselling Applied to Teaching

Emeritus Professors
Mark W. Aulls; B.S.(Ball St.), M.Ed.(Ind.), Ed.D.(Georgia)
Robert J. Bracewell; B.Sc., M.A.(McM.), Ph.D.(Tor.)
Janet G. Donald; B.A., M.A.(W. Ont.), Ph.D.(Tor.)
Carl H. Frederiksen; B.A.(Harv.), M.A., Ph.D.(Ill.)
Lynn McAlpine; B.A.(McG.), M.A.(C'dia), Ph.D.(Tor.)
Eigil Pedersen; B.A.(Sir G. Wms.), M.A.(McG.), Ed.D.(Harv.)
Bruce M. Shore; B.Sc., M.A.(McG.), Ph.D.(Calg.)
Howard A. Stutt; B.A.(Qu.), B.Ed., M.Ed.(Montr.), F.C.C.T.
Cynthia B. Weston; B.A.(G’town), M.L.S.(SUNY), D.Ed.(Wash.)
Professors

Jacob A. Burack; B.A.(Col.), M.S., M.Phil., Ph.D.(Yale)
Jeffrey L. Derevensky; B.A.(C.W. Post), M.A., Ph.D.(McG.)
Marilyn Fitzpatrick; B.A.(Tor.), M.Ed., Ph.D.(McG.)
Nancy L. Heath; B.A.(McG.), M.Ed.(Ott.), Ph.D.(Tor.) (James McGill Professor)
Susanne P. Lajoie; B.A., M.A.(McG.), Ph.D.(Stan.) (Canada Research Chair, Tier 1)
Alenoush Saroyan; B.A.(Pahlavi), M.Ed.(Loy. U. Chic.), Ph.D.(McG.)

Associate Professors

Alain Breuleux; B.Sc., M.Sc., Ph.D.(Montr.)
Martin Drapeau; B.A.(Montr.), B.A.Ps.(UQTR), M.P.(Laval), Ph.D.(Montr.) (FRSQ Chercheur Boursier, Junior 2)
Tara Flanagan; B.A.(Winn.), M.A., Ph.D.(McG.)
Nathan Hall; B.A., M.A., Ph.D.(Manit.)
Michael L. Hoover; B.S.(Tulane), M.A., Ph.D.(Col.)
Annett Körner; M.A., Ph.D.(Leipzig)
Krista Muis; B.A.(Wat.), M.A.(Vic., BC), Ph.D.(S. Fraser)
Robert Savage; B.A.(Oxf.), M.Sc.(Camb.), M.Sc., Ph.D.(Lond.) (William Dawson Scholar)
Steven R. Shaw; B.A., M.Ed., Ed.S., Ph.D.(Flor.)
Ada L. Sinacore; B.A.(Montclair St.), M.A., M.Ed., Ph.D.(Col.)
Ingrid E. Sladecek; B.A., M.S., Ph.D.(Ariz.), A.A.(Md.)
Ronald Stringer; B.Sc., M.A., Ph.D.(Tor.) (on leave)
Victoria Talwar; M.A.(St. And.), M.A., Ph.D.(Qu.) (Canada Research Chair, Tier 2)

Assistant Professors

Armando Bertone; B.A., M.A.(C’dia), M.Ps., Ph.D.(Montr.) (FRSQ Chercheur Boursier, Junior 1)
Adam Dubé; M.A., Ph.D.(Regina)
Chiaki Konishi; B.Ed.(Chiba), M.Ed.(Mass.-Amh.), M.A., Ph.D.(Br. Col.)
Tina Montreuil; M.Ed.(McG.), Ph.D.(UQAM)
Eve-Marie Quintin; B.Sc.(McG.), Ph.D.(UQAM)
Jessica Ruglis; B.S.(Albany), M.A.T.(Union Coll.), M.P.H.(Hunter), Ph.D.(CUNY)

Faculty Lecturers

Karen Cohen-Gazith; B.A. (Dal.), M.A., Ph.D.(McG.)
Jack De Stefano; B.A.(Loyola), M.Ed., Ed.D.(McG.)

Associate Members

Robin Cohen; B.Sc., M.Sc., Ph.D.(McG.) (Oncology)
Reut Gruber; B.A., M.A., Ph.D.(Tel Aviv) (Psychiatry)
Suzanne King; B.A.(McG.), M.Ed., Ed.S.(James Madison), Ph.D.(Virg. Poly. Inst.) (Psychiatry)
Lawrence Kirmayer; B.Sc., M.D.(McG.) (Psychiatry)
Heather Beth MacIntosh; B.A., Ph.D.(Ott.) (School of Social Work)
Brett D. Thombs; B.A.(N’western), M.A.(Ariz.), M.A., Ph.D.(Fordham Univ.) (Psychiatry)
Jeffrey G. Wiseman; B.Sc., M.A., M.D., C.M.(McG.) (Medicine, Royal Victoria Hospital)
Associate Professors (Non-Tenure Track)
Marcia A.B. Delcourt; B.Sc.(Bloomsburg State Univ.), M.A., Ph.D.(Conn.)
Laura Winer; B.A., M.A., Ph.D.(C'dia) (Teaching and Learning Services)

Adjunct Professors
Dermot Bowler, Thomas Goetz, Judith Gradinger, Calvin Kalman, Jasvinder Magon, Katherine Moxness, Nathan Grant Smith, Lisa Spanierman, Anastassios Stalikas

8.2 Integrated Studies in Education

8.2.1 Location

Integrated Studies in Education, Faculty of Education
3700 McTavish Street, Room 244
Montreal QC H3A 1Y2
Website: www.mcgill.ca/dise

Undergraduate Programs:
Telephone: 514-398-4527
Fax: 514-398-4529

Graduate and Certificate Programs:
Telephone: 514-398-4527
Fax: 514-398-4529

8.2.2 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 www.mcgill.ca/dise/progs.

8.2.3 Integrated Studies in Education Faculty

Chair
Steven Jordan

Director of Teacher Education Programs & Certificates, and M.A. Programs
Caroline Riches

Assistant Director of Undergraduate Programs
Sheryl Smith-Gilman

Director of First Nations and Inuit Education
James Howden

Director of Ph.D. Program
Marta Kobiela

Assistant Director of M.A. Programs
Lisa Starr

Director of Graduate Certificate in Educational Leadership
Lynn Butler-Kisber
Emeritus Professors

Patrick X. Dias; B.A., M.A.(Karachi), B.Ed., Ph.D.(Montr.)

David Dillon; B.A.(St. Columban's), M.S.(SW Texas St.), Ph.D.(Texas-Austin)


John B. Gradwell; B.A., M.A.(Calif.), Ph.D.(Iowa)

Denise Lussier; B.A.(Coll. Jesus Marie de Sillery), M.Ed.(Boston), M.A., Ph.D.(Laval) (Post-retirement)


Anthony Paré; B.Ed, M.A., Ph.D.(McG.)

Jacques J. Rebuffot; B. és L., L. és L., D.E.S.(Aix-Marseilles), Dip. I.E.P., Dr. 3rd Cy.(Strasbourg)

Bernard Shapiro; B.A.(McG.), M.A.T., Ed.D.(Harv.)

David C. Smith; B.Ed.(McG.), Ph.D.(Lond.), F.C.C.T., F.R.S.A.


Lise Winer; B.A.(Pitt.), M.A.(Minn.), Cert. Ped.(C'dia), Ph.D.(West Indies)

John Wolfforth; B.Sc.(Sheff.), M.A., Ph.D.(Br. Col.)

Professors

Lynn Butler-Kisber; B.Ed., M.Ed.(McG.), Ed.D.(Harv.)

Ratna Ghosh; C.M., B.A.(Calc.), M.A., Ph.D.(Calg.), F.R.S.C. (William C. Macdonald Professor of Education) (James McGill Professor)

Roy Lyster; B.A.(Regina), M.A.(Paris VII), B.Ed., M.Ed., Ph.D.(Tor.)

Claudia A. Mitchell; B.A.(Bran.), M.A.(Mt. St. Vin.), Ph.D.(Alta.) (James McGill Professor)

Associate Professors

Anila Asghar; M.S.(Punjab), M.A.(Col.), M.Ed., Ed.D.(Harv.)

Fiona Benson; B.A.(Ott.), M. Ed., Ph.D.(McG.)

Eric Caplan; B.A.(Tor.), M.A.(Hebrew), Ph.D.(McG.)

Abdul Aziz Choudry; Grad.Dip., Ph.D.(C'dia)

Steven Jordan; B.A.(Kent), M.Sc.(Lond.), Ph.D.(McG.)

Bronwen Low; B.A.(Qu.), M.A.(Br. Col.), Ph.D.(York)

Kevin McDonough; B.A., B.Ed., M.Ed.(Alta.), Ph.D.(III.)

Caroline Riches; B.A., M.Sc.(Alta.), Ph.D.(McG.)

Mela Sarkar; B.A., Dip.Ed.(McG.), M.A., Ph.D.(C'dia)

Annie Savard; B.Ed., M.A., Ph.D.(Laval)

Shaheen Shariff; B.G.S., M.A.Educ., Ph.D.(S. Fraser)

Doreen Starke-Meyerring; B.Ed.(Potsdam), M.A.(N. Dakota), Ph.D.(Minn.)

Teresa Strong-Wilson; B.A.(Calg.), B.A.(McG.), M.A., Ph.D.(Vic., BC)

Georges Terroux; B.A.(Montr.), M.A.(Essex), Ph.D.(Montr.) (Post-retirement)

Boyd White; B.A.(Sir G. Wms.), B.F.A.(C'dia), M.A.(Inst. Allende, Guanajuato), Ph.D.(C'dia)


Assistant Professors

Susan Ballinger; B.A.(Wash.), M.A., Ph.D.(McG.)

Mindy Carter; B.A.(Dal.), B.Ed.(Lake.), M.A.(C'dia), Ph.D.(Br. Col.)

Christian Ehret; B.A., M.A.(Georgia), Ph.D.(Vanderbilt)

Allison Gonsalves; B.Sc.(W.Ont.), M.Sc.(Guelph), Ph.D.(McG.)

Philip Howard; B.A.(Cornell), Dip.Ed., M.A.(McG.), Ph.D.(OISE, Tor.)
8.2.4 Overview of Programs (Integrated Studies in Education)

The following is an overview of programs offered by the Department of Integrated Studies in Education.

8.2.4.1 Bachelor of Education: Secondary Program (120 credits)

The aim of the B.Ed. Secondary program is to prepare strong beginning teachers for the secondary school level. This integrated 120-credit program (150 credits for out-of-province students) consists of academic studies to provide background depth in subjects taught in the secondary school, professional studies centred on school-based practicum, supported by studies in pedagogy, curriculum, and educational foundations. Students choose their teaching profiles from: English, Mathematics, Science and Technology, and Social Sciences (History and Citizenship, and one of Geography or Ethics and Religious Culture). Students applying to the B.Ed. Secondary in the areas of Mathematics or Science and Technology, depending on their academic record, may be required to complete additional courses in order to gain the appropriate subject area background.

8.2.4.2 Concurrent Bachelor of Music (Music Education)/Bachelor of Education in Music program (137 credits)

This program provides students with the opportunity to obtain a Bachelor of Music 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 137 credits.

8.2.4.3 Concurrent Bachelor of Science/Bachelor of Education (Secondary) (135 credits)

New students are no longer being admitted to this program.

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.

8.2.4.4 Bachelor of Education (Kindergarten and Elementary) (120 credits)

This program leads to certification to teach children between the ages of five 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
- Pédagogie de l’immersion française

8.2.4.5 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.

An option within the B.Ed. in Teaching English as a Second Language program is:

- Teaching Greek Language & Culture
8.2.4.6 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 offers a Master of Arts in Teaching and Learning (MATL), leading to teacher certification at the secondary level for those meeting specific criteria. See www.mcgill.ca/dise/grad.

The Department also offers graduate certificates in Leadership and Teaching English as a Second Language. See www.mcgill.ca/dise/grad.

8.2.4.7 In-Service Programs

The Department of Integrated Studies in Education offers a number of in-service programs through First Nations and Inuit Education: a Certificate in Education for First Nations and Inuit; a Certificate in Indigenous Language and Literacy Education; a Certificate in Middle School Education in Indigenous Communities; a Certificate in First Nations and Inuit Educational Leadership; a Certificate in First Nations and Inuit Student Personnel Services; and a Bachelor of Education for Certified Teachers.

8.2.5 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 courses in Education (including field experiences) and courses in the subject area of the teaching specialization. Students also take 6 credits of free electives. For all teacher education programs, course sequencing is highly structured. For this reason, the advising information in this eCalendar section must be used in conjunction with the summary companion document (Program Overview) found at http://www.mcgill.ca/dise/progs/secenglish.

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 Ministry (Education). 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 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.

In addition, in consultation with the Program Adviser, students may select courses from the recommended course list below or other courses. The list includes English literature courses that may be used toward the academic component of the Secondary English course requirements. Also included are several French Second Language (FRSL) courses for which placement tests are required to determine the appropriate level.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEAP 250</td>
<td>Research Essay &amp; Rhetoric</td>
<td>(3)</td>
<td></td>
</tr>
<tr>
<td>EDEC 203*</td>
<td>Communication in Education</td>
<td>(3)</td>
<td></td>
</tr>
<tr>
<td>EDEM 220</td>
<td>Contemporary Issues in Education</td>
<td>(3)</td>
<td></td>
</tr>
<tr>
<td>ENGL 201</td>
<td>Survey of English Literature 2</td>
<td>(3)</td>
<td></td>
</tr>
<tr>
<td>ENGL 215</td>
<td>Introduction to Shakespeare</td>
<td>(3)</td>
<td></td>
</tr>
<tr>
<td>ENGL 226</td>
<td>American Literature 2</td>
<td>(3)</td>
<td></td>
</tr>
<tr>
<td>FRSL 101</td>
<td>Beginners French 1</td>
<td>(3)</td>
<td></td>
</tr>
<tr>
<td>FRSL 102</td>
<td>Beginners French 2</td>
<td>(3)</td>
<td></td>
</tr>
<tr>
<td>FRSL 207D1</td>
<td>Elementary French 01</td>
<td>(3)</td>
<td></td>
</tr>
<tr>
<td>FRSL 207D2</td>
<td>Elementary French 01</td>
<td>(3)</td>
<td></td>
</tr>
<tr>
<td>FRSL 211D1</td>
<td>Oral and Written French 1</td>
<td>(3)</td>
<td></td>
</tr>
<tr>
<td>FRSL 211D2</td>
<td>Oral and Written French 1</td>
<td>(3)</td>
<td></td>
</tr>
<tr>
<td>RELG 207</td>
<td>Introduction to the Study of Religions</td>
<td>(3)</td>
<td></td>
</tr>
</tbody>
</table>

* Note: Students may take either CEAP 250 OR EDEC 203 for credit but not both

Required Courses (57 credits)
EDEC 201 (1) First Year Professional Seminar
EDEC 215 (0) English Exam for Teacher Certification
EDEC 233 (3) Indigenous Education
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
EDES 361 (3) Teaching Secondary English 1
EDES 461 (3) Teaching Secondary English 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) Diverse Learners
EDPI 341 (3) Instruction in Inclusive Schools

**Complementary Courses (6 credits)**

6 credits selected as described below:

**Equity Education**

3 credits from:

- EDEC 248 (3) Equity and 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

**Secondary English Subject Area (51 credits)**

**Option 1**

51 credits distributed as follows:

**Required Course (3 credits)**

- EDES 366 (3) Literature for Young Adults

**Complementary Language/Linguistics courses (6 credits)**

- CEAP 250* (3) Research Essay & Rhetoric
EDEC 203* (3) Communication in Education
EDSL 305 (3) L2 Learning: Classroom Settings
EDSL 350 (3) Essentials of English Grammar
LING 200 (3) Introduction to the Study of Language
LING 201 (3) Introduction to Linguistics
LING 355 (3) Language Acquisition 1

* Note: Students may take either CEAP 250 OR EDEC 203 for credit but not both

Complementary Courses
42 credits distributed as follows (including at least one course in Shakespeare):

Literature (30 credits)
A minimum of 15 credits must be at the 300 level or higher, chosen from the English Department undergraduate complementary course list (http://www.mcgill.ca/english/undergrad) or the following list:

ENGL 200 (3) Survey of English Literature 1
ENGL 201 (3) Survey of English Literature 2
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
GERM 259 (3) Introduction to German Literature 1
GERM 260 (3) Introduction to German Literature 2
JWST 206 (3) Introduction to Yiddish Literature
JWST 225 (3) Literature and Society
LLCU 220 (3) Introduction to Literary Analysis
RUSS 218 (3) Russian Literature and Revolution
RUSS 223 (3) Russian 19th Century: Literary Giants 1
RUSS 224 (3) Russian 19th Century: Literary Giants 2

Cultural Studies (9 credits)
A minimum of 3 credits must be at the 300 level or higher chosen from the English Department undergraduate complementary course list (http://www.mcgill.ca/english/undergrad) or the following list:

ENGL 279 (3) Introduction to Film as Art
ENGL 280 (3) Introduction to Film as Mass Medium
LLCU 200 (3) Topics in Film
LLCU 250 (3) History and Future of the Book

Drama/Theatre (3 credits)
Chosen from the English Department undergraduate complementary course list (http://www.mcgill.ca/english/undergrad) or the following list:

ENGL 215 (3) Introduction to Shakespeare
ENGL 230 (3) Introduction to Theatre Studies
Option 2 (51 credits)

51 credits distributed as follows:

**Required Course (3 credits)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDES 366</td>
<td>3</td>
</tr>
<tr>
<td>Literature for Young Adults</td>
<td></td>
</tr>
</tbody>
</table>

**Complementary Language/Linguistics courses. (6 credits)**

Select 6 credits from the following course list:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEAP 250*</td>
<td>3</td>
</tr>
<tr>
<td>Research Essay &amp; Rhetoric</td>
<td></td>
</tr>
<tr>
<td>EDEC 203*</td>
<td>3</td>
</tr>
<tr>
<td>Communication in Education</td>
<td></td>
</tr>
<tr>
<td>EDSL 305</td>
<td>3</td>
</tr>
<tr>
<td>L2 Learning: Classroom Settings</td>
<td></td>
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<tr>
<td>EDSL 350</td>
<td>3</td>
</tr>
<tr>
<td>Essentials of English Grammar</td>
<td></td>
</tr>
<tr>
<td>LING 200</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to the Study of Language</td>
<td></td>
</tr>
<tr>
<td>LING 201</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Linguistics</td>
<td></td>
</tr>
<tr>
<td>LING 355</td>
<td>3</td>
</tr>
<tr>
<td>Language Acquisition 1</td>
<td></td>
</tr>
</tbody>
</table>

*Note: Students may take either CEAP 250 OR EDEC 203 for credit but not both

**Complementary Courses**

27 credits, distributed as follows (including at least one course in Shakespeare):

**Literature (18 credits)**

A minimum of 6 credits at the 300 level or higher, chosen from the English Department undergraduate complementary course list (http://www.mcgill.ca/english/undergrad) or the following list:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ENGL 200</td>
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<tr>
<td>Survey of English Literature 1</td>
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<tr>
<td>ENGL 201</td>
<td>3</td>
</tr>
<tr>
<td>Survey of English Literature 2</td>
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<tr>
<td>ENGL 215</td>
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<tr>
<td>Introduction to Shakespeare</td>
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<tr>
<td>ENGL 225</td>
<td>3</td>
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<tr>
<td>American Literature 1</td>
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<td>ENGL 226</td>
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<td>American Literature 2</td>
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<td>ENGL 227</td>
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<tr>
<td>American Literature 3</td>
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<tr>
<td>ENGL 228</td>
<td>3</td>
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<tr>
<td>Canadian Literature 1</td>
<td></td>
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<tr>
<td>ENGL 229</td>
<td>3</td>
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<tr>
<td>Canadian Literature 2</td>
<td></td>
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<tr>
<td>GERM 259</td>
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<tr>
<td>Introduction to German Literature 1</td>
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<td>GERM 260</td>
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<tr>
<td>Introduction to German Literature 2</td>
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<tr>
<td>JWST 206</td>
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<tr>
<td>Introduction to Yiddish Literature</td>
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<td>JWST 225</td>
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<tr>
<td>Literature and Society</td>
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<tr>
<td>LLCU 220</td>
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<tr>
<td>Introduction to Literary Analysis</td>
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<tr>
<td>RUSS 218</td>
<td>3</td>
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<tr>
<td>Russian Literature and Revolution</td>
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<tr>
<td>RUSS 223</td>
<td>3</td>
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<tr>
<td>Russian 19th Century: Literary Giants 1</td>
<td></td>
</tr>
<tr>
<td>RUSS 224</td>
<td>3</td>
</tr>
<tr>
<td>Russian 19th Century: Literary Giants 2</td>
<td></td>
</tr>
</tbody>
</table>

**Cultural Studies (6 credits)**

A minimum of 3 credits at the 300 level or higher from the English Department undergraduate complementary course list (http://www.mcgill.ca/english/undergrad) or the following list:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 279</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Film as Art</td>
<td></td>
</tr>
</tbody>
</table>
ENGL 280 (3) Introduction to Film as Mass Medium
LLCU 200 (3) Topics in Film
LLCU 250 (3) History and Future of the Book

Drama/Theatre (3 credits)
Chosen from the English Department undergraduate complementary course list (http://www.mcgill.ca/english/undergrad) or the following list:
ENGL 215 (3) Introduction to Shakespeare
ENGL 230 (3) Introduction to Theatre Studies

Unofficial "Teachable" Subject Area (15 credits)
15 credits of designated courses for Secondary English Option 2 students (Math, Social Sciences, or Science and Technology - see an adviser for course selection.

Elective Courses (6 credits)
Note: Students who have chosen to do Option 2 (36 credits in one teachable subject and 15 credits in another) will use 3 credits of electives to take the Secondary Teaching Methods course needed for their second unofficial teachable subject.

8.2.6 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.

Note: Students entering this program from CEGEP or with Advanced Standing should have a strong background in their Mathematics courses. Students entering from CEGEP or with Advanced Standing without having completed two calculus courses and one linear algebra course (MATH 133, MATH 140, and MATH 141 or their equivalents) will be required to make up any deficiencies in these courses over and above the degree requirements.

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 courses in Education (including field experiences) and courses in the subject area of the teaching specialization. Students also take 6 credits of free electives. For all teacher education programs, course sequencing is highly structured. For this reason, the advising information in this eCalendar section must be used in conjunction with the summary companion document (Program Overview) found at http://www.mcgill.ca/dise/progs/secmath.

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.

CEAP 250 (3) Research Essay & Rhetoric
EDEM 220 (3) Contemporary Issues in Education
FRSL 101 (3) Beginners French 1
FRSL 102 (3) Beginners French 2
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) Introduction to the Study of Religions

Required Courses (54 credits)
EDEC 201 (1) First Year Professional Seminar
EDEC 215 (0) English Exam for Teacher Certification
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 (Secondary)
EDES 350 (3) Classroom Practices
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) Diverse Learners
EDPI 341 (3) Instruction in Inclusive Schools

Complementary Courses (6 credits)
6 credits selected as described below.

Multicultural Education
3 credits from:
EDEC 233 (3) Indigenous Education
EDEC 248 (3) Equity and 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

Secondary Mathematics Subject Area (54 credits)
Secondary Mathematics students complete 54 credits selected in consultation with the Program Adviser in one of two options.

Option 1
27 credits from the list of "Required Mathematics Courses" and
27 credits from the list of "Complementary Mathematics Courses"

Or

Option 2:
27 credits from the list of "Required Mathematics Courses" and
9 credits from the list of "Complementary Mathematics Courses"

And
18 credits of designated courses in another "teachable" subject area (English, Social Sciences, or Science and Technology - see an adviser for courses).

Required Mathematics Courses (27 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 222</td>
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<tr>
<td>MATH 223</td>
<td>(3)</td>
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<tr>
<td>MATH 235</td>
<td>(3)</td>
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<tr>
<td>MATH 242</td>
<td>(3)</td>
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<td>MATH 315</td>
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<tr>
<td>MATH 338</td>
<td>(3)</td>
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<tr>
<td>MATH 348</td>
<td>(3)</td>
</tr>
</tbody>
</table>

Complementary Mathematics Courses (27 credits)

27 credits from the list below for Secondary Mathematics Option 1 students or
9 credits from the list below for Secondary Mathematics Option 2 students

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>COMP 202</td>
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</tr>
<tr>
<td>COMP 230</td>
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<td>EDTL 520</td>
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<tr>
<td>MATH 423</td>
<td>(3)</td>
</tr>
<tr>
<td>MATH 447</td>
<td>(3)</td>
</tr>
<tr>
<td>MATH 523</td>
<td>(4)</td>
</tr>
</tbody>
</table>
"Teachable" Subject Area
0-18 credits
18 credits of designated courses for Secondary Mathematics Option 2 students (English, Social Sciences, or Science and Technology - see an adviser for course selection)

Electives (6 credits)
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.

8.2.7 Bachelor of Education (B.Ed.) - Secondary Social Sciences - History and Citizenship, Ethics and Religious Culture (120 credits)

The Bachelor of Education (B.Ed.) - Secondary Social Sciences - History and Citizenship, Ethics and Religious Culture 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 courses in Education (including field experiences) and courses in the subject area of the teaching specialization. Students also take 6 credits of free electives. For all teacher education programs, course sequencing is highly structured. For this reason, the advising information in this eCalendar section must be used in conjunction with the summary companion document (Program Overview) found at http://www.mcgill.ca/dise/progs/secsosecsci.

The Secondary Social Sciences - History and Citizenship, Ethics and Religious Culture program provides students with the learning opportunities needed to become proficient Social Science teachers with a strong knowledge base in the associated disciplinary areas.

Please note that graduates of teacher education programs are recommended by the University for Quebec certification to the Ministry (Education). 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.

CEAP 250 (3) Research Essay & Rhetoric
EDEM 220 (3) Contemporary Issues in Education
FRSL 101 (3) Beginners French 1
FRSL 102 (3) Beginners French 2
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
HIST 202 (3) Survey: Canada to 1867
HIST 203 (3) Survey: Canada since 1867
HIST 214 (3) Introduction to European History
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<tr>
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<td>RELG 204</td>
<td>3</td>
<td>Judaism, Christianity and Islam</td>
</tr>
<tr>
<td>RELG 207</td>
<td>3</td>
<td>Introduction to the Study of Religions</td>
</tr>
<tr>
<td>RELG 252</td>
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<td>Hinduism and Buddhism</td>
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**Required Courses (57 credits)**

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<td>English Exam for Teacher Certification</td>
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<td>EDEC 233</td>
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<td>Indigenous Education</td>
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<td>EDEC 247</td>
<td>3</td>
<td>Policy Issues in Quebec Education</td>
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<td>EDEC 254</td>
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<td>EDEC 262</td>
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<td>Media, Technology and Education</td>
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<td>Third Professional Seminar (Secondary)</td>
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<td>EDEC 404</td>
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<td>EDER 372</td>
<td>3</td>
<td>Ethics and Religious Culture (Secondary)</td>
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<td>EDES 334</td>
<td>3</td>
<td>Teaching Secondary Social Studies I</td>
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<td>EDES 350</td>
<td>3</td>
<td>Classroom Practices</td>
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<td>EDFE 200</td>
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<td>First Field Experience (K/Elem &amp; Secondary)</td>
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<td>EDFE 351</td>
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<td>EDFE 451</td>
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<td>EDPE 300</td>
<td>3</td>
<td>Educational Psychology</td>
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<td>Measurement and Evaluation</td>
</tr>
<tr>
<td>EDPI 309</td>
<td>3</td>
<td>Diverse Learners</td>
</tr>
<tr>
<td>EDPI 341</td>
<td>3</td>
<td>Instruction in Inclusive Schools</td>
</tr>
</tbody>
</table>

**Complementary Courses (6 credits)**

6 credits selected as described below.

**Equity Education**

3 credits from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDEC 248</td>
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</tr>
<tr>
<td>EDEC 249</td>
<td>3</td>
<td>Global Education and Social Justice</td>
</tr>
</tbody>
</table>

**Philosophy of Education**

3 credits from:

<table>
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<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDEC 260</td>
<td>3</td>
<td>Philosophical Foundations</td>
</tr>
<tr>
<td>EDEC 261</td>
<td>3</td>
<td>Philosophy of Catholic Education</td>
</tr>
</tbody>
</table>

**Secondary Social Sciences - History & Citizenship, Ethics & Religious Culture Subject Area (51 credits)**

Secondary Social Sciences - History and Citizenship, Ethics and Religious Culture students complete 51 credits selected in consultation with the Program Adviser with the following specifications:
### Required Courses

History
6 credits:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 202</td>
<td>(3)</td>
<td>Survey: Canada to 1867</td>
</tr>
<tr>
<td>HIST 203</td>
<td>(3)</td>
<td>Survey: Canada since 1867</td>
</tr>
</tbody>
</table>

### Complementary Courses (45 credits)

History and Citizenship (27 credits)
At least 12 of the 27 credits must be taken at the 300 or 400 level, distributed as follows:

3 credits from:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 303</td>
<td>(3)</td>
<td>History of Quebec</td>
</tr>
<tr>
<td>HIST 353</td>
<td>(3)</td>
<td>History of Montreal</td>
</tr>
</tbody>
</table>

3-9 credits in European History

3-9 credits in Asian, African, American, Latin American, or Ancient History

6 credits of history courses on social history, gender history, identity, culture, religion and values, political life and institutions, conflict, wealth and poverty, science, and health.

(Students may consult the course lists for History programs offered by the Faculty of Arts for guidance on course choices.)

6-12 credits selected from the following list. Students must select a minimum of 3 credits ECON and a minimum of 3 credits POLI:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 338</td>
<td>(3)</td>
<td>Native Peoples of North America</td>
</tr>
<tr>
<td>CANS 200</td>
<td>(3)</td>
<td>Introduction to the Study of Canada</td>
</tr>
<tr>
<td>ECON 199</td>
<td>(3)</td>
<td>FYS: Aspects of Globalization</td>
</tr>
<tr>
<td>ECON 205</td>
<td>(3)</td>
<td>An Introduction to Political Economy</td>
</tr>
<tr>
<td>ECON 208</td>
<td>(3)</td>
<td>Microeconomic Analysis and Applications</td>
</tr>
<tr>
<td>ECON 209</td>
<td>(3)</td>
<td>Macroeconomic Analysis and Applications</td>
</tr>
<tr>
<td>ECON 219</td>
<td>(3)</td>
<td>Current Economic Problems: Topics</td>
</tr>
<tr>
<td>ECON 221</td>
<td>(3)</td>
<td>Economic History</td>
</tr>
<tr>
<td>ECON 313</td>
<td>(3)</td>
<td>Economic Development 1</td>
</tr>
<tr>
<td>ECON 326</td>
<td>(3)</td>
<td>Ecological Economics</td>
</tr>
<tr>
<td>ECON 341</td>
<td>(3)</td>
<td>Economic History of a World Area</td>
</tr>
<tr>
<td>ECON 347</td>
<td>(3)</td>
<td>Economics of Climate Change</td>
</tr>
<tr>
<td>ENVR 201</td>
<td>(3)</td>
<td>Society, Environment and Sustainability</td>
</tr>
<tr>
<td>ENVR 203</td>
<td>(3)</td>
<td>Knowledge, Ethics and Environment</td>
</tr>
<tr>
<td>POLI 212</td>
<td>(3)</td>
<td>Government and Politics - Developed World</td>
</tr>
<tr>
<td>POLI 221</td>
<td>(3)</td>
<td>Government of Canada</td>
</tr>
<tr>
<td>POLI 222</td>
<td>(3)</td>
<td>Political Process and Behaviour in Canada</td>
</tr>
<tr>
<td>POLI 227</td>
<td>(3)</td>
<td>Developing Areas/Introduction</td>
</tr>
<tr>
<td>POLI 243</td>
<td>(3)</td>
<td>International Politics of Economic Relations</td>
</tr>
<tr>
<td>POLI 244</td>
<td>(3)</td>
<td>International Politics: State Behaviour</td>
</tr>
<tr>
<td>POLI 341</td>
<td>(3)</td>
<td>Foreign Policy: The Middle East</td>
</tr>
<tr>
<td>POLI 345</td>
<td>(3)</td>
<td>International Organizations</td>
</tr>
<tr>
<td>POLI 354</td>
<td>(3)</td>
<td>Approaches to International Political Economy</td>
</tr>
<tr>
<td>POLI 360</td>
<td>(3)</td>
<td>Security: War and Peace</td>
</tr>
<tr>
<td>POLI 362</td>
<td>(3)</td>
<td>Political Theory and International Relations</td>
</tr>
</tbody>
</table>
### Politics of Ethno-Nationalism (3)
- POLI 423

### Identity and Inequality (3)
- POLI 435

### International Relations of Ethnic Conflict (3)
- POLI 442

### Peacebuilding (3)
- POLI 450

### Inequality and Development (3)
- POLI 474

### Ethics and Religious Culture
18 credits as specified below.

#### 6 credits from:
- EDER 309 (3) The Religious Quest
- RELG 204 (3) Judaism, Christianity and Islam
- RELG 207 (3) Introduction to the Study of Religions
- 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) Human Rights and Ethics in Practice
- PHIL 230 (3) Introduction to Moral Philosophy 1
- PHIL 237 (3) Contemporary Moral Issues

#### 6 credits from:
- CATH 200 (3) Introduction to Catholicism
- EDER 252 (3) Understanding and Teaching Jewish Life
- EDER 319 (3) Teaching the Holocaust
- EDER 394 (3) Philosophy of God
- RELG 270 (3) Religious Ethics and the Environment

### Electives (6 credits)
6 credits

#### Bachelor of Education (B.Ed.) - Secondary Social Sciences - History and Citizenship, Geography (120 credits)

Bachelor of Education (B.Ed.) - Secondary Social Sciences - History and Citizenship, Geography 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 courses in Education (including field experiences) and courses in the subject area of the teaching specialization. Students also take 6 credits of free electives. For all teacher education programs, course sequencing is highly structured. For this reason, the advising information in this eCalendar section must be used in conjunction with the summary companion document (Program Overview) found at http://www.mcgill.ca/dise/progs/secsocsci.

The Secondary Social Sciences - History and Citizenship, Geography program provides students with the learning opportunities needed to become proficient Social Science teachers with a strong knowledge base in History and Geography.
Please note that graduates of teacher education programs are recommended by the University for Quebec certification to the Ministry (Education). 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.

**Required Courses (57 credits)**

- **CEAP 250** (3) Research Essay & Rhetoric
- **EDEM 220** (3) Contemporary Issues in Education
- **FRSL 101** (3) Beginners French 1
- **FRSL 102** (3) Beginners French 2
- **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
- **HIST 202** (3) Survey: Canada to 1867
- **HIST 203** (3) Survey: Canada since 1867
- **HIST 214** (3) Introduction to European History
- **HIST 215** (3) Modern European History
- **RELG 204** (3) Judaism, Christianity and Islam
- **RELG 207** (3) Introduction to the Study of Religions
- **RELG 252** (3) Hinduism and Buddhism
EDFE 451 (7) Fourth Field Experience (Secondary)
EDPE 300 (3) Educational Psychology
EDPE 304 (3) Measurement and Evaluation
EDPI 309 (3) Diverse Learners
EDPI 341 (3) Instruction in Inclusive Schools

Complementary Courses (6 credits)
6 credits selected as described below:

Equity Education
3 credits from:
EDEC 248 (3) Equity and 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

Secondary Social Sciences - History and Citizenship, Geography Subject Area (51 credits)
Secondary Social Sciences - History and Citizenship, Geography students complete 51 credits selected in consultation with the Program Adviser with the following specifications:

Required Courses
History
6 credits selected from:
HIST 202 (3) Survey: Canada to 1867
HIST 203 (3) Survey: Canada since 1867

Complementary Courses (45 credits)
History and Citizenship (27 credits)
At least 12 of the 27 credits must be taken at the 300 or 400 level, distributed as follows:
3 credits from:
HIST 303 History of Quebec (3 credits)
HIST 353 History of Montreal (3 credits)
3-9 credits in European History
3-9 credits in Asian, African, American, Latin American, or Ancient History
6 credits of history courses on social history, gender history, identity, culture, religion and values, political life and institutions, conflict, wealth and poverty, science, and health
(Students may consult the course lists for History programs offered by the Faculty of Arts for guidance on course choices.)
6-12 credits selected from the following list (students must select a minimum of 3 credits ECON and a minimum of 3 credits POLI):
ANTH 338 (3) Native Peoples of North America
CANS 200 (3) Introduction to the Study of Canada
ECON 199 (3) FYS: Aspects of Globalization
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<td>(3)</td>
<td>Politics of Ethno-Nationalism</td>
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<td>POLI 435</td>
<td>(3)</td>
<td>Identity and Inequality</td>
</tr>
<tr>
<td>POLI 442</td>
<td>(3)</td>
<td>International Relations of Ethnic Conflict</td>
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**Geography**

18 credits from:

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<td>GEOG 200</td>
<td>(3)</td>
<td>Geographical Perspectives: World Environmental Problems</td>
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<td>GEOG 205</td>
<td>(3)</td>
<td>Global Change: Past, Present and Future</td>
</tr>
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<td>GEOG 210</td>
<td>(3)</td>
<td>Global Places and Peoples</td>
</tr>
<tr>
<td>GEOG 216</td>
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<td>Geography of the World Economy</td>
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<tr>
<td>GEOG 217</td>
<td>(3)</td>
<td>Cities in the Modern World</td>
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<tr>
<td>GEOG 272</td>
<td>(3)</td>
<td>Earth's Changing Surface</td>
</tr>
<tr>
<td>GEOG 301</td>
<td>(3)</td>
<td>Geography of Nunavut</td>
</tr>
<tr>
<td>GEOG 309</td>
<td>(3)</td>
<td>Geography of Canada</td>
</tr>
<tr>
<td>GEOG 311</td>
<td>(3)</td>
<td>Economic Geography</td>
</tr>
<tr>
<td>GEOG 331</td>
<td>(3)</td>
<td>Urban Social Geography</td>
</tr>
</tbody>
</table>

Note: In consultation with the Program Adviser, students may choose their Geography courses from those that comprise the B.A. Minor Concentration Geography program.
Electives (6 credits)

8.2.9 Bachelor of Education (B.Ed.) - Secondary Science and Technology (120 credits)

The Bachelor of Education (B.Ed.) - Secondary Science and Technology 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 courses in Education (including field experiences) and courses in the subject area of the teaching specialization. Students also take 6 credits of free electives. For all teacher education programs, course sequencing is highly structured. For this reason, the advising information in this eCalendar section must be used in conjunction with the summary companion document (Program Overview) found at http://www.mcgill.ca/dise/progs/secscitech.

The Secondary Science and Technology program provides students with the subject matter expertise in the Living World, Earth and Space, the Material World, and the Technological World needed to teach the secondary science curriculum in Quebec schools.

Please note that graduates of teacher education programs are recommended by the University for Quebec certification to the Ministry (Education). 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."

Note: Students entering this program from CEGEP or with Advanced Standing should have completed two biology courses, two chemistry courses, two math courses and two physics courses at the CEGEP level. Students entering from CEGEP 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.

Freshman Program - Basic Sciences

Freshmen in the Science and Technology program must complete the 29 to 30 credits of Basic Science courses listed below in their first year of studies.

Fall term: BIOL 111, CHEM 110, MATH 139 or MATH 140 or MATH 150, PHYS 101 or PHYS 131
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.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 111</td>
<td>3</td>
<td>Principles: Organismal Biology</td>
</tr>
<tr>
<td>BIOL 112</td>
<td>3</td>
<td>Cell and Molecular Biology</td>
</tr>
<tr>
<td>CHEM 110</td>
<td>4</td>
<td>General Chemistry 1</td>
</tr>
<tr>
<td>CHEM 120</td>
<td>4</td>
<td>General Chemistry 2</td>
</tr>
<tr>
<td>MATH 139</td>
<td>4</td>
<td>Calculus 1 with Precalculus</td>
</tr>
<tr>
<td>MATH 140</td>
<td>3</td>
<td>Calculus 1</td>
</tr>
<tr>
<td>MATH 141</td>
<td>4</td>
<td>Calculus 2</td>
</tr>
<tr>
<td>MATH 150</td>
<td>4</td>
<td>Calculus A</td>
</tr>
<tr>
<td>MATH 151</td>
<td>4</td>
<td>Calculus B</td>
</tr>
<tr>
<td>PHYS 101</td>
<td>4</td>
<td>Introductory Physics - Mechanics</td>
</tr>
<tr>
<td>PHYS 102</td>
<td>4</td>
<td>Introductory Physics - Electromagnetism</td>
</tr>
<tr>
<td>PHYS 131</td>
<td>4</td>
<td>Mechanics and Waves</td>
</tr>
<tr>
<td>PHYS 142</td>
<td>4</td>
<td>Electromagnetism and Optics</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEAP 250</td>
<td>3</td>
<td>Research Essay &amp; Rhetoric</td>
</tr>
<tr>
<td>EDEM 220</td>
<td>3</td>
<td>Contemporary Issues in Education</td>
</tr>
<tr>
<td>FRSL 101</td>
<td>3</td>
<td>Beginners French 1</td>
</tr>
<tr>
<td>FRSL 102</td>
<td>3</td>
<td>Beginners French 2</td>
</tr>
<tr>
<td>FRSL 207D1</td>
<td>3</td>
<td>Elementary French 01</td>
</tr>
<tr>
<td>FRSL 207D2</td>
<td>3</td>
<td>Elementary French 01</td>
</tr>
</tbody>
</table>
FRSL 211D1 (3) Oral and Written French 1
FRSL 211D2 (3) Oral and Written French 1

**Required Courses (57 credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credit(s)</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDEC 201</td>
<td>(1)</td>
<td>First Year Professional Seminar</td>
</tr>
<tr>
<td>EDEC 215</td>
<td>(0)</td>
<td>English Exam for Teacher Certification</td>
</tr>
<tr>
<td>EDEC 233</td>
<td>(3)</td>
<td>Indigenous Education</td>
</tr>
<tr>
<td>EDEC 247</td>
<td>(3)</td>
<td>Policy Issues in Quebec Education</td>
</tr>
<tr>
<td>EDEC 254</td>
<td>(1)</td>
<td>Second Professional Seminar (Secondary)</td>
</tr>
<tr>
<td>EDEC 262</td>
<td>(3)</td>
<td>Media, Technology and Education</td>
</tr>
<tr>
<td>EDEC 351</td>
<td>(2)</td>
<td>Third Professional Seminar (Secondary)</td>
</tr>
<tr>
<td>EDEC 404</td>
<td>(3)</td>
<td>Fourth Year Professional Seminar (Sec)</td>
</tr>
<tr>
<td>EDES 335</td>
<td>(3)</td>
<td>Teaching Secondary Science 1</td>
</tr>
<tr>
<td>EDES 350</td>
<td>(3)</td>
<td>Classroom Practices</td>
</tr>
<tr>
<td>EDES 435</td>
<td>(3)</td>
<td>Teaching Secondary Science 2</td>
</tr>
<tr>
<td>EDFE 200</td>
<td>(2)</td>
<td>First Field Experience (K/Elem &amp; Secondary)</td>
</tr>
<tr>
<td>EDFE 254</td>
<td>(3)</td>
<td>Second Field Experience (Secondary)</td>
</tr>
<tr>
<td>EDFE 351</td>
<td>(8)</td>
<td>Third Field Experience (Secondary)</td>
</tr>
<tr>
<td>EDFE 451</td>
<td>(7)</td>
<td>Fourth Field Experience (Secondary)</td>
</tr>
<tr>
<td>EDPE 300</td>
<td>(3)</td>
<td>Educational Psychology</td>
</tr>
<tr>
<td>EDPE 304</td>
<td>(3)</td>
<td>Measurement and Evaluation</td>
</tr>
<tr>
<td>EDPI 309</td>
<td>(3)</td>
<td>Diverse Learners</td>
</tr>
<tr>
<td>EDPI 341</td>
<td>(3)</td>
<td>Instruction in Inclusive Schools</td>
</tr>
</tbody>
</table>

**Complementary Courses (6 credits)**

6 credits selected as described below:

**Equity Education**

3 credits from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credit(s)</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDEC 248</td>
<td>(3)</td>
<td>Equity and Education</td>
</tr>
<tr>
<td>EDEC 249</td>
<td>(3)</td>
<td>Global Education and Social Justice</td>
</tr>
</tbody>
</table>

**Philosophy of Education**

3 credits from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credit(s)</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDEC 260</td>
<td>(3)</td>
<td>Philosophical Foundations</td>
</tr>
<tr>
<td>EDEC 261</td>
<td>(3)</td>
<td>Philosophy of Catholic Education</td>
</tr>
</tbody>
</table>

**Secondary Science and Technology (51 credits)**

51 credits in designated science courses selected to provide subject matter expertise in the four areas of:

- the Material World
- the Living World
- the Technological World
All students need to plan their course selections with attention to the prerequisites.

**Required Courses (15 credits)**

3 credits of Statistics:

- **MATH 203** (3) Principles of Statistics 1

3 credits of History of Science:

- **EDTL 520** (3) Perspectives on Knowledge in Mathematics and Science

3 credits of the Material World:

- **CHEM 281** (3) Inorganic Chemistry 1

3 credits of the Living World:

- **BIOL 206** (3) Methods in Biology of Organisms

3 credits of the Technological World:

- **EDTL 525** (3) Teaching Science and Technology

**Core Complementary Courses (9 credits)**

The Living World

3 credits from:

- **BIOL 200** (3) Molecular Biology
- **BIOL 206** (3) Methods in Biology of Organisms
- **LSCI 202** (3) Molecular Cell Biology

* Students select either BIOL 200 or LSCI 202, but not both.

The Material World

2-3 credits from:

- **CHEM 203** (3) Survey of Physical Chemistry
- **CHEM 223** (2) Introductory Physical Chemistry 1

4 credits from:

- **CHEM 212** (4) Introductory Organic Chemistry 1
- **CHEM 232** (4) Organic Chemistry Principles

**Complementary Courses (27 credits)**

At least 9 of the 27 credits must be taken at the 300 level or above, distributed as follows:

- 3 to 15 credits from the Living World complementary list;
- 3 to 18 credits from Earth and Space complementary list;
- 3 to 18 credits from Earth and Space - Environment complementary list;
- 0 to 15 credits from the Material World complementary list;
- 3 to 12 credits from the Technological World complementary list.

Students select a minimum of 3 credits to a maximum of 15 credits from the following lists:

**Cell and Molecular Biology**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 201</td>
<td>3</td>
<td>Cell Biology and Metabolism</td>
</tr>
<tr>
<td>BIOL 202</td>
<td>3</td>
<td>Basic Genetics</td>
</tr>
<tr>
<td>BIOL 300</td>
<td>3</td>
<td>Molecular Biology of the Gene</td>
</tr>
<tr>
<td>BIOL 301</td>
<td>4</td>
<td>Cell and Molecular Laboratory</td>
</tr>
<tr>
<td>BIOL 313</td>
<td>3</td>
<td>Eukaryotic Cell Biology</td>
</tr>
</tbody>
</table>

**Human and Organismal Biology**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 205</td>
<td>3</td>
<td>Biology of Organisms</td>
</tr>
<tr>
<td>EDKP 292</td>
<td>3</td>
<td>Nutrition and Wellness</td>
</tr>
<tr>
<td>EDKP 395</td>
<td>3</td>
<td>Exercise Physiology</td>
</tr>
<tr>
<td>NUTR 207</td>
<td>3</td>
<td>Nutrition and Health</td>
</tr>
<tr>
<td>NUTR 307</td>
<td>3</td>
<td>Human Nutrition</td>
</tr>
<tr>
<td>PHGY 209</td>
<td>3</td>
<td>Mammalian Physiology 1</td>
</tr>
<tr>
<td>PHGY 210</td>
<td>3</td>
<td>Mammalian Physiology 2</td>
</tr>
</tbody>
</table>

**Populations, Ecosystems, and Evolution**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 215</td>
<td>3</td>
<td>Introduction to Ecology and Evolution</td>
</tr>
<tr>
<td>BIOL 240</td>
<td>3</td>
<td>Monteregian Flora</td>
</tr>
<tr>
<td>BIOL 304</td>
<td>3</td>
<td>Evolution</td>
</tr>
<tr>
<td>BIOL 305</td>
<td>3</td>
<td>Animal Diversity</td>
</tr>
<tr>
<td>BIOL 308</td>
<td>3</td>
<td>Ecological Dynamics</td>
</tr>
<tr>
<td>BIOL 310</td>
<td>3</td>
<td>Biodiversity and Ecosystems</td>
</tr>
<tr>
<td>BIOL 331</td>
<td>3</td>
<td>Ecology/Behaviour Field Course</td>
</tr>
<tr>
<td>BIOL 352</td>
<td>3</td>
<td>Vertebrate Evolution: Dinosaurs and Mammals</td>
</tr>
<tr>
<td>ENVB 305</td>
<td>3</td>
<td>Population &amp; Community Ecology</td>
</tr>
<tr>
<td>EPSC 334</td>
<td>3</td>
<td>Invertebrate Paleontology</td>
</tr>
</tbody>
</table>

**Earth and Space**

Students select a minimum of 3 credits to a maximum of 18 credits from the following list:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATOC 214</td>
<td>3</td>
<td>Introduction: Physics of the Atmosphere</td>
</tr>
<tr>
<td>ATOC 215</td>
<td>3</td>
<td>Oceans, Weather and Climate</td>
</tr>
<tr>
<td>ATOC 219</td>
<td>3</td>
<td>Introduction to Atmospheric Chemistry</td>
</tr>
<tr>
<td>ATOC 309</td>
<td>3</td>
<td>Weather Radars and Satellites</td>
</tr>
<tr>
<td>ATOC 315</td>
<td>3</td>
<td>Thermodynamics and Convection</td>
</tr>
<tr>
<td>ENVR 202</td>
<td>3</td>
<td>The Evolving Earth</td>
</tr>
<tr>
<td>EPSC 201</td>
<td>3</td>
<td>Understanding Planet Earth</td>
</tr>
<tr>
<td>EPSC 203</td>
<td>3</td>
<td>Structural Geology</td>
</tr>
<tr>
<td>EPSC 210</td>
<td>3</td>
<td>Introductory Mineralogy</td>
</tr>
<tr>
<td>Course Code</td>
<td>Credits</td>
<td>Course Title</td>
</tr>
<tr>
<td>-------------</td>
<td>---------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>EPSC 212</td>
<td>(3)</td>
<td>Introductory Petrology</td>
</tr>
<tr>
<td>EPSC 220</td>
<td>(3)</td>
<td>Principles of Geochemistry</td>
</tr>
<tr>
<td>EPSC 221</td>
<td>(3)</td>
<td>General Geology</td>
</tr>
<tr>
<td>EPSC 225</td>
<td>(1)</td>
<td>Properties of Minerals</td>
</tr>
<tr>
<td>EPSC 233</td>
<td>(3)</td>
<td>Earth and Life History</td>
</tr>
<tr>
<td>EPSC 320</td>
<td>(3)</td>
<td>Elementary Earth Physics</td>
</tr>
<tr>
<td>EPSC 330</td>
<td>(3)</td>
<td>Earthquakes and Earth Structure</td>
</tr>
<tr>
<td>EPSC 350</td>
<td>(3)</td>
<td>Tectonics</td>
</tr>
<tr>
<td>ESYS 200</td>
<td>(3)</td>
<td>Earth System Processes</td>
</tr>
<tr>
<td>ESYS 300</td>
<td>(3)</td>
<td>Investigating the Earth System</td>
</tr>
<tr>
<td>ESYS 301</td>
<td>(3)</td>
<td>Earth System Modelling</td>
</tr>
<tr>
<td>GEOG 272</td>
<td>(3)</td>
<td>Earth's Changing Surface</td>
</tr>
<tr>
<td>GEOG 321</td>
<td>(3)</td>
<td>Climatic Environments</td>
</tr>
<tr>
<td>PHYS 214</td>
<td>(3)</td>
<td>Introductory Astrophysics</td>
</tr>
</tbody>
</table>

### Earth and Space - Environment

Students select a minimum of 3 credits to a maximum of 18 credits from the following list:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVR 200</td>
<td>(3)</td>
<td>The Global Environment</td>
</tr>
<tr>
<td>ENVR 201</td>
<td>(3)</td>
<td>Society, Environment and Sustainability</td>
</tr>
<tr>
<td>ENVR 203</td>
<td>(3)</td>
<td>Knowledge, Ethics and Environment</td>
</tr>
<tr>
<td>ENVR 301</td>
<td>(3)</td>
<td>Environmental Research Design</td>
</tr>
<tr>
<td>GEOG 200</td>
<td>(3)</td>
<td>Geographical Perspectives: World Environmental Problems</td>
</tr>
<tr>
<td>GEOG 203</td>
<td>(3)</td>
<td>Environmental Systems</td>
</tr>
<tr>
<td>GEOG 205</td>
<td>(3)</td>
<td>Global Change: Past, Present and Future</td>
</tr>
<tr>
<td>GEOG 221</td>
<td>(3)</td>
<td>Environment and Health</td>
</tr>
</tbody>
</table>

### The Material World

Students select a maximum of 15 credits from the following list:

Note: Students who plan to teach Grade 11 Chemistry or Physics should select the maximum 15 credits from this list:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 222</td>
<td>(4)</td>
<td>Introductory Organic Chemistry 2</td>
</tr>
<tr>
<td>CHEM 243</td>
<td>(2)</td>
<td>Introductory Physical Chemistry 2</td>
</tr>
<tr>
<td>CHEM 253</td>
<td>(1)</td>
<td>Introductory Physical Chemistry 1 Laboratory</td>
</tr>
<tr>
<td>CHEM 263</td>
<td>(1)</td>
<td>Introductory Physical Chemistry 2 Laboratory</td>
</tr>
<tr>
<td>CHEM 267</td>
<td>(3)</td>
<td>Introductory Chemical Analysis</td>
</tr>
<tr>
<td>CHEM 302</td>
<td>(3)</td>
<td>Introductory Organic Chemistry 3</td>
</tr>
<tr>
<td>CHEM 319</td>
<td>(3)</td>
<td>Chemistry of Energy, Storage and Utilization</td>
</tr>
<tr>
<td>CHEM 381</td>
<td>(3)</td>
<td>Inorganic Chemistry 2</td>
</tr>
<tr>
<td>CHEM 392</td>
<td>(3)</td>
<td>Integrated Inorganic/Organic Laboratory</td>
</tr>
<tr>
<td>MATH 222</td>
<td>(3)</td>
<td>Calculus 3</td>
</tr>
<tr>
<td>PHYS 224</td>
<td>(3)</td>
<td>Physics of Music</td>
</tr>
<tr>
<td>PHYS 230</td>
<td>(3)</td>
<td>Dynamics of Simple Systems</td>
</tr>
<tr>
<td>PHYS 232</td>
<td>(3)</td>
<td>Heat and Waves</td>
</tr>
<tr>
<td>Course Code</td>
<td>Credits</td>
<td>Course Name</td>
</tr>
<tr>
<td>------------</td>
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</tr>
<tr>
<td>PHYS 241</td>
<td>3</td>
<td>Signal Processing</td>
</tr>
<tr>
<td>PHYS 242</td>
<td>2</td>
<td>Electricity and Magnetism</td>
</tr>
<tr>
<td>PHYS 257</td>
<td>3</td>
<td>Experimental Methods 1</td>
</tr>
<tr>
<td>PHYS 258</td>
<td>3</td>
<td>Experimental Methods 2</td>
</tr>
<tr>
<td>PHYS 271</td>
<td>3</td>
<td>Introduction to Quantum Physics</td>
</tr>
<tr>
<td>PHYS 328</td>
<td>3</td>
<td>Electronics</td>
</tr>
<tr>
<td>PHYS 331</td>
<td>3</td>
<td>Topics in Classical Mechanics</td>
</tr>
<tr>
<td>PHYS 333</td>
<td>3</td>
<td>Thermal and Statistical Physics</td>
</tr>
<tr>
<td>PHYS 339</td>
<td>3</td>
<td>Measurements Laboratory in General Physics</td>
</tr>
<tr>
<td>PHYS 340</td>
<td>3</td>
<td>Majors Electricity and Magnetism</td>
</tr>
<tr>
<td>PHYS 342</td>
<td>3</td>
<td>Majors Electromagnetic Waves</td>
</tr>
<tr>
<td>PHYS 432</td>
<td>3</td>
<td>Physics of Fluids</td>
</tr>
<tr>
<td>PHYS 434</td>
<td>3</td>
<td>Optics</td>
</tr>
<tr>
<td>PHYS 439</td>
<td>3</td>
<td>Majors Laboratory in Modern Physics</td>
</tr>
<tr>
<td>PHYS 446</td>
<td>3</td>
<td>Majors Quantum Physics</td>
</tr>
<tr>
<td>PHYS 447</td>
<td>3</td>
<td>Applications of Quantum Mechanics</td>
</tr>
</tbody>
</table>

The Technological World

Students select a minimum of 3 credits to a maximum of 12 credits from the following list:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP 102*</td>
<td>3</td>
<td>Computers and Computing</td>
</tr>
<tr>
<td>COMP 202**</td>
<td>3</td>
<td>Foundations of Programming</td>
</tr>
<tr>
<td>COMP 206</td>
<td>3</td>
<td>Introduction to Software Systems</td>
</tr>
<tr>
<td>COMP 280*</td>
<td>3</td>
<td>History and Philosophy of Computing</td>
</tr>
<tr>
<td>COMP 364</td>
<td>3</td>
<td>Computer Tools for Life Sciences</td>
</tr>
<tr>
<td>MATH 204</td>
<td>3</td>
<td>Principles of Statistics 2</td>
</tr>
</tbody>
</table>

* 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.

Elective Courses (6 credits)

8.2.10 Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Biology - Cell/Molecular with Minor Chemistry for Teachers (135 credits)

Note: New students are no longer being admitted to this program.

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 fulfill 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 fulfill 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 (SOUA) to obtain advice and approval of their course selection. Full details are available on the SOUSA website at http://www.mcgill.ca/science/student. Academic advising is also available by email. The address is newstudentadvising.science@mcgill.ca.
Students normally complete 30 credits which must include at least seven 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 seven 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/student/newstudents/u0/bscfreshman/specific.
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)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 111</td>
<td>(3)</td>
<td>Principles: Organismal Biology</td>
</tr>
<tr>
<td>BIOL 112</td>
<td>(3)</td>
<td>Cell and Molecular Biology</td>
</tr>
<tr>
<td>CHEM 110</td>
<td>(4)</td>
<td>General Chemistry 1</td>
</tr>
<tr>
<td>CHEM 115*</td>
<td>(4)</td>
<td>Accelerated General Chemistry: Giants in Science</td>
</tr>
<tr>
<td>CHEM 120*</td>
<td>(4)</td>
<td>General Chemistry 2</td>
</tr>
<tr>
<td>COMP 202</td>
<td>(3)</td>
<td>Foundations of Programming</td>
</tr>
<tr>
<td>ESYS 104</td>
<td>(3)</td>
<td>The Earth System</td>
</tr>
<tr>
<td>MATH 133</td>
<td>(3)</td>
<td>Linear Algebra and Geometry</td>
</tr>
<tr>
<td>PSYC 100</td>
<td>(3)</td>
<td>Introduction to Psychology</td>
</tr>
</tbody>
</table>
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/student/newstudents/u0/bscfreshman/suggested-elective-courses. Certain courses offered by other faculties may also be taken, but some restrictions apply.

Consult the SOUSA website at http://www.mcgill.ca/science/student/continuingstudents/bsc/outside for more information about taking courses from other faculties.

Education Component (60 credits)

60 credits of Education Component consisting 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 Exam for Teacher Certification
- 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
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)  Diverse Learners
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)  Indigenous Education
EDEC 248*  (3)  Equity and 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
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
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.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 203</td>
<td>3</td>
<td>Survey of Physical Chemistry</td>
</tr>
<tr>
<td>CHEM 212*</td>
<td>4</td>
<td>Introductory Organic Chemistry 1</td>
</tr>
<tr>
<td>CHEM 222*</td>
<td>4</td>
<td>Introductory Organic Chemistry 2</td>
</tr>
<tr>
<td>CHEM 253</td>
<td>1</td>
<td>Introductory Physical Chemistry 1 Laboratory</td>
</tr>
<tr>
<td>CHEM 267</td>
<td>3</td>
<td>Introductory Chemical Analysis</td>
</tr>
<tr>
<td>CHEM 281</td>
<td>3</td>
<td>Inorganic Chemistry 1</td>
</tr>
</tbody>
</table>

**Additional Science Courses**
15 credits selected as follows:

12 credits:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 210</td>
<td>3</td>
<td>Perspectives of Science</td>
</tr>
<tr>
<td>CHEM 381</td>
<td>3</td>
<td>Inorganic Chemistry 2</td>
</tr>
<tr>
<td>MATH 203</td>
<td>3</td>
<td>Principles of Statistics 1</td>
</tr>
<tr>
<td>MATH 222</td>
<td>3</td>
<td>Calculus 3</td>
</tr>
</tbody>
</table>

plus 3 credits, one of:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 180</td>
<td>3</td>
<td>World of Chemistry: Environment</td>
</tr>
<tr>
<td>CHEM 181</td>
<td>3</td>
<td>World of Chemistry: Food</td>
</tr>
<tr>
<td>CHEM 182</td>
<td>3</td>
<td>World of Chemistry: Technology</td>
</tr>
<tr>
<td>CHEM 183</td>
<td>3</td>
<td>World of Chemistry: Drugs</td>
</tr>
</tbody>
</table>

**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.

8.2.11 Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Biology - Cell/Molecular with Minor Physics for Teachers (135 credits)

Note: New students are no longer being admitted to this program.
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 fulfill 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 Physics 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 Physics.

To fulfill 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 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/student. Academic advising is also available by email. The address is newstudentadvising.science@mcgill.ca.

Students normally complete 30 credits which must include at least seven 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 seven 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/student/newstudents/u0/bscfreshman/specific.

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)
### Principles: Organismal Biology (3) BIOL 111
### Cell and Molecular Biology (3) BIOL 112
### General Chemistry 1 (4) CHEM 110
### Accelerated General Chemistry: Giants in Science (4) CHEM 115*
### General Chemistry 2 (4) CHEM 120*
### Foundations of Programming (3) COMP 202
### The Earth System (3) ESYS 104
### Linear Algebra and Geometry (3) MATH 133
### Introduction to Psychology (3) PSYC 100

**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/student/newstudents/u0/bscfreshman/suggested-elective-courses](http://www.mcgill.ca/science/student/newstudents/u0/bscfreshman/suggested-elective-courses). Certain courses offered by other faculties may also be taken, but some restrictions apply.


**Education Component (60 credits)**

60 credits of Education Component, consisting 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 Exam for Teacher Certification
EDEC 247* (3) Policy Issues in Quebec Education
EDEC 254 (1) Second Professional Seminar (Secondary)
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EDES 350 (3) Classroom Practices
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) Diverse Learners
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) Indigenous Education
EDEC 248* (3) Equity and 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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 200</td>
<td>3</td>
<td>Molecular Biology</td>
</tr>
<tr>
<td>BIOL 201</td>
<td>3</td>
<td>Cell Biology and Metabolism</td>
</tr>
<tr>
<td>BIOL 202</td>
<td>3</td>
<td>Basic Genetics</td>
</tr>
<tr>
<td>BIOL 205</td>
<td>3</td>
<td>Biology of Organisms</td>
</tr>
<tr>
<td>BIOL 215</td>
<td>3</td>
<td>Introduction to Ecology and Evolution</td>
</tr>
<tr>
<td>BIOL 300</td>
<td>3</td>
<td>Molecular Biology of the Gene</td>
</tr>
<tr>
<td>BIOL 301</td>
<td>4</td>
<td>Cell and Molecular Laboratory</td>
</tr>
<tr>
<td>BIOL 303</td>
<td>3</td>
<td>Developmental Biology</td>
</tr>
<tr>
<td>CHEM 212*</td>
<td>4</td>
<td>Introductory Organic Chemistry 1</td>
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</table>

### Complementary Courses

At least 7 credits selected from:

<table>
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<tr>
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<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 306</td>
<td>3</td>
<td>Neural Basis of Behaviour</td>
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<tr>
<td>BIOL 313</td>
<td>3</td>
<td>Eukaryotic Cell Biology</td>
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<tr>
<td>BIOL 314</td>
<td>3</td>
<td>Molecular Biology of Oncogenes</td>
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<td>BIOL 370</td>
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<td>Human Genetics Applied</td>
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<tr>
<td>BIOL 373</td>
<td>3</td>
<td>Biometry</td>
</tr>
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<td>BIOL 413</td>
<td>1</td>
<td>Directed Reading</td>
</tr>
<tr>
<td>BIOL 568</td>
<td>3</td>
<td>Topics on the Human Genome</td>
</tr>
<tr>
<td>BIOL 575</td>
<td>3</td>
<td>Human Biochemical Genetics</td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 230</td>
<td>3</td>
<td>Dynamics of Simple Systems</td>
</tr>
<tr>
<td>PHYS 251</td>
<td>3</td>
<td>Honours Classical Mechanics 1</td>
</tr>
</tbody>
</table>

One of:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 232</td>
<td>3</td>
<td>Heat and Waves</td>
</tr>
<tr>
<td>PHYS 253</td>
<td>3</td>
<td>Thermal Physics</td>
</tr>
</tbody>
</table>

One of:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 241</td>
<td>3</td>
<td>Signal Processing</td>
</tr>
<tr>
<td>PHYS 258</td>
<td>3</td>
<td>Experimental Methods 2</td>
</tr>
</tbody>
</table>
One of:

PHYS 214 (3) Introductory Astrophysics
PHYS 224 (3) Physics of Music
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.

8.2.12 Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Biology - Organismal with Minor Chemistry for Teachers (135 credits)

Note: New students are no longer being admitted to this program.

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 fulfill 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 fulfill 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 (SOUSSA) 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.

Students normally complete 30 credits which must include at least seven 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 seven 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/student/newstudents/u0/bscfreshman/.

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)

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</table>

Second calculus course, one of:
Calculus 2 (4) MATH 141
Calculus B (4) MATH 151

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/new_students/u0/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/continuing_students/bsc/outside/ for more information about taking courses from other faculties.

Education Component (60 credits)
60 credits of Education Component consisting 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 Exam for Teacher Certification
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
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) Diverse Learners
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) Indigenous Education
- EDEC 248* (3) Equity and 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
- BIOL 310 (3) Biodiversity and Ecosystems
- BIOL 331 (3) Ecology/Behaviour Field Course
- BIOL 342 (3) Contemporary Topics in Aquatic Ecology
- BIOL 350 (3) Insect Biology and Control
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 267 (3) Introductory Chemical Analysis**

**CHEM 281 (3) Inorganic Chemistry 1**

**Additional Science Courses (15 credits)**

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.

**8.2.13 Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Biology - Organismal with Minor Physics for Teachers (135 credits)**

Note: New students are no longer being admitted to this program.

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/student. Academic advising is also available by email. The address is newstudentadvising.science@mcgill.ca.

Students normally complete 30 credits which must include at least seven 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 seven 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/student/newstudents/u0/bscfreshman/specific.

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)

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<td>Introductory Physics - Electromagnetism</td>
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<td>PHYS 142</td>
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**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/student/newstudents/u0/bscfreshman/suggested-elective-courses](http://www.mcgill.ca/science/student/newstudents/u0/bscfreshman/suggested-elective-courses).

Certain courses offered by other faculties may also be taken, but some restrictions apply. Consult the SOUSA website at [http://www.mcgill.ca/science/student/continuingstudents/bsc/outside](http://www.mcgill.ca/science/student/continuingstudents/bsc/outside) for more information about taking courses from other faculties.

**Education Component (60 credits)**

60 credits of Education Component, consisting 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 Exam for Teacher Certification
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
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) Diverse Learners
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) Indigenous Education
- EDEC 248* (3) Equity and 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 (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 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 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 selected from:

BIOL 303 (3) Developmental Biology
BIOL 305 (3) Animal Diversity
BIOL 306 (3) Neural Basis of Behaviour
BIOL 307 (3) Behavioural Ecology
BIOL 310 (3) Biodiversity and Ecosystems
BIOL 331 (3) Ecology/Behaviour Field Course
BIOL 342 (3) Contemporary Topics in Aquatic Ecology
BIOL 350 (3) Insect Biology and Control
BIOL 352 (3) Vertebrate Evolution: Dinosaurs and Mammals
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 224** (3) Physics of Music
**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.

### 8.2.14 Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Chemistry with Minor Biology for Teachers (135 credits)

**Note:** New students are no longer being admitted to this program.

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 (SOUAS) to obtain advice and approval of their course selection. Full details are available on the SOUSA website at http://www.mcgill.ca/science/student.

Academic advising is also available by email. The address is newstudentadvising.science@mcgill.ca.

Students normally complete 30 credits which must include at least seven 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 seven 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/student.

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)

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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/student/newstudents/bsf/bacfreshman/suggested-elective-courses/. Certain courses offered by other faculties may also be taken, but some restrictions apply.

Consult the SOUSA website at http://www.mcgill.ca/science/student/continuingstudents/bsc/outside for more information about taking courses from other faculties.

Education Component (60 credits)
60 credits of Education Component, consisting 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 Exam for Teacher Certification
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
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) Diverse Learners
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) Indigenous Education
- EDEC 248* (3) Equity and 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**

18 credits selected from:

- CHEM 219 (3) Introduction to Atmospheric Chemistry
- CHEM 263 (1) Introductory Physical Chemistry 2 Laboratory
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 302</td>
<td>(3)</td>
<td>Introductory Organic Chemistry 3</td>
</tr>
<tr>
<td>CHEM 334</td>
<td>(3)</td>
<td>Advanced Materials</td>
</tr>
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<td>CHEM 367</td>
<td>(3)</td>
<td>Instrumental Analysis 1</td>
</tr>
<tr>
<td>CHEM 381</td>
<td>(3)</td>
<td>Inorganic Chemistry 2</td>
</tr>
<tr>
<td>CHEM 482</td>
<td>(3)</td>
<td>Organic Chemistry: Natural Products</td>
</tr>
<tr>
<td>CHEM 531</td>
<td>(3)</td>
<td>Chemistry of Inorganic Materials</td>
</tr>
<tr>
<td>CHEM 571</td>
<td>(3)</td>
<td>Polymer Synthesis</td>
</tr>
<tr>
<td>CHEM 582</td>
<td>(3)</td>
<td>Supramolecular Chemistry</td>
</tr>
<tr>
<td>CHEM 591</td>
<td>(3)</td>
<td>Bioinorganic Chemistry</td>
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</table>

**Minor Biology (24 credits)**

**Required Courses**

15 credits

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<tr>
<td>BIOL 202</td>
<td>(3)</td>
<td>Basic Genetics</td>
</tr>
<tr>
<td>BIOL 205</td>
<td>(3)</td>
<td>Biology of Organisms</td>
</tr>
<tr>
<td>BIOL 215</td>
<td>(3)</td>
<td>Introduction to Ecology and Evolution</td>
</tr>
</tbody>
</table>

**Complementary Courses**

9 credits selected from the Biology Department's course offerings, at the 300 level or above.

**Additional Science Courses (9 credits)**

<table>
<thead>
<tr>
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<th>Credits</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>BIOL 210</td>
<td>(3)</td>
<td>Perspectives of Science</td>
</tr>
<tr>
<td>MATH 203</td>
<td>(3)</td>
<td>Principles of Statistics 1</td>
</tr>
<tr>
<td>MATH 222</td>
<td>(3)</td>
<td>Calculus 3</td>
</tr>
</tbody>
</table>

**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.

**8.2.15 Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Chemistry with Minor Physics for Teachers (135 credits)**

Note: New students are no longer being admitted to this program.

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

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 (SOUUSA) to obtain advice and approval of their course selection. Full details are available on the SOUSA website at http://www.mcgill.ca/science/student. Academic advising is also available by email. The address is newstudentadvising.science@mcgill.ca.

Students normally complete 30 credits which must include at least seven 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 seven 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/student/newstudents/u0/bscfreshman/specific.

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)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
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<tbody>
<tr>
<td>BIOL 111</td>
<td>3</td>
<td>Principles: Organismal Biology</td>
</tr>
<tr>
<td>BIOL 112</td>
<td>3</td>
<td>Cell and Molecular Biology</td>
</tr>
<tr>
<td>CHEM 110</td>
<td>4</td>
<td>General Chemistry 1</td>
</tr>
<tr>
<td>CHEM 115*</td>
<td>4</td>
<td>Accelerated General Chemistry: Giants in Science</td>
</tr>
<tr>
<td>CHEM 120*</td>
<td>4</td>
<td>General Chemistry 2</td>
</tr>
<tr>
<td>COMP 202</td>
<td>3</td>
<td>Foundations of Programming</td>
</tr>
<tr>
<td>ESYS 104</td>
<td>3</td>
<td>The Earth System</td>
</tr>
</tbody>
</table>
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/student/newstudents/ad/bscfreshman/suggested-elective-courses. Certain courses offered by other faculties may also be taken, but some restrictions apply.

Consult the SOUSA website at: http://www.mcgill.ca/science/student/continuingstudents/bsc/outside for more information about taking courses from other faculties.

Education Component (60 credits)

60 credits of Education Component, consisting 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 Exam for Teacher Certification
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)
<table>
<thead>
<tr>
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<tr>
<td>EDEC 404</td>
<td>3</td>
<td>Fourth Year Professional Seminar (Sec)</td>
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<tr>
<td>EDES 335</td>
<td>3</td>
<td>Teaching Secondary Science 1</td>
</tr>
<tr>
<td>EDES 350</td>
<td>3</td>
<td>Classroom Practices</td>
</tr>
<tr>
<td>EDES 435</td>
<td>3</td>
<td>Teaching Secondary Science 2</td>
</tr>
<tr>
<td>EDFE 200</td>
<td>2</td>
<td>First Field Experience (K/Elem &amp; Secondary)</td>
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<tr>
<td>EDFE 254</td>
<td>3</td>
<td>Second Field Experience (Secondary)</td>
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<td>EDFE 351</td>
<td>8</td>
<td>Third Field Experience (Secondary)</td>
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<td>EDFE 451</td>
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<td>Fourth Field Experience (Secondary)</td>
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<td>EDPE 300</td>
<td>3</td>
<td>Educational Psychology</td>
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<tr>
<td>EDPE 304</td>
<td>3</td>
<td>Measurement and Evaluation</td>
</tr>
<tr>
<td>EDPI 309</td>
<td>3</td>
<td>Diverse Learners</td>
</tr>
<tr>
<td>EDPI 341</td>
<td>3</td>
<td>Instruction in Inclusive Schools</td>
</tr>
</tbody>
</table>

**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) Indigenous Education
- EDEC 248* (3) Equity and 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:

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<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
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<td>CHEM 219</td>
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<td>Introduction to Atmospheric Chemistry</td>
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<tr>
<td>CHEM 263</td>
<td>1</td>
<td>Introductory Physical Chemistry 2 Laboratory</td>
</tr>
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<td>CHEM 302</td>
<td>3</td>
<td>Introductory Organic Chemistry 3</td>
</tr>
<tr>
<td>CHEM 334</td>
<td>3</td>
<td>Advanced Materials</td>
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<tr>
<td>CHEM 367</td>
<td>3</td>
<td>Instrumental Analysis 1</td>
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<td>CHEM 381</td>
<td>3</td>
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<tr>
<td>CHEM 482</td>
<td>3</td>
<td>Organic Chemistry: Natural Products</td>
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<tr>
<td>CHEM 531</td>
<td>3</td>
<td>Chemistry of Inorganic Materials</td>
</tr>
<tr>
<td>CHEM 571</td>
<td>3</td>
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</tr>
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<td>3</td>
<td>Supramolecular Chemistry</td>
</tr>
<tr>
<td>CHEM 591</td>
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<td>Bioinorganic Chemistry</td>
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</table>

### Minor Physics (18 credits)

**Required Course**

3 credits

<table>
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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>PHYS 257</td>
<td>3</td>
<td>Experimental Methods 1</td>
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**Complementary Courses**

15 credits to be selected as follows:

One of:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PHYS 230</td>
<td>3</td>
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<td>PHYS 251</td>
<td>3</td>
<td>Honours Classical Mechanics 1</td>
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</table>

One of:

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<thead>
<tr>
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<th>Credits</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>PHYS 232</td>
<td>3</td>
<td>Heat and Waves</td>
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<tr>
<td>PHYS 253</td>
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<td>Thermal Physics</td>
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One of:

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<tr>
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<th>Credits</th>
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<tbody>
<tr>
<td>PHYS 241</td>
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<td>Signal Processing</td>
</tr>
<tr>
<td>PHYS 258</td>
<td>3</td>
<td>Experimental Methods 2</td>
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One of:

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<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PHYS 214</td>
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<td>Introductory Astrophysics</td>
</tr>
<tr>
<td>PHYS 260</td>
<td>3</td>
<td>Modern Physics and Relativity</td>
</tr>
<tr>
<td>PHYS 271</td>
<td>3</td>
<td>Introduction to Quantum Physics</td>
</tr>
</tbody>
</table>
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.

8.2.16 Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Physics with Minor Biology for Teachers (135 credits)

Note: New students are no longer being admitted to this program.

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 fulfill 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 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 fulfill 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 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/student. Academic advising is also available by email. The address is newstudentadvising.science@mcgill.ca.

Students normally complete 30 credits which must include at least seven 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 seven 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/student/newstudents/ut0/bscfreshman/specific.
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)

<table>
<thead>
<tr>
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<th>Description</th>
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</thead>
<tbody>
<tr>
<td>BIOL 111</td>
<td>3</td>
<td>Principles: Organismal Biology</td>
</tr>
<tr>
<td>BIOL 112</td>
<td>3</td>
<td>Cell and Molecular Biology</td>
</tr>
<tr>
<td>CHEM 110</td>
<td>4</td>
<td>General Chemistry 1</td>
</tr>
<tr>
<td>CHEM 115*</td>
<td>4</td>
<td>Accelerated General Chemistry: Giants in Science</td>
</tr>
<tr>
<td>CHEM 120*</td>
<td>4</td>
<td>General Chemistry 2</td>
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<td>COMP 202</td>
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<td>ESYS 104</td>
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<td>The Earth System</td>
</tr>
<tr>
<td>MATH 133</td>
<td>3</td>
<td>Linear Algebra and Geometry</td>
</tr>
<tr>
<td>PSYC 100</td>
<td>3</td>
<td>Introduction to Psychology</td>
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</table>

First calculus course, one of:

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<tr>
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<th>Credits</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>MATH 139</td>
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<td>Calculus 1 with Precalculus</td>
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<tr>
<td>MATH 140</td>
<td>3</td>
<td>Calculus 1</td>
</tr>
<tr>
<td>MATH 150</td>
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<td>Calculus A</td>
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</table>

Second calculus course, one of:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>MATH 141</td>
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<td>Calculus 2</td>
</tr>
<tr>
<td>MATH 151</td>
<td>4</td>
<td>Calculus B</td>
</tr>
</tbody>
</table>

First physics course, one of:

<table>
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<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 101</td>
<td>4</td>
<td>Introductory Physics - Mechanics</td>
</tr>
<tr>
<td>PHYS 131</td>
<td>4</td>
<td>Mechanics and Waves</td>
</tr>
</tbody>
</table>
Second physics course, one of:

<table>
<thead>
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<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 102</td>
<td>(4)</td>
<td>Introductory Physics - Electromagnetism</td>
</tr>
<tr>
<td>PHYS 142</td>
<td>(4)</td>
<td>Electromagnetism and Optics</td>
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</tbody>
</table>

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/student/newstudents/stu/bscfreshman/suggested-elective-courses](http://www.mcgill.ca/science/student/newstudents/stu/bscfreshman/suggested-elective-courses). Certain courses offered by other faculties may also be taken, but some restrictions apply.


Education Component (60 credits)

60 credits of Education Component, consisting 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.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Title</th>
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<tr>
<td>EDEC 201</td>
<td>(1)</td>
<td>First Year Professional Seminar</td>
</tr>
<tr>
<td>EDEC 215</td>
<td>(0)</td>
<td>English Exam for Teacher Certification</td>
</tr>
<tr>
<td>EDEC 247*</td>
<td>(3)</td>
<td>Policy Issues in Quebec Education</td>
</tr>
<tr>
<td>EDEC 254</td>
<td>(1)</td>
<td>Second Professional Seminar (Secondary)</td>
</tr>
<tr>
<td>EDEC 262*</td>
<td>(3)</td>
<td>Media, Technology and Education</td>
</tr>
<tr>
<td>EDEC 351</td>
<td>(2)</td>
<td>Third Professional Seminar (Secondary)</td>
</tr>
<tr>
<td>EDEC 404</td>
<td>(3)</td>
<td>Fourth Year Professional Seminar (Sec)</td>
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<td>EDES 350</td>
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<td>EDES 435</td>
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<td>EDPI 309*</td>
<td>(3)</td>
<td>Diverse Learners</td>
</tr>
<tr>
<td>EDPI 341</td>
<td>(3)</td>
<td>Instruction in Inclusive Schools</td>
</tr>
</tbody>
</table>

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) Indigenous Education
- EDEC 248* (3) Equity and 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
- 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 224 (3) Physics of Music
- PHYS 241 (3) Signal Processing
- PHYS 258 (3) Experimental Methods 2
- PHYS 534 (3) Nanoscience and Nanotechnology

or any 300- or 400-level course approved by an adviser.

**Minor Biology (24 credits)**

24-25 credits for the Minor Biology selected as follows:

- 15 credits of required courses
- 9-10 credits of complementary courses

**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
9-10 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

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.

8.2.17 Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Physics with Minor Chemistry for Teachers (135 credits)

Note: New students are no longer being admitted to this program.
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 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 (SOUUSA) to obtain advice and approval of their course selection. Full details are available on the SOUSA website at http://www.mcgill.ca/science/student. Academic advising is also available by email. The address is newstudentadvising.science@mcgill.ca.

Students normally complete 30 credits which must include at least seven 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 seven 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/student/newstudents/u0/bscfreshman/specific.

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)

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<tr>
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<td>Principles: Organismal Biology</td>
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<td>BIOL 112</td>
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<td>Cell and Molecular Biology</td>
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<td>CHEM 110</td>
<td>4</td>
<td>General Chemistry 1</td>
</tr>
<tr>
<td>CHEM 115*</td>
<td>4</td>
<td>Accelerated General Chemistry: Giants in Science</td>
</tr>
<tr>
<td>CHEM 120*</td>
<td>4</td>
<td>General Chemistry 2</td>
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<tr>
<td>COMP 202</td>
<td>3</td>
<td>Foundations of Programming</td>
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<td>ESYS 104</td>
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<td>The Earth System</td>
</tr>
<tr>
<td>MATH 133</td>
<td>3</td>
<td>Linear Algebra and Geometry</td>
</tr>
<tr>
<td>PSYC 100</td>
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<td>Introduction to Psychology</td>
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First calculus course, one of:

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<td>MATH 140</td>
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<td>Calculus 1</td>
</tr>
<tr>
<td>MATH 150</td>
<td>4</td>
<td>Calculus A</td>
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</tbody>
</table>

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/student/newstudents/ai0/bscfreshman/suggested-elective-courses. Certain courses offered by other faculties may also be taken, but some restrictions apply.
Consult the SOUSA website at: http://www.mcgill.ca/science/student/continuingstudents/bsc/outside for more information about taking courses from other faculties.

Education Component (60 credits)
60 credits of Education Component, consisting 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 Exam for Teacher Certification
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
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) Diverse Learners
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) Indigenous Education
EDEC 248* (3) Equity and 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 224 (3) Physics of Music
PHYS 241 (3) Signal Processing
PHYS 258 (3) Experimental Methods 2
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 267 (3) Introductory Chemical Analysis
- CHEM 281 (3) Inorganic Chemistry 1

Additional Science Courses (15 credits)
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.

8.2.18 Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Mathematics for Teachers (135 credits)

Note: New students are no longer being admitted to this program.

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 fulfill 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.

Students normally complete 30 credits which must include at least seven 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 seven 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/student/newstudents/u0/bscfreshman/specific.
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)

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</tr>
<tr>
<td>PSYC 100</td>
<td>3</td>
<td>Introduction to Psychology</td>
</tr>
</tbody>
</table>

First calculus course, one of:
Calculus 1 with Precalculus (4) MATH 139
Calculus 1 (3) MATH 140
Calculus A (4) MATH 150

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/student/newstudents/ut/bscfreshman/suggested-elective-courses. Certain courses offered by other faculties may also be taken, but some restrictions apply.

Consult the SOUSA website at http://www.mcgill.ca/science/student/continuingstudents/bsc/outside for more information about taking courses from other faculties.

Education Component (60 credits)
60 credits of Education Component, consisting 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 Exam for Teacher Certification
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)
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EDES 350 (3) Classroom Practices
EDES 353 (3) Teaching Secondary Mathematics 1
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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)  Diverse Learners
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)  Indigenous Education
- EDEC 248* (3)  Equity and 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 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
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<td>MATH 315</td>
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<td>Ordinary Differential Equations</td>
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<tr>
<td>MATH 316*</td>
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<td>Complex Variables</td>
</tr>
<tr>
<td>MATH 323</td>
<td>3</td>
<td>Probability</td>
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**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:

<table>
<thead>
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<th>Credits</th>
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<td>Foundations of Programming</td>
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<td>MATH 324</td>
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<td>Statistics</td>
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<td>MATH 338</td>
<td>3</td>
<td>History and Philosophy of Mathematics</td>
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<td>MATH 348</td>
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<td>Topics in Geometry</td>
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at least 3 credits from:

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<td>Numerical Analysis</td>
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<td>MATH 335</td>
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<td>Computational Algebra</td>
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<td>MATH 340</td>
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<td>Discrete Structures 2</td>
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12 credits from:

It is highly recommended that students include MATH 318 and MATH 346 in their complementary courses.

<table>
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</tr>
<tr>
<td>MATH 447</td>
<td>3</td>
<td>Introduction to Stochastic Processes</td>
</tr>
<tr>
<td>MATH 523</td>
<td>4</td>
<td>Generalized Linear Models</td>
</tr>
<tr>
<td>MATH 525</td>
<td>4</td>
<td>Sampling Theory and Applications</td>
</tr>
</tbody>
</table>

In consultation with an adviser, 3 of the 12 credits may be selected from other MATH courses or related disciplines.

**Electives (21 credits)**

21 credits of electives, of which at least 18 credits must be Science Electives chosen in consultation with the Science Adviser.

The electives must be chosen in such a way that the credit counts needed for graduation are satisfied.
8.2.19 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 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 (170 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 from a North American university 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.

Note:
1. Students major in Music Education may also audition for Jazz Ensemble (MUEN 595) and use this ensemble for credits towards the performance requirement.
2. If Choral and Keyboard Arranging (MUTH 461) is not offered, students may use The Art of Composition (MUCO 230) or Instruments of Orchestra (MUCO 260) as a substitute course. If MUTH 461 is offered, students majoring in Music Education must take this course to fulfill the program requirement.
3. Students major in Music Education in the jazz stream may also take Jazz Arranging 1 (MUJZ 260) instead of Choral and Keyboard Arranging (MUTH 461) with the permission of the Jazz Area Chair. They may also be asked to register for another jazz stream course under the recommendation of the Jazz Area Chair and/or the Music Education Area Chair.

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, vocal, and conducting techniques courses. Laboratory experiences provide an opportunity to develop facility with basic music rehearsing/teaching techniques, with emphasis on the ability to diagnose and correct technical and musical problems. The B.Ed. Music Elementary and Secondary program in the Faculty of Education focuses on the development of the musician as an educator. This is achieved through courses in educational foundations, music pedagogy and pedagogical support, and a practicum component comprised of four field experiences and supporting professional seminars.

Students in the Concurrent B.Mus/B.Ed. program who decide to complete only a Bachelor of Music may transfer at any time into the Bachelor of Music, Faculty Program. Students who wish to complete only the Bachelor of Education Music program have the option of doing so after the successful completion of the first two years of the Concurrent program and MUIN 283 “BMus Concentration Final Examination” or equivalent. They would be required to complete 61 music credits, 6 elective credits, and 55 education credits from the program given below.

The components of the 137-credit Concurrent Bachelor of Music - Major Music Education and Bachelor of Education - Music Elementary and Secondary (excluding the 33-credit Freshman Program) are as follows:

- 55 professional Education credits
- 70 Music academic credits
- 9 music elective credits
- 3 non-music elective credits

**Program Prerequisites - Freshman Program**

33 credits

**Prerequisite Courses**

33 credits distributed as follows:

- 4 credits (2 credits per term) Basic Ensemble Training
- 6 credits of Non-Music Electives

and 23 credits in the following course list:

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. First-year students enrolled in the Bachelor of Music program who have completed the Quebec Diploma of Collegial Studies (Diplôme d'études collégiales) in a Music concentration or equivalent, or students transferring from other universities or colleges, who have successfully completed a course in the history of Western music, will be exempted from the first-year Western Musical Traditions requirement (MUHL 186).

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUHL 186</td>
<td>3</td>
<td>Western Musical Traditions</td>
</tr>
<tr>
<td>MUIN 180</td>
<td>3</td>
<td>BMus Practical Lessons 1</td>
</tr>
</tbody>
</table>
**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:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credit(s)</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUCT 235</td>
<td>3</td>
<td>Vocal Techniques</td>
</tr>
<tr>
<td>MUGT 215</td>
<td>1</td>
<td>Basic Conducting Techniques</td>
</tr>
<tr>
<td>MUGT 354</td>
<td>3</td>
<td>Music for Children</td>
</tr>
<tr>
<td>MUGT 358</td>
<td>3</td>
<td>General Music for Adults and Teenagers</td>
</tr>
<tr>
<td>MUGT 401</td>
<td>3</td>
<td>Issues in Music Education</td>
</tr>
<tr>
<td>MUIT 202</td>
<td>3</td>
<td>Woodwind Techniques</td>
</tr>
<tr>
<td>MUIT 203</td>
<td>3</td>
<td>Brass Techniques</td>
</tr>
<tr>
<td>MUIT 204</td>
<td>3</td>
<td>Percussion Techniques</td>
</tr>
<tr>
<td>MUIT 356</td>
<td>3</td>
<td>Jazz Instruction: Philosophy and Techniques</td>
</tr>
</tbody>
</table>

### Theory

11 credits:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credit(s)</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUTH 250</td>
<td>3</td>
<td>Theory and Analysis 3</td>
</tr>
<tr>
<td>MUTH 251</td>
<td>3</td>
<td>Theory and Analysis 4</td>
</tr>
<tr>
<td>MUTH 350</td>
<td>3</td>
<td>Theory and Analysis 5</td>
</tr>
<tr>
<td>MUTH 461</td>
<td>2</td>
<td>Choral and Keyboard Arranging</td>
</tr>
</tbody>
</table>

### Musicianship

4 credits:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credit(s)</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSP 240</td>
<td>2</td>
<td>Musicianship Training 3</td>
</tr>
<tr>
<td>MUSP 241</td>
<td>2</td>
<td>Musicianship Training 4</td>
</tr>
</tbody>
</table>

### Music History
3 credits:
MUHL 286 (3) Critical Thinking About Music

**Performance**
6 credits:
MUIN 280 (2.5) BMus Practical Lessons 3
MUIN 281 (2.5) BMus Practical Lessons 4
MUIN 283 (1) 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

**Musicianship**
2 credits from:
MUSP 324 (2) Musicianship for Strings
MUSP 330 (2) Musicianship for Woodwinds
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 Wind Orchestra
- MUEN 592 (2) Chamber Jazz Ensemble
- MUEN 593 (2) Choral Ensembles
- MUEN 594 (2) Contemporary Music Ensemble
- MUEN 597 (2) McGill Symphony Orchestra

Electives (12 credits)
9 credits of free electives
3 credits of non-music electives

Required Education Courses (45 credits)
- EDEA 206 (1) 1st Year Professional Seminar
- EDEA 407 (3) Final Year Professional Seminar Music
- EDEA 442 (3) Methods in Music Education 1
- EDEA 472 (3) Methods in Music Education 2
- EDEC 215 (0) English Exam for Teacher Certification
- EDEC 247 (3) Policy Issues in Quebec Education
- EDEE 355* (3) Classroom-based Evaluation
- EDES 350 (3) Classroom Practices
- 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 341 (3) Instruction in Inclusive Schools

* Note: Students take either EDEE 355 or EDPE 304, but not both.

Complementary Education Courses (10 credits)
10 credits distributed as follows:

3 credits from:
- EDEC 233 (3) Indigenous Education
- EDEC 248 (3) Equity and Education
- EDEC 249 (3) Global Education and Social Justice

1 credit from:
<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDEC 253</td>
<td>1</td>
<td>Second Professional Seminar (Kindergarten/Elementary)</td>
</tr>
<tr>
<td>EDEC 254</td>
<td>1</td>
<td>Second Professional Seminar (Secondary)</td>
</tr>
<tr>
<td>EDEC 260</td>
<td>3</td>
<td>Philosophical Foundations</td>
</tr>
<tr>
<td>EDEC 261</td>
<td>3</td>
<td>Philosophy of Catholic Education</td>
</tr>
<tr>
<td>EDEC 262</td>
<td>3</td>
<td>Media, Technology and Education</td>
</tr>
<tr>
<td>MUGT 301</td>
<td>3</td>
<td>Technology and Media for Music Education</td>
</tr>
</tbody>
</table>

### 8.2.19.1 Admissions to the Concurrent B.Mus. (Major Music Education) and B.Ed. in Music Program

Applicants without a completed Bachelor of Music degree who wish to pursue a teacher education degree specializing in Music 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. Information is available on that site or may be obtained from:

- Admissions Office
  - Schulich School of Music, McGill University
  - 555 Sherbrooke Street West
  - Montreal QC H3A 1E3
  - Telephone: 514-398-4546
  - Email: undergraduateadmissions.music@mcgill.ca
  - Website: www.mcgill.ca/music/admissions/undergraduate

Those who have completed a Bachelor of Music degree from a North American university should apply to the Bachelor of Education in Music program in the Faculty of Education and, if eligible, will receive Advanced Standing for applicable courses. Application to the Bachelor of Education in Music may be made online at www.mcgill.ca/applying. Information is available on that site or may be obtained from:

- Service Point
  - Enrolment Services, McGill University
  - 3415 McTavish Street
  - Montreal QC H3A 0C8
  - Telephone: 514-398-7878
  - Website: www.mcgill.ca/students/servicepoint

Program details are available from:

- Department of Integrated Studies in Education
  - Professor Caroline Riches, Program Director
  - Telephone: 514-398-4527 ext. 00539
  - Email: caroline.riches@mcgill.ca

or

- Telephone: 514-398-4527
  - Email: advisedise.education@mcgill.ca
  - Website: www.mcgill.ca/dise

### 8.2.20 Bachelor of Education (B.Ed.) - Kindergarten and Elementary Education (120 credits)

The Bachelor of Education (B.Ed.) - Kindergarten and Elementary Education 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-credit program) for a total of 150 credits.
The Kindergarten and Elementary Education program leads to certification to teach children between the ages of 5 and 11 years (kindergarten and elementary school). The program consists of academic and professional courses, as well as studies in pedagogy and educational foundations. Each year of the program provides a school-based practicum.

Please note that graduates of teacher education programs are recommended by the University for Quebec certification to the Ministry (Education). 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 Advisor, 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. Also recommended are 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.

**Required Courses (81 credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEAP 250</td>
<td>Research Essay &amp; Rhetoric</td>
<td>3</td>
</tr>
<tr>
<td>EDEE 325</td>
<td>Children's Literature</td>
<td>3</td>
</tr>
<tr>
<td>EDEM 220</td>
<td>Contemporary Issues in Education</td>
<td>3</td>
</tr>
<tr>
<td>EDES 366</td>
<td>Literature for Young Adults</td>
<td>3</td>
</tr>
<tr>
<td>FRSL 101</td>
<td>Beginners French 1</td>
<td>3</td>
</tr>
<tr>
<td>FRSL 102</td>
<td>Beginners French 2</td>
<td>3</td>
</tr>
<tr>
<td>FRSL 207D1</td>
<td>Elementary French 01</td>
<td>3</td>
</tr>
<tr>
<td>FRSL 207D2</td>
<td>Elementary French 01</td>
<td>3</td>
</tr>
<tr>
<td>FRSL 211D1</td>
<td>Oral and Written French 1</td>
<td>3</td>
</tr>
<tr>
<td>FRSL 211D2</td>
<td>Oral and Written French 1</td>
<td>3</td>
</tr>
<tr>
<td>MATH 111</td>
<td>Mathematics for Education Students</td>
<td>3</td>
</tr>
<tr>
<td>RELG 207</td>
<td>Introduction to the Study of Religions</td>
<td>3</td>
</tr>
<tr>
<td>EDEC 201</td>
<td>First Year Professional Seminar</td>
<td>1</td>
</tr>
<tr>
<td>EDEC 203</td>
<td>Communication in Education</td>
<td>3</td>
</tr>
<tr>
<td>EDEC 215</td>
<td>English Exam for Teacher Certification</td>
<td>0</td>
</tr>
<tr>
<td>EDEC 233</td>
<td>Indigenous Education</td>
<td>3</td>
</tr>
<tr>
<td>EDEC 247</td>
<td>Policy Issues in Quebec Education</td>
<td>3</td>
</tr>
<tr>
<td>EDEC 253</td>
<td>Second Professional Seminar</td>
<td>1</td>
</tr>
<tr>
<td>EDEC 262</td>
<td>Media, Technology and Education</td>
<td>3</td>
</tr>
<tr>
<td>EDEC 405</td>
<td>Fourth Year Professional Seminar (K/Elem)</td>
<td>3</td>
</tr>
<tr>
<td>EDEE 223</td>
<td>Language Arts</td>
<td>3</td>
</tr>
<tr>
<td>EDEE 230</td>
<td>Elementary School Mathematics 1</td>
<td>3</td>
</tr>
<tr>
<td>EDEE 253</td>
<td>Kindergarten Classroom Pedagogy</td>
<td>3</td>
</tr>
<tr>
<td>EDEE 260</td>
<td>Reading Methods - Kindergarten/Elementary</td>
<td>3</td>
</tr>
<tr>
<td>EDEE 270</td>
<td>Elementary School Science</td>
<td>3</td>
</tr>
<tr>
<td>EDEE 273</td>
<td>Elementary School Science 2</td>
<td>3</td>
</tr>
<tr>
<td>EDEE 280</td>
<td>Geography, History and Citizenship Education</td>
<td>3</td>
</tr>
<tr>
<td>Course Code</td>
<td>Credits</td>
<td>Course Name</td>
</tr>
<tr>
<td>-------------</td>
<td>---------</td>
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<tr>
<td>EDEE 332</td>
<td>(3)</td>
<td>Teaching Elementary Mathematics 2</td>
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<tr>
<td>EDEE 353</td>
<td>(3)</td>
<td>Third Year Professional Seminar (Kindergarten/Elementary)</td>
</tr>
<tr>
<td>EDEE 355</td>
<td>(3)</td>
<td>Classroom-based Evaluation</td>
</tr>
<tr>
<td>EDER 360</td>
<td>(2)</td>
<td>Ethics and Religious Culture (K/Elementary)</td>
</tr>
<tr>
<td>EDFE 200</td>
<td>(2)</td>
<td>First Field Experience (K/Elem &amp; Secondary)</td>
</tr>
<tr>
<td>EDFE 256</td>
<td>(3)</td>
<td>Second Field Experience (Kindergarten/Elementary)</td>
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<tr>
<td>EDFE 306</td>
<td>(8)</td>
<td>Third Field Experience (Kindergarten/Elementary)</td>
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<tr>
<td>EDFE 406</td>
<td>(7)</td>
<td>Fourth Field Experience (K/Elem)</td>
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<tr>
<td>EDPE 300</td>
<td>(3)</td>
<td>Educational Psychology</td>
</tr>
<tr>
<td>EDPI 309</td>
<td>(3)</td>
<td>Diverse Learners</td>
</tr>
<tr>
<td>EDPI 341</td>
<td>(3)</td>
<td>Instruction in Inclusive Schools</td>
</tr>
</tbody>
</table>

**Complementary Courses (15 credits)**

15 credits of courses selected as described below:

**Equity Education**

3 credits from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDEC 248</td>
<td>(3)</td>
<td>Equity and Education</td>
</tr>
<tr>
<td>EDEC 249</td>
<td>(3)</td>
<td>Global Education and Social Justice</td>
</tr>
</tbody>
</table>

**Philosophy of Education**

3 credits from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDEC 260</td>
<td>(3)</td>
<td>Philosophical Foundations</td>
</tr>
<tr>
<td>EDEC 261</td>
<td>(3)</td>
<td>Philosophy of Catholic Education</td>
</tr>
</tbody>
</table>

**Ethics, Values, or Religion**

3 credits from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDER 309</td>
<td>(3)</td>
<td>The Religious Quest</td>
</tr>
<tr>
<td>RELG 204</td>
<td>(3)</td>
<td>Judaism, Christianity and Islam</td>
</tr>
<tr>
<td>RELG 207</td>
<td>(3)</td>
<td>Introduction to the Study of Religions</td>
</tr>
<tr>
<td>RELG 341</td>
<td>(3)</td>
<td>Introduction: Philosophy of Religion</td>
</tr>
</tbody>
</table>

**Kindergarten and Elementary Teaching Methods - Art, Drama, or Music**

3-6 credits from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDEA 332</td>
<td>(3)</td>
<td>Art Curriculum and Instruction - Elementary</td>
</tr>
<tr>
<td>EDEA 342</td>
<td>(3)</td>
<td>Curriculum and Instruction in Drama Education</td>
</tr>
<tr>
<td>EDEA 345</td>
<td>(3)</td>
<td>Music Curriculum and Instruction for Generalists</td>
</tr>
</tbody>
</table>

**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)  Literacy 1: Teaching Reading in ESL
EDSL 447* (3)  Methods in TESL 1

**Kindergarten & Elementary Education - Subject Areas (18 credits)**

18 credits selected in consultation with the Program Adviser as follows:

9 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 9 credits may be selected from any single course list.

**Art**

Students may select up to 9 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 9 credits from this list.

- **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
- **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 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 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 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 9 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 209 (3) Search for Authenticity
EDER 252 (3) Understanding and Teaching Jewish Life
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) Human Rights and Ethics in Practice
GSFS 200* (3) Feminist and Social Justice Studies
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) Introduction to the Study of Religions
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

French

Students may choose up to 9 credits of French as a Second Language (FRSL) courses and/or French (FREN) courses and/or:
### Mathematics

Students may choose up to 9 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.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Title</th>
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<tbody>
<tr>
<td>MATH 111</td>
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<td>Mathematics for Education Students</td>
</tr>
</tbody>
</table>

### Music

Students may choose up to 9 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.

<table>
<thead>
<tr>
<th>Course Code</th>
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<tr>
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<td>EDEA 352</td>
<td>3</td>
<td>Music Listening in Education</td>
</tr>
<tr>
<td>EDEA 362</td>
<td>3</td>
<td>Movement, Music and Communication</td>
</tr>
<tr>
<td>MUJZ 160*</td>
<td>3</td>
<td>Jazz Materials 1</td>
</tr>
<tr>
<td>MUJZ 161*</td>
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<td>Jazz Materials 2</td>
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### Natural Sciences

Students may choose up to 9 credits from this list.

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<td>ATOC 182</td>
<td>3</td>
<td>Introduction to Oceanic Sciences</td>
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<td>ATOC 184</td>
<td>3</td>
<td>Science of Storms</td>
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<td>Natural Disasters</td>
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<tr>
<td>BIOL 115</td>
<td>3</td>
<td>Essential Biology</td>
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<td>CHEM 180</td>
<td>3</td>
<td>World of Chemistry: Environment</td>
</tr>
<tr>
<td>CHEM 181</td>
<td>3</td>
<td>World of Chemistry: Food</td>
</tr>
<tr>
<td>CHEM 182</td>
<td>3</td>
<td>World of Chemistry: Technology</td>
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<tr>
<td>CHEM 183</td>
<td>3</td>
<td>World of Chemistry: Drugs</td>
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<td>EDEE 473</td>
<td>3</td>
<td>Ecological Studies</td>
</tr>
<tr>
<td>EDEE 474</td>
<td>3</td>
<td>Problems of the Environment</td>
</tr>
<tr>
<td>EPSC 180</td>
<td>3</td>
<td>The Terrestrial Planets</td>
</tr>
<tr>
<td>EPSC 181</td>
<td>3</td>
<td>Environmental Geology</td>
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<tr>
<td>EPSC 185</td>
<td>3</td>
<td>Natural Disasters</td>
</tr>
<tr>
<td>EPSC 201</td>
<td>3</td>
<td>Understanding Planet Earth</td>
</tr>
<tr>
<td>PHYS 180</td>
<td>3</td>
<td>Space, Time and Matter</td>
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<td>PHYS 181</td>
<td>3</td>
<td>Everyday Physics</td>
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<td>PHYS 182</td>
<td>3</td>
<td>Our Evolving Universe</td>
</tr>
<tr>
<td>PHYS 183</td>
<td>3</td>
<td>The Milky Way Inside and Out</td>
</tr>
</tbody>
</table>

### Physical Education

Students may take up to 9 credits of Physical Education (EDKP) courses from the list with the permission of the Department of Kinesiology and Physical Education.
Social Studies

Students may take up to 9 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 (SOCI) 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 additional 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.

ANTH 202 (3) Socio-Cultural Anthropology
CANS 200 (3) Introduction to the Study of Canada
CANS 310 (3) Canadian Cultures: Context and Issues
GEOG 200 (3) Geographical Perspectives: World Environmental Problems
GEOG 205 (3) Global Change: Past, Present and Future
GEOG 210 (3) Global Places and Peoples
GEOG 217 (3) Cities in the Modern World
GSFS 200* (3) Feminist and Social Justice Studies
HIST 202 (3) Survey: Canada to 1867
HIST 203 (3) Survey: Canada since 1867
JWST 240* (3) The Holocaust
POLI 221 (3) Government of Canada
POLI 222 (3) Political Process and Behaviour in Canada

Electives (6 credits)

8.2.21 Bachelor of Education (B.Ed.) - Kindergarten and Elementary Education - First Nations and Inuit Studies (120 credits)

The Bachelor of Education (B.Ed.) - Kindergarten and Elementary Education - First Nations and Inuit Studies program requires 120 credits and leads to teacher certification. Interested applicants must contact the office of First Nations and Inuit Education for admission information; please call 514-398-4527.

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 credit program) for a total of 150 credits. Students who are admitted as “mature students” are not required to complete the 30 credits of Freshman courses. These students are admitted to U1.

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.).
Required Courses (111 credits)

- **EDEA 242** (3) Cultural Skills 1
- **EDEA 243** (3) Cultural Skills 2
- **EDEC 201** (1) First Year Professional Seminar
- **EDEC 203** (3) Communication in Education
- **EDEC 215** (0) English Exam for Teacher Certification
- **EDEC 216** (0) Indigenous Language Requirement
- **EDEC 247** (3) Policy Issues in Quebec Education
- **EDEC 253** (1) Second Professional Seminar (Kindergarten/Elementary)
- **EDEC 260** (3) Philosophical Foundations
- **EDEC 262** (3) Media, Technology and Education
- **EDEC 342** (3) Intermediate Indigenous Language
- **EDEC 344** (3) Advanced Indigenous Language
- **EDEC 405** (3) Fourth Year Professional Seminar (K/Elem)
- **EDEC 591** (3) Cultural Values and Socialization
- **EDEE 223** (3) Language Arts
- **EDEE 230** (3) Elementary School Mathematics 1
- **EDEE 253** (3) Kindergarten Classroom Pedagogy
- **EDEE 260** (3) Reading Methods - Kindergarten/Elementary
- **EDEE 270** (3) Elementary School Science
- **EDEE 273** (3) Elementary School Science 2
- **EDEE 280** (3) Geography, History and Citizenship Education
- **EDEE 283** (3) Social Studies Pedagogy
- **EDEE 325** (3) Children's Literature
- **EDEE 332** (3) Teaching Elementary Mathematics 2
- **EDEE 353** (3) Third Year Professional Seminar (Kindergarten/Elementary)
- **EDEE 355** (3) Classroom-based Evaluation
- **EDER 309** (3) The Religious Quest
- **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) Indigenous Physical Activities
- **EDPE 300** (3) Educational Psychology
- **EDPI 309** (3) Diverse Learners
- **EDPI 341** (3) Instruction in Inclusive Schools
- **EDSL 247** (3) Second Language Education in Indigenous Communities
- **EDSL 300** (3) Foundations of L2 Education
Complementary Courses (9 credits)
9 credits of courses selected as described below.

Language - Complementary Component
6 credits from the following language courses chosen according to language group and fluency:

**Algonquin**
- EDEC 270  (3)  Algonquin Heritage Language 1
- EDEC 271  (3)  Algonquin Heritage Language 2
- EDEC 272  (3)  Algonquin Language 1
- EDEC 273  (3)  Algonquin Language 2

**Cree**
- EDEC 241  (3)  Cree Language 1
- EDEC 242  (3)  Cree Language 2

**Inuktitut**
- EDEC 289  (3)  Inuktitut Orthography and Grammar
- EDEC 403  (3)  The Dialects of Inuktitut

**Mi'gmaw**
- EDEC 237  (3)  Mi'gmaw Heritage Language 1
- EDEC 238  (3)  Mi'gmaw Heritage Language 2
- EDEC 239  (3)  Mi'gmaw Language 1
- EDEC 240  (3)  Mi'gmaw Language 2

**Mohawk**
- EDEC 275  (3)  Mohawk Heritage Language 1
- EDEC 276  (3)  Mohawk Heritage Language 2
- EDEC 277  (3)  Mohawk Language 1
- EDEC 278  (3)  Mohawk Language 2

**Naskapi**
- EDEC 227  (3)  Naskapi Language 1
- EDEC 228  (3)  Naskapi Language 2

**Education - Complementary Component**
3 credits from:
- EDEC 233  (3)  Indigenous Education
- EDEC 248  (3)  Equity and Education
- EDEC 249  (3)  Global Education and Social Justice
8.2.22 Bachelor of Education (B.Ed.) - Kindergarten and Elementary Jewish Studies (120 credits)

Bachelor of Education (B.Ed.) - Kindergarten and Elementary Jewish Studies 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-credit program) for a total of 150 credits.

The Kindergarten and Elementary program leads to certification to teach children between the ages of 5 and 11 years (kindergarten and elementary school). The program consists of academic and professional courses, as well as studies in pedagogy and educational foundations. Each year of the program provides a school-based practicum.

The Jewish Studies option is addressed to students enrolled in the Kindergarten and Elementary program who wish to teach Jewish studies as well as general studies. Students are encouraged to acquire a strong background in Bible, Jewish prayer, Jewish holidays, and Jewish history prior to registering in the option. Students lacking the ability to teach in Hebrew should consider spending a semester at an Israeli university or seek other avenues to improve their language skills.

Please note that graduates of teacher education programs are recommended by the University for Quebec certification to the Ministry (Education). 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 several French Second Language (FRSL) courses for which placement tests are required to determine the appropriate level. Also recommended are 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.

- CEAP 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 101 (3) Beginners French 1
- FRSL 102 (3) Beginners French 2
- 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) Introduction to the Study of Religions

Required Courses (87 credits)

- EDEC 201 (1) First Year Professional Seminar
- EDEC 203 (3) Communication in Education
- EDEC 215 (0) English Exam for Teacher Certification
- EDEC 233 (3) Indigenous Education
- EDEC 247 (3) Policy Issues in Quebec Education
- EDEC 253 (1) Second Professional Seminar (Kindergarten/Elementary)
- EDEC 262 (3) Media, Technology and Education
- EDEC 405 (3) Fourth Year Professional Seminar (K/Elem)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDEE 223</td>
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<td>Language Arts</td>
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<tr>
<td>EDEE 230</td>
<td>3</td>
<td>Elementary School Mathematics 1</td>
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<tr>
<td>EDEE 253</td>
<td>3</td>
<td>Kindergarten Classroom Pedagogy</td>
</tr>
<tr>
<td>EDEE 260</td>
<td>3</td>
<td>Reading Methods - Kindergarten/Elementary</td>
</tr>
<tr>
<td>EDEE 270</td>
<td>3</td>
<td>Elementary School Science</td>
</tr>
<tr>
<td>EDEE 273</td>
<td>3</td>
<td>Elementary School Science 2</td>
</tr>
<tr>
<td>EDEE 280</td>
<td>3</td>
<td>Geography, History and Citizenship Education</td>
</tr>
<tr>
<td>EDEE 283</td>
<td>3</td>
<td>Social Studies Pedagogy</td>
</tr>
<tr>
<td>EDEE 332</td>
<td>3</td>
<td>Teaching Elementary Mathematics 2</td>
</tr>
<tr>
<td>EDEE 353</td>
<td>3</td>
<td>Third Year Professional Seminar (Kindergarten/Elementary)</td>
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<td>EDEE 355</td>
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<td>Classroom-based Evaluation</td>
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<td>EDER 320</td>
<td>3</td>
<td>Visions and Realities of Jewish Education</td>
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<td>EDER 360</td>
<td>2</td>
<td>Ethics and Religious Culture (K/Elementary)</td>
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<td>EDFE 200</td>
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<td>First Field Experience (K/Elem &amp; Secondary)</td>
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<td>Second Field Experience (Kindergarten/Elementary)</td>
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<td>EDFE 306</td>
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<td>EDPI 309</td>
<td>3</td>
<td>Diverse Learners</td>
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<td>EDPI 341</td>
<td>3</td>
<td>Instruction in Inclusive Schools</td>
</tr>
<tr>
<td>JWST 211</td>
<td>3</td>
<td>Jewish Studies 1: Biblical Period</td>
</tr>
</tbody>
</table>

**Complementary Courses (30 credits)**

**Equity Education**
3 credits from:
- EDEC 248 (3) Equity and Education
- EDEC 249 (3) Global Education and Social Justice

**Teaching Methods (12 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

9 credits from:
- EDER 252 (3) Understanding and Teaching Jewish Life
- EDER 318 (3) Teaching the Jewish Liturgy
- EDER 319 (3) Teaching the Holocaust
- EDER 401 (3) Teaching Biblical Literature - Jewish School 1

**Kindergarten and Elementary - Subject Area: Jewish Studies (15 credits)**
In consultation with the Jewish Studies option Program Adviser, students select 15 credits from the undergraduate course offerings of the Department of Jewish Studies, Faculty of Arts.

**Electives (3 credits)**

**8.2.21 B.Ed. Kindergarten and Elementary Program (Jewish Studies Option)**

Students who wish to follow this option should contact:

Professor Eric Caplan  
Department of Integrated Studies in Education  
Faculty of Education  
Telephone: 514-398-6544  
Email: eric.caplan@mcgill.ca

**8.2.23 Bachelor of Education (B.Ed.) - Kindergarten and Elementary Pédagogie de l'Immersion Française (120 credits)**

The Kindergarten and Elementary Pédagogie de l'Immersion Française major is designed to meet the needs of students enrolled in the B.Ed. Kindergarten and Elementary program who wish to teach in French immersion contexts. It consists of 30 credits of French and second language education courses embedded within the regular B.Ed. Kindergarten and Elementary program. In addition, certain other course sections may be offered in French.

**Competency in French**

Students wishing to follow the Kindergarten and Elementary Pédagogie de l'Immersion Française major must demonstrate a sufficient level of competency in French by passing the written and oral French Language Proficiency Test (FLPT) set by the Department of Integrated Studies in Education. Students should contact advisedise.education@mcgill.ca to indicate their desire to transfer into this major and will subsequently be contacted with a testing date. The test must be passed for the transfer to be accepted/processed.

For further information about the Kindergarten and Elementary Pédagogie de l'Immersion Française major and/or the FLPT, please contact the Department at 514-398-4527.

**Required Courses (99 credits)**

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<tr>
<th>Course Code</th>
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<td>EDEC 215</td>
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<td>English Exam for Teacher Certification</td>
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<td>EDEC 233</td>
<td>3</td>
<td>Indigenous Education</td>
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<td>EDEC 247</td>
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<td>Policy Issues in Quebec Education</td>
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<td>EDEC 253</td>
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<td>Second Professional Seminar (Kindergarten/Elementary)</td>
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<td>EDFE 256</td>
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</table>
EDFE 306** (8) Third Field Experience (Kindergarten/Elementary)
EDFE 406** (7) Fourth Field Experience (K/Elem)
EDPE 300 (3) Educational Psychology
EDPI 309 (3) Diverse Learners
EDPI 341 (3) Instruction in Inclusive Schools
EDSL 300 (3) Foundations of L2 Education
EDSL 301 (3) Étude de la langue
EDSL 305 (3) L2 Learning: Classroom Settings
EDSL 341 (3) Littératie et littérature jeunesse en FLS

Kindergarten and Elementary Teaching Methods
EDSL 345 (3) Enseignement du FLS-immersion
EDSL 444 (3) Laboratoire d'enseignement en français langue seconde

* Students must register in the sections designated as 'Bilingual section'.
** Note: At least one of these Field Experiences must be completed in a French immersion setting.

Complementary Courses (15 credits)
15 credits selected as described below:

Equity Education
3 credits from:
EDEC 248 (3) Equity and 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

Ethics and Religious Culture
3 credits from:
EDER 309 (3) The Religious Quest
RELG 204 (3) Judaism, Christianity and Islam
RELG 207 (3) Introduction to the Study of Religions
RELG 341 (3) Introduction: Philosophy of Religion

French
6 credits selected from courses with a FREN prefix, in consultation with an adviser.

Elective Courses (6 credits)
The following courses are suggested:
EDEA 332 (3) Art Curriculum and Instruction - Elementary
EDEA 342 (3) Curriculum and Instruction in Drama Education
8.2.24 Bachelor of Education (B.Ed.) - Teaching English as a Second Language - TESL Elementary and Secondary (120 credits)

The Bachelor of Education (B.Ed.) - Teaching English as a Second Language - TESL Elementary and Secondary 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-credit program) for a total of 150 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 Ministry (Education). 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, EDSL 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 EDSL 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 good choices for the Freshman year.

Required Courses (90 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDEC 203</td>
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<td>3</td>
</tr>
<tr>
<td>EDEC 325</td>
<td>Children's Literature</td>
<td>3</td>
</tr>
<tr>
<td>EDEN 220</td>
<td>Contemporary Issues in Education</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 201</td>
<td>Survey of English Literature 2</td>
<td>3</td>
</tr>
<tr>
<td>FRSL 101</td>
<td>Beginners French 1</td>
<td>3</td>
</tr>
<tr>
<td>FRSL 102</td>
<td>Beginners French 2</td>
<td>3</td>
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<td>FRSL 211D1</td>
<td>Oral and Written French 1</td>
<td>3</td>
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<td>FRSL 211D2</td>
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<td>3</td>
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<td>LING 200</td>
<td>Introduction to the Study of Language</td>
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<td>EDEC 247</td>
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</tr>
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<td>EDES 350</td>
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</tr>
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<td>EDES 361</td>
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<td>EDSL 254</td>
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<td>EDSL 305</td>
<td>(3)</td>
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<td>EDSL 330</td>
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<td>(3)</td>
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<td>(3)</td>
<td>Fourth Professional Seminar</td>
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<tr>
<td>EDSL 447</td>
<td>(3)</td>
<td>Methods in TESL 1</td>
</tr>
<tr>
<td>EDSL 458</td>
<td>(3)</td>
<td>Methods in TESL 2</td>
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</table>

**Complementary Courses (24 credits)**

24 credits selected as described below:

**3 credits from:**

<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Course Title</th>
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<tr>
<td>EDEC 248</td>
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<td>EDEC 249</td>
<td>(3)</td>
<td>Global Education and Social Justice</td>
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**3 credits from:**

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<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
</tr>
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<tbody>
<tr>
<td>EDEC 260</td>
<td>(3)</td>
<td>Philosophical Foundations</td>
</tr>
<tr>
<td>EDEC 261</td>
<td>(3)</td>
<td>Philosophy of Catholic Education</td>
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</table>

**3 credits from:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDEA 332</td>
<td>(3)</td>
<td>Art Curriculum and Instruction - Elementary</td>
</tr>
</tbody>
</table>
3 credits from:

LING 200 (3) Introduction to the Study of Language
LING 201 (3) Introduction to Linguistics

12 credits of English and other complementary courses distributed as follows:

6-9 credits of English (ENGL) courses
And
3-6 credits of other complementary courses including
Foreign language courses (0-6 credits)
Other Complementary courses (0-6 credits)

Electives (6 credits)

8.2.25 Bachelor of Education (B.Ed.) - Teaching English as a Second Language - TESL Elementary and Secondary: Teaching Greek Language & Culture (120 credits)

This 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-credit program) for a total of 150 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. This program also prepares students to teach in Hellenic school settings. Students are encouraged to participate in a ‘study away’ semester in Greece.

Please note that graduates of teacher education programs are recommended by the University for Quebec certification to the Ministry (Education). 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.

Additional Entrance and Language Requirements

All applicants must pass the English Language Proficiency Test (ELPT) set by the Department of Integrated Studies in Education and pass a Greek language proficiency test set by the Department of Classical Studies prior to being offered admission. Eligible applicants will be contacted by email with information on how to register for these two tests.

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, EDSL 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 EDSL 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/Polsih) are also good choices for the Freshman year.

EDDEC 203 (3) Communication in Education
EDEEE 325 (3) Children's Literature
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDEM 220</td>
<td>3</td>
<td>Contemporary Issues in Education</td>
</tr>
<tr>
<td>ENGL 201</td>
<td>3</td>
<td>Survey of English Literature 2</td>
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<tr>
<td>FRSL 101</td>
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<td>Beginners French 2</td>
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<td>FRSL 207D1</td>
<td>3</td>
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<tr>
<td>LING 200</td>
<td>3</td>
<td>Introduction to the Study of Language</td>
</tr>
<tr>
<td>LING 201</td>
<td>3</td>
<td>Introduction to Linguistics</td>
</tr>
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</table>

**Required Courses (90 credits)**

<table>
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<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Name</th>
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<tbody>
<tr>
<td>CLAS 336*</td>
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<td>Modern Greek Literature</td>
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<td>EDEC 203</td>
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<td>Communication in Education</td>
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<td>EDEC 233</td>
<td>3</td>
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<td>EDEC 247</td>
<td>3</td>
<td>Policy Issues in Quebec Education</td>
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<td>EDEC 262</td>
<td>3</td>
<td>Media, Technology and Education</td>
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<td>EDPI 341</td>
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<td>Instruction in Inclusive Schools</td>
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<tr>
<td>EDSL 210</td>
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<tr>
<td>EDSL 458</td>
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<td>Methods in TESL 2</td>
</tr>
</tbody>
</table>
* Note: Offered every 3rd year (alternating with CLAS 333, 335).
** Note: At least one of these Field Experiences must be completed in a Hellenic school.

**Complementary Courses (30 credits)**

30 credits selected as described below:

3 credits from:
- EDEC 248 (3) Equity and 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:
- 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
- EDKP 332 (3) Physical Education Curriculum and Instruction

3 credits from:
- LING 200 (3) Introduction to the Study of Language
- LING 201 (3) Introduction to Linguistics

**TESL and Greek Language & Culture (18 credits)**

12-15 credits of Greek Language and Culture from the following (with adviser's approval):
- CLAS 230D1 (3) Introductory Modern Greek
- CLAS 230D2 (3) Introductory Modern Greek
- CLAS 300 (3) Ancient Drama and Theatre
- CLAS 331 (3) Intermediate Modern Greek 1
- CLAS 332 (3) Intermediate Modern Greek 2
- CLAS 333 (3) Modern Greek Poetry
- CLAS 335 (3) Modern Greek Culture and Society
- CLAS 337 (3) Hellenisms: Roman to Ottoman
- CLAS 498 (3) Independent Research
- HIST 349 (3) Greece: From Ottoman to the European Union
- HIST 368 (3) Greek History: Classical Period

3-6 credits from (with adviser's approval, other courses may be considered):
- ARTH 314 (3) The Medieval City
- CLAS 203 (3) Greek Mythology
The following programs are offered in Indigenous communities for First Nations and Inuit teachers by McGill's Faculty of Education.

Information may be obtained by contacting:

Office of First Nations and Inuit Education (OFNIE), Faculty of Education
3700 McTavish Street, Room 244
Montreal QC H3A 1Y2
Telephone: 514-398-4527
Fax: 514-398-4679
Website: [www.mcgill.ca/dise/fnie](http://www.mcgill.ca/dise/fnie)

For details about the First Nations and Inuit Studies Option within the Bachelor of Education Kindergarten and Elementary program, see [section 8.2.21: Bachelor of Education (B.Ed.) - Kindergarten and Elementary Education - First Nations and Inuit Studies (120 credits)].

### 8.3 Certificate (Cert.) Education for First Nations and Inuit (60 credits)

This 60-credit program provides an opportunity for Algonquin, Cree, Inuit, Mi'kmaq, Mohawk, and Naskapi 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, Algonquin and education authorities.

Quebec graduates of this program receive Quebec 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 - Kindergarten and Elementary Education - First Nations and Inuit Studies or Bachelor of Education for Certified Teachers program and consult the Program Adviser to determine Advanced Standing.

**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 five-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 (24 credits)

- **EDEC 203** (3) Communication in Education
- **EDEM 502** (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)
EDEC 200 (2)   First Field Experience (K/Elem & Secondary)
EDEC 256 (3)   Second Field Experience (Kindergarten/Elementary)
EDEC 300 (5)   Aboriginal Education Field Experience

Complementary Courses (36 credits)
6 credits from the following language courses according to language group and fluency:

**Algonquin**
- EDEC 270 (3)   Algonquin Heritage Language 1
- EDEC 271 (3)   Algonquin Heritage Language 2
- EDEC 272 (3)   Algonquin Language 1
- EDEC 273 (3)   Algonquin Language 2

**Cree**
- EDEC 241 (3)   Cree Language 1
- EDEC 242 (3)   Cree Language 2

**Inuktitut**
- EDEC 289 (3)   Inuktitut Orthography and Grammar
- EDEC 342 (3)   Intermediate Indigenous Language
- EDEC 344 (3)   Advanced Indigenous Language

**Mi'kmaq**
- EDEC 237 (3)   Mi'gmaw Heritage Language 1
- EDEC 238 (3)   Mi'gmaw Heritage Language 2
- EDEC 239 (3)   Mi'gmaw Language 1
- EDEC 240 (3)   Mi'gmaw Language 2

**Mohawk**
- EDEC 275 (3)   Mohawk Heritage Language 1
- EDEC 276 (3)   Mohawk Heritage Language 2
- EDEC 277 (3)   Mohawk Language 1
- EDEC 278 (3)   Mohawk Language 2

**Naskapi**
- EDEC 227 (3)   Naskapi Language 1
- EDEC 228 (3)   Naskapi Language 2

30 credits from one of the three following Stream course lists:
Stream A: Generalist
Stream B: Physical Education
Stream C: Culture and Language

In order to ensure appropriate choices, students select from the list of Complementary Courses in consultation with the Program Adviser.

**Stream A: Generalist**

30 credits from the following list:

<table>
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<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>EDEA 242</td>
<td>3</td>
<td>Cultural Skills 1</td>
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<tr>
<td>EDEC 243</td>
<td>3</td>
<td>Teaching: Multigrade Classrooms</td>
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<td>EDEC 260</td>
<td>3</td>
<td>Philosophical Foundations</td>
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<td>EDEC 262</td>
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<td>Media, Technology and Education</td>
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<tr>
<td>EDEE 223</td>
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<td>Language Arts</td>
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<td>EDEE 230</td>
<td>3</td>
<td>Elementary School Mathematics 1</td>
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<td>EDEE 245</td>
<td>3</td>
<td>Orientation to Education</td>
</tr>
<tr>
<td>EDEE 248</td>
<td>3</td>
<td>Reading and Writing Inuktitut/Cree</td>
</tr>
<tr>
<td>EDEE 253</td>
<td>3</td>
<td>Kindergarten Classroom Pedagogy</td>
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<td>EDEE 270</td>
<td>3</td>
<td>Elementary School Science</td>
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<td>EDEE 273</td>
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<td>Elementary School Science 2</td>
</tr>
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<td>EDEE 280</td>
<td>3</td>
<td>Geography, History and Citizenship Education</td>
</tr>
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<td>EDEE 283</td>
<td>3</td>
<td>Social Studies Pedagogy</td>
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<td>EDEE 325</td>
<td>3</td>
<td>Children's Literature</td>
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<tr>
<td>EDEE 332</td>
<td>3</td>
<td>Teaching Elementary Mathematics 2</td>
</tr>
<tr>
<td>EDEE 355</td>
<td>3</td>
<td>Classroom-based Evaluation</td>
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</table>

**Stream B: Physical Education**

24 credits from the following list:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDEC 243</td>
<td>3</td>
<td>Teaching: Multigrade Classrooms</td>
</tr>
<tr>
<td>EDEC 262</td>
<td>3</td>
<td>Media, Technology and Education</td>
</tr>
<tr>
<td>EDEE 223</td>
<td>3</td>
<td>Language Arts</td>
</tr>
<tr>
<td>EDEE 245</td>
<td>3</td>
<td>Orientation to Education</td>
</tr>
<tr>
<td>EDKP 204</td>
<td>3</td>
<td>Health Education</td>
</tr>
<tr>
<td>EDKP 224</td>
<td>3</td>
<td>Foundations of Movement Education</td>
</tr>
<tr>
<td>EDKP 241</td>
<td>3</td>
<td>Indigenous Physical Activities</td>
</tr>
<tr>
<td>EDKP 292</td>
<td>3</td>
<td>Nutrition and Wellness</td>
</tr>
<tr>
<td>EDKP 307</td>
<td>3</td>
<td>Evaluation in Physical Education</td>
</tr>
<tr>
<td>EDKP 342</td>
<td>3</td>
<td>Physical Education Methods</td>
</tr>
<tr>
<td>EDKP 494</td>
<td>3</td>
<td>Physical Education Curriculum Development</td>
</tr>
</tbody>
</table>

and 6 credits from the following Physical Education courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDKP 214</td>
<td>2</td>
<td>Basketball</td>
</tr>
<tr>
<td>EDKP 217</td>
<td>2</td>
<td>Track &amp; Field / Cross Country</td>
</tr>
<tr>
<td>EDKP 218</td>
<td>2</td>
<td>Volleyball</td>
</tr>
<tr>
<td>EDKP 223</td>
<td>2</td>
<td>Games: Principles and Practice 1</td>
</tr>
<tr>
<td>EDKP 226</td>
<td>1</td>
<td>Quebec Education Program Orientation</td>
</tr>
<tr>
<td>EDKP 229</td>
<td>1</td>
<td>Ice Hockey 1</td>
</tr>
</tbody>
</table>
**Stream C: Culture and Language**

30 credits from the following list:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDEA 242</td>
<td>3</td>
<td>Cultural Skills 1</td>
</tr>
<tr>
<td>EDEA 243</td>
<td>3</td>
<td>Cultural Skills 2</td>
</tr>
<tr>
<td>EDEE 248</td>
<td>3</td>
<td>Reading and Writing Inuktitut/Cree</td>
</tr>
<tr>
<td>EDEE 270</td>
<td>3</td>
<td>Elementary School Science</td>
</tr>
<tr>
<td>EDEE 283</td>
<td>3</td>
<td>Social Studies Pedagogy</td>
</tr>
<tr>
<td>EDEE 332</td>
<td>3</td>
<td>Teaching Elementary Mathematics 2</td>
</tr>
<tr>
<td>EDEE 353</td>
<td>3</td>
<td>Third Year Professional Seminar (Kindergarten/Elementary)</td>
</tr>
<tr>
<td>EDEE 355</td>
<td>3</td>
<td>Classroom-based Evaluation</td>
</tr>
<tr>
<td>EDEE 370</td>
<td>3</td>
<td>Traditional Indigenous Life Skills</td>
</tr>
<tr>
<td>EDEE 371</td>
<td>3</td>
<td>Integrating Indigenous Storytelling and Creative Writing</td>
</tr>
<tr>
<td>EDEE 373</td>
<td>3</td>
<td>Traditional Healing</td>
</tr>
<tr>
<td>EDEE 383</td>
<td>3</td>
<td>Oral and Family History</td>
</tr>
<tr>
<td>EDKP 241</td>
<td>3</td>
<td>Indigenous Physical Activities</td>
</tr>
</tbody>
</table>

---

### 8.3.1.1 Admission to the Certificate in Education for First Nations and Inuit

Those intending to complete the program offered in cooperation with the Kativik School Board must be fluent and literate in Inuktitut/Inuinnaqtun. Fluency in Algonquin, Cree, Mi'kmaq, Mohawk, or Naskapi is not a condition for acceptance for applicants from these communities, but is considered an asset. Courses are available in some of these languages for those teaching in immersion classes and other teaching situations where a knowledge of the first language is essential.

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 Collegiate Studies. The right of final decision for acceptance of candidates rests with McGill.

### 8.3.2 Certificate (Cert.) Indigenous Language and 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.

#### Required Courses (6 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDEC 342</td>
<td>3</td>
<td>Intermediate Indigenous Language</td>
</tr>
<tr>
<td>EDEC 344</td>
<td>3</td>
<td>Advanced Indigenous Language</td>
</tr>
</tbody>
</table>

#### Complementary Courses (18 credits)

18 credits selected as described below.

**Language Courses**

6 credits from the following language courses (or other courses as approved by the Director of Programs in First Nations and Inuit Education) including a beginning course (3 credits) in the Indigenous language as a first language (e.g., EDEC 241 Cree Language 1) and a second-level course (3 credits) in the same language (e.g., EDEC 242 Cree Language 2).

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDEC 227</td>
<td>3</td>
<td>Naskapi Language 1</td>
</tr>
<tr>
<td>EDEC 228</td>
<td>3</td>
<td>Naskapi Language 2</td>
</tr>
</tbody>
</table>
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 240 (3) Use and Adaptation of Curricula
- EDEE 243 (3) Reading Methods in Inuktitut/Cree
- EDEE 248 (3) Reading and Writing Inuktitut/Cree
- EDEE 345 (3) Literature and Creative Writing 1
- EDEE 346 (3) Literature and Creative Writing 2
- EDEE 347 (3) Grammar and Composition 1
- EDEE 348 (3) Grammar and Composition 2
- EDEE 373 (3) Traditional Healing
- EDEE 383 (3) Oral and Family History
- 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.

8.3.2.1 Admission to the Certificate in Indigenous Language and 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.

8.3.3 Certificate (Cert.) Middle School Education in Indigenous 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 developmentally and culturally appropriate. The program focuses on the particular psychological, emotional, and social needs of Aboriginal adolescents and the teacher's role in facilitating the transition between elementary and high school.

This certificate may be taken concurrently and completed within the Bachelor of Education for Certified Teachers program if the requirements for the B.Ed. are fulfilled.

Required Courses (15 credits)
EDEC 245 (3) Middle School Teaching
EDEC 246 (3) Middle School Curriculum
EDFE 210 (3) Middle School Practicum
EDPE 377 (3) Adolescence and Education

3 credits from the list below:
EDEC 302 (3) Language and Learning - Curriculum
EDSL 305 (3) L2 Learning: Classroom Settings

**Major Subject Area (6 credits)**

6 credits in the major subject area of the Bachelor of Education for Certified Teachers selected in consultation with the Director of Programs in First Nations and Inuit Education.

**Minor Subject Area (6 credits)**

6 credits in the minor subject area of the Bachelor of Education for Certified Teachers selected in consultation with the Director of Programs in First Nations and Inuit Education.

**Education Courses (3 credits)**

3 credits from the list below or from other courses as approved by the Director of Programs in First Nations and Inuit Education.

EDEA 241 (3) Basic Art Media for Classroom
EDEC 220 (3) Curriculum Development
EDEC 243 (3) Teaching: Multigrade Classrooms
EDEC 591 (3) Cultural Values and Socialization
EDEE 444 (3) First Nations and Inuit Curriculum
EDKP 241 (3) Indigenous Physical Activities
EDPT 200 (3) Integrating Educational Technology in Classrooms
EDSL 247 (3) Second Language Education in Indigenous Communities
EDSL 305 (3) L2 Learning: Classroom Settings

8.3.3.1 Admission to the Certificate in Middle School Education in Indigenous Communities

Applicants will normally have completed or be completing their B.Ed. for Certified Teachers. It is strongly recommended that they have some competence in their Indigenous language as indicated by the successful completion of at least two language courses. For those applying with degrees from other universities, additional courses may be required to match the McGill B.Ed. for Certified Teachers profile. As the program and courses will be delivered in the partnership communities, applicants must be recommended by their school boards or teaching authorities. The right of final decision for acceptance of candidates rests with McGill.

8.3.4 Certificate (Cert.) First Nations and Inuit Educational Leadership (30 credits)

The 30 credit Certificate in First Nations and Inuit Educational Leadership will focus on the following 5 objectives: (1) developing the core competencies of educational leaders; (2) fostering a self-reflective leader able to partner with parents to create community outreach; (3) cultivating awareness of the holistic learning and developmental cycles of the child and the role of the educational leader in enhancing that development; (4) maintaining the inter-connectedness and continuity of community and cultural values and aspirations within the structure of the administration of the school and other educational milieu; and (5) understanding and supporting the pedagogical objectives and the administrative framework of the educational context and system.

**Required Courses (18 credits)**

EDEC 203 (3) Communication in Education
EDEC 222 (3) Personnel Management and Group Skills
EDEC 311 (6) Resource Management
EDEC 312 (3) Practicum in Educational Leadership
Complementary Courses (12 credits)
12 credits from the list below or any other course approved by the Director of Programs in First Nations and Inuit Education.

- EDEC 230 (3) Conflict Resolution
- EDEC 233 (3) Indigenous Education
- EDEC 244 (3) Issues in Aboriginal Education
- EDEC 262 (3) Media, Technology and Education
- EDEE 245 (3) Orientation to Education
- EDEE 340 (3) Special Topics: Cultural Issues
- EDES 365 (3) Experiences in Communications

Admission to the Certificate in First Nations and Inuit Educational Leadership

Students admitted to this program will be recommended by their communities. They must be mature students (21 years of age), or hold a Secondary V diploma or equivalent. Students must speak, read, and write fluently the language of instruction as agreed upon between the unit and the Indigenous School Board or Education Centre. For Nunavik applicants, students must have experience in a Nunavik educational or community organization. The right of final decision for acceptance of candidates rests with McGill.

8.3.5 Bachelor of Education for Certified Teachers - Elementary Education: Native and Northern (90 credits)

This 90-credit program is designed for teachers who are already certified to teach in elementary schools and who wish to earn a Bachelor of Education degree. Normally, a minimum of 60 credits must be taken in the program, and no more than 30 credits may be transferred from other institutions. Credits may be transferred from programs leading to the certificates in Educational Technology, Second Language Teaching, Inclusive Education, or Aboriginal Literacy Education taken concurrently. Credit may also be transferred from the Certificate in Education for First Nations and Inuit, which is normally completed before the B.Ed. Students completing the Bachelor of Education for Certified Teachers following the Certificate in Education for First Nations and Inuit will have accumulated a total of 120 credits, 60 for the certificate and a further 60 for the B.Ed.

The Certificate in Aboriginal Literacy Education, the Certificate in Middle School Education in Aboriginal Communities, or the Certificate in First Nations and Inuit Educational Leadership may be taken concurrently and completed within the Bachelor of Education for Certified Teachers if the required B.Ed. profile is fulfilled.

This program does not lead to further certification.

Complementary Courses
Candidates enrolled in the program complete 90 credits within the following general pattern.

Academic Concentration (30 credits)
30 credits in five (5) subject areas relevant to elementary education in a 12-9-3-3-3 pattern (i.e., 12 credits in one subject, 9 credits in a second subject, and 3 credits in each of three (3) other subject areas), or 30 academic credits in three subject areas in a 15-9-6 pattern.

Note: Subject areas relevant to elementary education, in broad terms, are the Arts (Art, Music and Drama), English, French, Science, Mathematics, Physical Education, Moral and Religious Education, Social Studies, Educational Technology, or an Aboriginal language.

Cultural Development (15 credits)
15 credits of courses that will enhance the candidate's cultural development. These are to be chosen in consultation with the Director of Programs in First Nations and Inuit Education.

Education Concentration (30 credits)
30 credits. Normally the Education concentration is completed within the Certificate in Education for First Nations and Inuit.

Electives (15 credits)
15 credits selected by the candidate after consultation with the Director of Programs in First Nations and Inuit Education.

Admission Requirements for the B.Ed. for Certified Teachers

Applicants apply on the basis of having completed the Certificate in Education for First Nations and Inuit or equivalent and must have the continued support of their education authority to attend the field-based program. The right of final decision for acceptance of candidates rests with McGill.
8.3.6 Certificate (Cert.) First Nations and Inuit Student Personnel Services (30 credits)

This program is offered by the Department of Educational and Counselling Psychology through First Nations and Inuit Education.

This 30-credit program is designed to provide Aboriginal school personnel advisers with a training program that will enable them to learn about the principles and practice of personnel services as generally applied in educational settings, to help Aboriginal student personnel advisers develop their personal skills, and to modify or adapt their services and the content to best suit the cultural and educational needs of Aboriginal students; to encourage Aboriginal student personnel advisers to take leadership in developing educational programs that address the social needs of their communities, to upgrade their academic qualifications and professional development; and to develop and make available, in English and in the languages of instruction, collections of professional and scholarly knowledge about students' needs, and services in First Nations and Inuit communities.

Bearers of this certificate will be qualified to work as educational and school personnel advisers within the employ of an Aboriginal educational authority.

Required Courses (21 credits)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDPC 201</td>
<td>Introduction to Student Advising</td>
<td>3</td>
</tr>
<tr>
<td>EDPC 202</td>
<td>Helping Skills Practicum 1</td>
<td>3</td>
</tr>
<tr>
<td>EDPC 203</td>
<td>Helping Skills Practicum 2</td>
<td>3</td>
</tr>
<tr>
<td>EDPC 205</td>
<td>Career/Occupational Development</td>
<td>3</td>
</tr>
<tr>
<td>EDPC 208</td>
<td>Native Families' Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>EDPC 209</td>
<td>Basic Crisis Intervention Skills</td>
<td>3</td>
</tr>
<tr>
<td>EDPC 210</td>
<td>Field Experience</td>
<td>3</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDEM 502</td>
<td>Native Family Dynamics &amp; Supporting Institutions</td>
<td>3</td>
</tr>
<tr>
<td>EDKP 204</td>
<td>Health Education</td>
<td>3</td>
</tr>
<tr>
<td>EDPI 211</td>
<td>Social and Emotional Development</td>
<td>3</td>
</tr>
</tbody>
</table>

8.3.6.1 Admission to Certificate in First Nations and Inuit Student Personnel Services

Admission Requirements

- Fluently speak, read, and write the language of instruction as agreed upon between the Office of First Nations and Inuit Education and the Indigenous School Board or Education authority.
- Hold a student adviser position in an Indigenous 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.

8.4 Kinesiology and Physical Education

8.4.1 Location

Kinesiology and Physical Education, Faculty of Education
Currie Gym
475 Pine Avenue West, 2nd floor
Montreal QC H2W 1S4
8.4.2 About the Department of Kinesiology and Physical Education

The Department of Kinesiology and Physical Education offers one program leading to a B.Ed. degree, two programs leading to a B.Sc. degree, and a Minor in Kinesiology for Science students. For more information, please visit the website's Undergraduate Program Information section.

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 on these programs, please visit the website's Graduate Program Information section.

8.4.3 Kinesiology and Physical Education Faculty

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chair</td>
<td>Julie Côté</td>
</tr>
<tr>
<td>Director of Undergraduate Programs</td>
<td>William Harvey</td>
</tr>
<tr>
<td>Graduate Program Director</td>
<td>David Pearsall</td>
</tr>
<tr>
<td>Emeritus Professor</td>
<td>Greg Reid; B.Ed.(McG.), M.S.(Calif.), Ph.D.(Penn. St.)</td>
</tr>
<tr>
<td>Professors</td>
<td>Ross E. Andersen; B.Ed., M.A.(McG.), Ph.D.(Temple)</td>
</tr>
<tr>
<td></td>
<td>Theodore E. Milner; B.Sc., M.Sc., Ph.D.(Alta.)</td>
</tr>
<tr>
<td></td>
<td>Dilson Rassier; B.P.E.(Fed. de Pelotas), M.Sc.(UFRGS), Ph.D.(Calg.)</td>
</tr>
<tr>
<td>Associate Professors</td>
<td>Gordon Bloom; B.Ed.(W. Ont.), M.A.(York), Ph.D.(Ott.)</td>
</tr>
<tr>
<td></td>
<td>Julie Côté; B.Sc., M.Sc.(Wisc.-Madison), Ph.D.(Montr.)</td>
</tr>
<tr>
<td></td>
<td>William Harvey; B.Ed., M.A., Ph.D. (McG.)</td>
</tr>
<tr>
<td></td>
<td>David J. Pearsall; B.A., B.P.H.E., M.Sc., Ph.D.(Qu.)</td>
</tr>
<tr>
<td>Assistant Professors</td>
<td>Lindsay Duncan; B.A., M.A., Ph.D.(W. Ont.)</td>
</tr>
<tr>
<td></td>
<td>Dennis Jensen; B.P.E.(Brock), M.Sc., Ph.D.(Qu.)</td>
</tr>
<tr>
<td></td>
<td>Caroline Paquette; B.Sc., M.Sc.(Laval), Ph.D.(McG.)</td>
</tr>
<tr>
<td></td>
<td>Lee Schaefer; B.Ed.(Regina), M.Ed., Ph.D.(Alta.)</td>
</tr>
<tr>
<td></td>
<td>Shane Sweet; B.A., Ph.D.(Ott.)</td>
</tr>
<tr>
<td>Faculty Lecturer</td>
<td>Celena Scheede-Bergdahl; B.Sc.(C'dia), M.Sc.(Montr.), Ph.D.(Copen.)</td>
</tr>
<tr>
<td>Adjunct Professors</td>
<td>Lymperis Koziris; M.A.(McG.), Ph.D.(Penn. St.)</td>
</tr>
<tr>
<td></td>
<td>Ruddy Richard; M.D.(Strasbourg I), Ph.D.(Paris V)</td>
</tr>
<tr>
<td></td>
<td>Catherine M. Sabiston; B.Sc.K.(Dal.), M.H.K.(Windsor), Ph.D.(Br. Col.)</td>
</tr>
</tbody>
</table>
8.4.4 Bachelor of Education (B.Ed.) - Physical and Health Education (120 credits)

The Bachelor of Education (B.Ed.) - Physical and Health Education is a 120-credit program leading 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 credit program) for a total of 150 credits.

The Physical and Health Education program prepares students to teach physical and health education at the elementary and secondary levels. In a unique structure interweaving academic studies, professional course work, and teaching practices over the course of study, students are rapidly given the opportunity to assume a teaching role; the extent of teaching involvement and expectations progressively building on additional academic and professional courses.

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

Freshman students are required to complete 30 credits of introductory (100- or 200-level) courses. Students will not be granted permission to take first-year (U1) courses if the credits from the Freshman year have not been obtained. For students considering a second teachable subject, the following areas are recommended: history, geography, English, or mathematics.

From the "Required Courses" list, Freshman students take the 0-credit course EDEC 215 English Language Requirement. In addition, in consultation with the Program Adviser, students may select courses from the recommended course list below or other courses.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDEC 202</td>
<td>Effective Communication</td>
<td>3</td>
</tr>
<tr>
<td>EDEC 220</td>
<td>Contemporary Issues in Education</td>
<td>3</td>
</tr>
</tbody>
</table>

Required Courses (99 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDEC 215</td>
<td>English Exam for Teacher Certification</td>
<td>0</td>
</tr>
<tr>
<td>EDEC 247</td>
<td>Policy Issues in Quebec Education</td>
<td>3</td>
</tr>
<tr>
<td>EDEC 260</td>
<td>Philosophical Foundations</td>
<td>3</td>
</tr>
<tr>
<td>EDFE 246</td>
<td>First Field Experience (Physical Education)</td>
<td>3</td>
</tr>
<tr>
<td>EDFE 373</td>
<td>Second Field Experience (Physical Education)</td>
<td>3</td>
</tr>
<tr>
<td>EDFE 380</td>
<td>Third Field Experience (Physical Education)</td>
<td>7</td>
</tr>
<tr>
<td>EDFE 480</td>
<td>Fourth Field Experience (Physical Education)</td>
<td>7</td>
</tr>
<tr>
<td>EDKP 100</td>
<td>Introduction to Physical and Health Education in Quebec</td>
<td>3</td>
</tr>
<tr>
<td>EDKP 200</td>
<td>Weight Training</td>
<td>1</td>
</tr>
<tr>
<td>EDKP 204</td>
<td>Health Education</td>
<td>3</td>
</tr>
<tr>
<td>EDKP 208</td>
<td>Biomechanics and Motor Learning</td>
<td>3</td>
</tr>
<tr>
<td>EDKP 213</td>
<td>Aquatics</td>
<td>1</td>
</tr>
<tr>
<td>EDKP 214</td>
<td>Basketball</td>
<td>2</td>
</tr>
<tr>
<td>EDKP 215</td>
<td>Standard First Aid/Cardio-Pulmonary Resuscitation Level C</td>
<td>0</td>
</tr>
<tr>
<td>EDKP 217</td>
<td>Track &amp; Field / Cross Country</td>
<td>2</td>
</tr>
<tr>
<td>EDKP 218</td>
<td>Volleyball</td>
<td>2</td>
</tr>
<tr>
<td>EDKP 223</td>
<td>Games: Principles and Practice 1</td>
<td>2</td>
</tr>
</tbody>
</table>
EDKP 225 (2) Games: Principles and Practice 2
EDKP 231 (1) Martial Arts
EDKP 233 (2) Soccer
EDKP 252 (2) Racquet Sports
EDKP 253 (2) Movement Education
EDKP 261 (3) Motor Development
EDKP 292 (3) Nutrition and Wellness
EDKP 293 (3) Anatomy and Physiology
EDKP 307 (3) Evaluation in Physical Education
EDKP 330 (3) Physical Activity and Health
EDKP 342 (3) Physical Education Methods
EDKP 391 (3) Physiology in Sport and Exercise
EDKP 396 (3) Adapted Physical Activity
EDKP 442 (3) Physical Education Pedagogy
EDKP 443 (3) Research Methods
EDKP 448 (3) Exercise and Health Psychology
EDKP 494 (3) Physical Education Curriculum Development
EDKP 498 (3) Sport Psychology
EDPE 208 (3) Personality and Social Development
EDPE 300 (3) Educational Psychology

Complementary Courses (6 credits)
6 credits selected as specified below:

Multicultural Education
3 credits from:
EDEC 233 (3) Indigenous Education
EDEC 248 (3) Equity and Education
EDEC 249 (3) Global Education and Social Justice

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

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.

8.4.5 Bachelor of Science (Kinesiology) (B.Sc.(Kinesiology)) - Kinesiology (90 credits)
The McGill Bachelor of Science (B.Sc.) - Kinesiology program received accreditation from the Canadian Council of University Physical Education and Kinesiology Administrators (CCUPEKA) in April 2007.
The B.Sc.(Kinesiology) is a 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.

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:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 111</td>
<td>3</td>
<td>Principles: Organismal Biology</td>
</tr>
<tr>
<td>CHEM 110</td>
<td>4</td>
<td>General Chemistry 1</td>
</tr>
</tbody>
</table>

In consultation with a program adviser, one of the following Fall term MATH courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 139</td>
<td>4</td>
<td>Calculus 1 with Precalculus</td>
</tr>
<tr>
<td>MATH 140</td>
<td>3</td>
<td>Calculus 1</td>
</tr>
<tr>
<td>MATH 150</td>
<td>4</td>
<td>Calculus A</td>
</tr>
</tbody>
</table>

In consultation with a program adviser, one of the following Fall term PHYS courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 101</td>
<td>4</td>
<td>Introductory Physics - Mechanics</td>
</tr>
<tr>
<td>PHYS 131</td>
<td>4</td>
<td>Mechanics and Waves</td>
</tr>
</tbody>
</table>

Winter term BIOL and CHEM courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 112</td>
<td>3</td>
<td>Cell and Molecular Biology</td>
</tr>
<tr>
<td>CHEM 120</td>
<td>4</td>
<td>General Chemistry 2</td>
</tr>
</tbody>
</table>

One of the following Winter term MATH courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 141</td>
<td>4</td>
<td>Calculus 2</td>
</tr>
<tr>
<td>MATH 151</td>
<td>4</td>
<td>Calculus B</td>
</tr>
</tbody>
</table>

One of the following Winter term PHYS courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 102</td>
<td>4</td>
<td>Introductory Physics - Electromagnetism</td>
</tr>
<tr>
<td>PHYS 142</td>
<td>4</td>
<td>Electromagnetism and Optics</td>
</tr>
</tbody>
</table>

**Required Courses (64 credits)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANAT 315</td>
<td>3</td>
<td>Anatomy/Limbs and Back</td>
</tr>
<tr>
<td>ANAT 316</td>
<td>3</td>
<td>Human Visceral Anatomy</td>
</tr>
<tr>
<td>CHEM 212</td>
<td>4</td>
<td>Introductory Organic Chemistry 1</td>
</tr>
<tr>
<td>EDKP 206</td>
<td>3</td>
<td>Biomechanics of Human Movement</td>
</tr>
<tr>
<td>Course Code</td>
<td>Credits</td>
<td>Course Title</td>
</tr>
<tr>
<td>-------------</td>
<td>---------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>EDKP 215</td>
<td>(0)</td>
<td>Standard First Aid/Cardio-Pulmonary Resuscitation Level C</td>
</tr>
<tr>
<td>EDKP 250</td>
<td>(3)</td>
<td>Practicum 1</td>
</tr>
<tr>
<td>EDKP 261</td>
<td>(3)</td>
<td>Motor Development</td>
</tr>
<tr>
<td>EDKP 292</td>
<td>(3)</td>
<td>Nutrition and Wellness</td>
</tr>
<tr>
<td>EDKP 330</td>
<td>(3)</td>
<td>Physical Activity and Health</td>
</tr>
<tr>
<td>EDKP 350</td>
<td>(3)</td>
<td>Physical Fitness Evaluation Methods</td>
</tr>
<tr>
<td>EDKP 395</td>
<td>(3)</td>
<td>Exercise Physiology</td>
</tr>
<tr>
<td>EDKP 396</td>
<td>(3)</td>
<td>Adapted Physical Activity</td>
</tr>
<tr>
<td>EDKP 405</td>
<td>(3)</td>
<td>Sport in Society</td>
</tr>
<tr>
<td>EDKP 443</td>
<td>(3)</td>
<td>Research Methods</td>
</tr>
<tr>
<td>EDKP 447</td>
<td>(3)</td>
<td>Motor Control</td>
</tr>
<tr>
<td>EDKP 448</td>
<td>(3)</td>
<td>Exercise and Health Psychology</td>
</tr>
<tr>
<td>EDKP 450</td>
<td>(3)</td>
<td>Practicum 2</td>
</tr>
<tr>
<td>EDKP 485</td>
<td>(3)</td>
<td>Exercise Pathophysiology 1</td>
</tr>
<tr>
<td>EDKP 495</td>
<td>(3)</td>
<td>Scientific Principles of Training</td>
</tr>
<tr>
<td>EDKP 498</td>
<td>(3)</td>
<td>Sport Psychology</td>
</tr>
<tr>
<td>PHGY 209</td>
<td>(3)</td>
<td>Mammalian Physiology 1</td>
</tr>
<tr>
<td>PHGY 210</td>
<td>(3)</td>
<td>Mammalian Physiology 2</td>
</tr>
</tbody>
</table>

**Complementary Courses (12 credits)**

12 credits selected as described below.

3 credits of Statistics from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 373</td>
<td>(3)</td>
<td>Biometry</td>
</tr>
<tr>
<td>MATH 203</td>
<td>(3)</td>
<td>Principles of Statistics 1</td>
</tr>
<tr>
<td>PSYC 204</td>
<td>(3)</td>
<td>Introduction to Psychological Statistics</td>
</tr>
<tr>
<td>SOCI 350</td>
<td>(3)</td>
<td>Statistics in Social Research</td>
</tr>
</tbody>
</table>

9 credits from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDKP 200</td>
<td>(1)</td>
<td>Weight Training</td>
</tr>
<tr>
<td>EDKP 201</td>
<td>(3)</td>
<td>Physical Activity Leadership</td>
</tr>
<tr>
<td>EDKP 244</td>
<td>(1)</td>
<td>Dance and Fitness</td>
</tr>
<tr>
<td>EDKP 311</td>
<td>(3)</td>
<td>Athletic Injuries</td>
</tr>
<tr>
<td>EDKP 394</td>
<td>(3)</td>
<td>Historical Perspectives</td>
</tr>
<tr>
<td>EDKP 444</td>
<td>(3)</td>
<td>Ergonomics</td>
</tr>
<tr>
<td>EDKP 445</td>
<td>(3)</td>
<td>Exercise Metabolism</td>
</tr>
<tr>
<td>EDKP 446</td>
<td>(3)</td>
<td>Physical Activity and Ageing</td>
</tr>
<tr>
<td>EDKP 449</td>
<td>(3)</td>
<td>Exercise Pathophysiology 2</td>
</tr>
<tr>
<td>EDKP 451</td>
<td>(3)</td>
<td>Personal Trainer Practicum</td>
</tr>
<tr>
<td>EDKP 452</td>
<td>(3)</td>
<td>Fitness &amp; Lifestyle Consulting</td>
</tr>
<tr>
<td>EDKP 453</td>
<td>(3)</td>
<td>Research Practicum in Kinesiology</td>
</tr>
<tr>
<td>EDKP 542</td>
<td>(3)</td>
<td>Environmental Exercise Physiology</td>
</tr>
</tbody>
</table>
Elective Courses (14 credits)

To be chosen in consultation with the Program Director or Student Adviser.

8.4.6 Bachelor of Science (Kinesiology) (B.Sc.(Kinesiology)) - Kinesiology - Honours (90 credits)

The McGill Bachelor of Science (B.Sc.) - Kinesiology program received accreditation from the Canadian Council of University Physical Education and Kinesiology Administrators (CCUPEKA) in April 2007.

The Honours version of the B.Sc.(Kinesiology) is a 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 Kinesiology - Honours program offers particularly strong students aspiring to continue their studies at the graduate level the opportunity to pursue more advanced coursework. The program requires the completion of a research project under the direction of a professor during the final year. 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 Fall term MATH courses:

MATH 139  (4)  Calculus 1 with Precalculus
MATH 140  (3)  Calculus 1
MATH 150  (4)  Calculus A

In consultation with a program adviser, one of the following Fall term PHYS courses:

PHYS 101  (4)  Introductory Physics - Mechanics
PHYS 131  (4)  Mechanics and Waves

Winter term BIOL and CHEM courses:

BIOL 112  (3)  Cell and Molecular Biology
CHEM 120  (4)  General Chemistry 2

One of the following Winter term MATH courses:

MATH 141  (4)  Calculus 2
MATH 151  (4)  Calculus B

EDKP 548  (3)  Applied Exercise Psychology
EDKP 566  (3)  Advanced Biomechanics Theory
NUTR 503  (3)  Bioenergetics and the Lifespan
One of the following Winter term PHYS courses:

- PHYS 102 (4) Introductory Physics - Electromagnetism
- PHYS 142 (4) Electromagnetism and Optics

**Required Courses (73 credits)**

In addition to the 61 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 (3) Anatomy/Limbs and Back
- ANAT 316 (3) Human Visceral Anatomy
- 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 250 (3) Practicum 1
- EDKP 261 (3) Motor Development
- EDKP 292 (3) Nutrition and Wellness
- EDKP 330 (3) Physical Activity and Health
- EDKP 350 (3) Physical Fitness Evaluation Methods
- 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 448 (3) Exercise and Health Psychology
- EDKP 450 (3) Practicum 2
- 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:
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOC 311</td>
<td>(3)</td>
<td>Metabolic Biochemistry</td>
</tr>
<tr>
<td>EDKP 311</td>
<td>(3)</td>
<td>Athletic Injuries</td>
</tr>
<tr>
<td>EDKP 394</td>
<td>(3)</td>
<td>Historical Perspectives</td>
</tr>
<tr>
<td>EDKP 444</td>
<td>(3)</td>
<td>Ergonomics</td>
</tr>
<tr>
<td>EDKP 445</td>
<td>(3)</td>
<td>Exercise Metabolism</td>
</tr>
<tr>
<td>EDKP 446</td>
<td>(3)</td>
<td>Physical Activity and Ageing</td>
</tr>
<tr>
<td>EDKP 449</td>
<td>(3)</td>
<td>Exercise Pathophysiology 2</td>
</tr>
<tr>
<td>EDKP 542</td>
<td>(3)</td>
<td>Environmental Exercise Physiology</td>
</tr>
<tr>
<td>EDKP 548</td>
<td>(3)</td>
<td>Applied Exercise Psychology</td>
</tr>
<tr>
<td>EDKP 566</td>
<td>(3)</td>
<td>Advanced Biomechanics Theory</td>
</tr>
<tr>
<td>NUTR 344</td>
<td>(4)</td>
<td>Clinical Nutrition 1</td>
</tr>
<tr>
<td>NUTR 503</td>
<td>(3)</td>
<td>Bioenergetics and the Lifespan</td>
</tr>
<tr>
<td>PHGY 314</td>
<td>(3)</td>
<td>Integrative Neuroscience</td>
</tr>
<tr>
<td>POTH 434</td>
<td>(3)</td>
<td>Musculoskeletal Biomechanics</td>
</tr>
<tr>
<td>PSYC 471</td>
<td>(3)</td>
<td>Human Motivation</td>
</tr>
</tbody>
</table>

**Elective Courses (2 credits)**

To be chosen in consultation with the Program Director or Student Adviser.