Faculty of Education

Programs, Courses and University Regulations

2016-2017

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

1 . McGill University reserves the right to mak

Publication Information

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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 Uni

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.

Websites: *www.mcgill.ca/library/branches/education*; *www.mcgill.ca/library*

Hours of Operation – mid-April to end of July:	
Monday to Friday	08:15–16:45
Weekends	Closed

Note: Closed during the month of August.

Website: *www.mcgill.ca/education/technology* (under “Education Computer Lab”)

ICS McGill Central A

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 0 0 1 260.216161 Tm(human dw-00 0 1 187.82 209.16

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

examine issues pertaining to assessment and interv

Communications Associate

Stephen Lalla

Development Officer

Melissa Margles

5 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 a 1 507.855 Tm(lea7.52 2(Under)TUnder)5 541.875 ms:

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 Under

Education Building, Room 244
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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 Af

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.

- 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 relev

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 fulfil all Faculty and program requirements. This includes completing the minimum credit requirements for the degree as stipulated in the letter of acceptance; obtaining a grade of C or better in all required and complementary courses; and achieving a minimum cumulative grade point average (CGPA) of 2.00. Students must satisfactorily complete a minimum of 60 credits at McGill University toward the fulfilment of the degree requirements. In addition, students must complete specific components of their program at McGill.

Students enrolled in Kinesiology and Physical Education programs are required, before the end of their final year of study, to show proof of certification in Standard Level Safety Oriented First Aid, and Level C in Cardiopulmonary Resuscitation, or equivalencies.

Students must complete their degree requirementsl or heir de67.5IS 460mentarAKinesiolSc. 170.506 445.74Tm28gree requirementslto asdk0 1fj-men4arA

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 **•www**

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 b

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. H 443.521 Tm(Eeeks t58.602 4 and pri)Tj10 0 s. Rather

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 Department of Educational and Counselling Psychology

8.1.1 Location

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*

8.1.2 About the Department of Educational and Counselling Psychology

Educational Psychology encompasses:

a. the theoretical and applied study of learning, cognition, and instruction in a variety of educational settings across ages and domains;
b. instructional technology and computers as cognitireserv

At the undergraduate level, the Department of Educational and Counselling Psychology is responsible for the B.A.; see the *F*

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.rs

Associate Pr

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.)

Da

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.)

Limin Jao; B.Sc., B.Ed.(Qu.), M.A., Ph.D.(OISE, Tor.)

Marta Kobiela; B.Sc., M.Sc.(Texas A & M), Ph.D.(Vanderbilt)

Naomi Nichols; B.A.(Trent), B.Ed., M.Ed., Ph.D.(York)

Lisa Starr; B.Ed.(Regina), M.A.(Phoenix), Ph.D.(Vic.,BC)

Paul Zanazanian; B.A., M.A.(McG.), Ph.D.(Montr.)

Faculty Lecturers

James Howden; B.Ed.(McG.), M.Ed.(OISE, Tor.)

Sheryl Smith-Gilman; B.Ed., M.A., Ph.D.(McG.)

Lisa Trimble; B.A.(W. Laur.), M.A., Ph.D.(McG.)

Dawn Wiseman; B.Eng., Grad.Dip., M.A.(C'dia)

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

FRSL 207D2	(3)	Elementary French 01
FRSL 211D1	(3)	Oral and Written French 1
FRSL 211D2	(3)	Oral and Written French 1
RELG 207	(3)	The Study of World Religions 1

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

Required Courses (54 credits)

EDEC 201	(1)	First Year Professional Seminar
		English Exam for Txam for

54 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

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

Literature (33 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 (54 credits)

54 credits distributed as follows:

Required Course (3 credits)

EDES 366	(3)	Literature for Young Adults

Complementary Language/Linguistics courses. (6 credits)

Select 6 credits from the following course list:

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

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:

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 (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:

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

"Teachable" Subject Area (18 credits)

18 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 18 credits in another) will use 3 credits of electives to take the Secondary Teaching Methods course needed for their second teachable subject.

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)	The Study of World Religions 1

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 (Sec)
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)	First Nations and Inuit Education
EDEC 248	(3)	Equity and Education

MATH 327	(3)	Matrix Numerical Analysis
MATH 329	(3)	Theory of Interest
MATH 340	(3)	Discrete Structures 2
MATH 346	(3)	Number Theory
MATH 417	(3)	Mathematical Programming
MATH 423	(3)	Regression and Analysis of Variance
MATH 447	(3)	Introduction to Stochastic Processes
MATH 523	(4)	Generalized Linear Models
MATH 524	(4)	Nonparametric Statistics
MATH 525	(4)	Sampling Theory and Applications

"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/secsocsci.

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 Quebec Ministère de l'Éducation, du Loisir et du Sport (MELS). For more information about teacher certification in Quebec, please refer to the Faculty of Education section under "Overview of Faculty Programs," "Undergraduate Education Programs," and "Quebec Teacher Certification."

Freshman Program

Students normally complete 30 credits in their Freshman (U0) year.

The Freshman year is the time to take introductory-level courses in a teachable subject area, as well as to explore areas that are not normally taken within B.Ed. programs (e.g., Sociology, Psychology, Political Science, etc.). Students should also investigate the possibility of taking one of the First Year Seminar courses offered by the Faculty of Arts or the Faculty of Science.

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

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)	The Study of World Religions 1
RELG 252	(3)	Hinduism and Buddhism

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 (Sec)
EDER 372	(3)	Ethics and Religious Culture (Secondary)
EDES 334	(3)	Teaching Secondary Social Studies 1
EDES 350	(3)	Classroom Practices
EDFE 200	(2)	First Field Experience (K/Elem & Secondary)
EDFE 254	(3)	Second Field Experience (Secondary)

Philosophy of Education

3 credits from:

EDEC 260	(3)	Philosophical Foundations
EDEC 261	(3)	Philosophy of Catholic Education

Secondary Social Sciences - History & Citizenship, Ethics & Religious Culture Subject Area (54 credits)

Secondary Social Sciences - History and Citizenship, Ethics and Religious Culture students complete 54 credits selected in consultation with the Program Adviser with the following specifications:

Required Courses

History

6 credits:

HIST 202	(3)	Survey: Canada to 1867
HIST 203	(3)	Survey: Canada since 1867

Complementary Courses (48 credits)

History and Citizenship (30 credits)

At least 12 of the 30 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

9 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
ECON 205	(3)	An Introduction to Political Economy
ECON 208	(3)	Microeconomic Analysis and Applications
ECON 209	(3)	Macroeconomic Analysis and Applications
ECON 219	(3)	Current Economic Problems: Topics
ECON 221	(3)	Economic History
ECON 313	(3)	Economic Development 1
ECON 326	(3)	Ecological Economics
ECON 341	(3)	Economic History of a World Area
ECON 347	(3)	Economics of Climate Change
ENVR 201	(3)	Society, Environment and Sustainability

POLI 222	(3)	Political Process and Behaviour in Canada
POLI 227	(3)	Developing Areas/Introduction
POLI 243	(3)	International Politics of Economic Relations
POLI 244	(3)	International Politics: State Behaviour
POLI 341	(3)	Foreign Policy: The Middle East
POLI 345	(3)	International Organizations
POLI 354	(3)	Approaches to International Political Economy
POLI 360	(3)	Security: War and Peace
POLI 362	(3)	Political Theory and International Relations
POLI 423	(3)	Politics of Ethno-Nationalism
POLI 435	(3)	Identity and Inequality
POLI 442	(3)	International Relations of Ethnic Conflict
POLI 450	(3)	Peacebuilding
POLI 474	(3)	Inequality and Development

Ethics and Religious Culture

18 credits as specified below.

Revision, May 2016. Start of revision.

6 credits from:

EDER 309	(3)	The Religious Quest
RELG 204	(3)	Judaism, Christianity and Islam
RELG 207	(3)	The Study of World Religions 1
RELG 252	(3)	Hinduism and Buddhism

Revision, May 2016. End of revision.

6 credits from:

EDER 209	(3)	Search for Authenticity
EDER 395	(3)	Moral Values and Human Action
EDER 461	(3)	Society and Change
EDER 473	(3)	Living with Insight
EDER 494	(3)	Ethics in Practice
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

8.2.8 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 hav

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 334	(3)	Teaching Secondary Social Studies 1
EDES 350	(3)	Classroom Practices
EDES 434	(3)	Teaching Secondary Social Studies 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)	First Nations and Inuit 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 Social Sciences - History and Citizenship, Geography Subject Area (54 credits)

Secondary Social Sciences - History and Citizenship, Geography students complete 54 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 (48 credits)

History and Citizenship (30 credits)

At least 12 of the 30 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

9 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
ECON 205	(3)	An Introduction to Political Economy
ECON 208	(3)	Microeconomic Analysis and Applications
ECON 209	(3)	Macroeconomic Analysis and Applications
ECON 219	(3)	Current Economic Problems: Topics
ECON 221	(3)	Economic History
ECON 313	(3)	Economic Development 1
ECON 326	(3)	Ecological Economics
ECON 341	(3)	Economic History of a World Area
ECON 347	(3)	Economics of Climate Change
ENVR 201	(3)	Society, Environment and Sustainability
ENVR 203	(3)	Knowledge, Ethics and Environment
POLI 212	(3)	Government and Politics - Developed World
POLI 221	(3)	Government of Canada
POLI 222	(3)	Political Process and Behaviour in Canada
POLI 227	(3)	Developing Areas/Introduction
POLI 243	(3)	International Politics of Economic Relations
POLI 244	(3)	International Politics: State Behaviour
POLI 341	(3)	Foreign Policy: The Middle East
POLI 345	(3)	International Organizations
POLI 354	(3)	Approaches to International Political Economy
POLI 360	(3)	Security: War and Peace
POLI 362	(3)	Political Theory and International Relations
POLI 423	(3)	Politics of Ethno-Nationalism
POLI 435	(3)	Identity and Inequality
POLI 442	(3)	International Relations of Ethnic Conflict
POLI 450	(3)	Peacebuilding
POLI 474	(3)	Inequality and Development

Geography

18 credits from:

ENVR 202	(3)	The Evolving Earth

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 216	(3)	Geography of the World Economy
GEOG 217	(3)	Cities in the Modern World
GEOG 272	(3)	Earth's Changing Surface
GEOG 301	(3)	Geography of Nunavut
GEOG 309	(3)	Geography of Canada
GEOG 311	(3)	Economic Geography
GEOG 331	(3)	Urban Social Geography

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 Quebec Ministère de l'Éducation, du Loisir et du Sport (MELS). Fre de l'

PHYS 131	(4)	Mechanics and Waves
PHYS 142	(4)	Electromagnetism and Optics

Freshman Program - Complementary

For Freshman students with Advanced Standing in one or more of the basic sciences, the Faculty also recommends some of the courses listed below. French Second Language (FRSL) courses require a placement test to determine the course level.

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

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 (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)

6 credits selected as described below:

Multicultural Education

3 credits from:

EDEC 233	(3)	First Nations and Inuit 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 Science and Technology (54 credits)

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

the Material World

- Earth and Space
- the Living World
- the Technological World

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.

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Earth and Space

Students select a minimum of 6 credits to a maximum of 21 credits from the following list:

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

Earth and Space - Environment

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

ENVR 200	(3)	The Global Environment
ENVR 201	(3)	Society, Environment and Sustainability
ENVR 203	(3)	Knowledge, Ethics and Environment
ENVR 301	(3)	Environmental Research Design
GEOG 200	(3)	Geographical Perspectives: World Environmental Problems
GEOG 203	(3)	Environmental Systems
GEOG 205	(3)	Global Change: Past, Present and Future
GEOG 221	(3)	Environment and Health

The Material World

Students select a maximum of 15 credits from the follo

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

Revision, April 2016. Start of revision.

The Technological World

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

COMP 102*	(3)	Computers and Computing
COMP 202**	(3)	Foundations of Programming
COMP 206	(3)	Introduction to Software Systems
COMP 280*	(3)	History and Philosophy of Computing
COMP 364	(3)	Computer Tools for Life Sciences
MATH 204	(3)	Principles of Statistics 2

* 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.

Revision, April 2016. End of revision.

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 w

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.

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CHEM 180	(3)	World of Chemistry: Environment
CHEM 181	(3)	World of Chemistry: Food
CHEM 182	(3)	World of Chemistry: Technology
CHEM 183	(3)	World of Chemistry: Drugs

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.

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)

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

First calculus course, one of:

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

Second calculus course, one of:

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

First physics course, one of:

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

Second physics course, one of:

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

Electives

Students wishing to take elective courses may choose them from introductory courses offered by departments in the Faculties of Science or of Arts. A list of recommended courses is found athttp://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.

EDEC 261*	(3)	Philosophy of Catholic Education

Major Concentration Biology - Cell/Molecular (36 credits)

The Major Concentration Biology - Cell/Molecular is a planned sequence of courses designed to permit a degree of specialization in cell/molecular biology.

Advising Note: Freshman students should be aware that PHYS 101 and/or PHYS 102 are required for some of the courses in the major and minor concentrations in Biology.

Required Courses*

29 credits selected as follows:

* Students who have already taken CHEM 212 or its equivalent will choose another appropriate complementary course, to be approved by the Adviser. Regardless of the substitution, students must take at least 36 credits in this program.

BIOL 200	(3)	Molecular Biology
BIOL 201	(3)	Cell Biology and Metabolism
BIOL 202	(3)	Basic Genetics
BIOL 205	(3)	Biology of Organisms
BIOL 215	(3)	Introduction to Ecology and Evolution
BIOL 300	(3)	Molecular Biology of the Gene
BIOL 301	(4)	Cell and Molecular Laboratory
BIOL 303	(3)	Developmental Biology
CHEM 212*	(4)	Introductory Organic Chemistry 1

Complementary Courses

At least 7 credits selected from:

BIOL 306	(3)	Neural Basis of Behaviour
BIOL 313	(3)	Eukaryotic Cell Biology
BIOL 314	(3)	Molecular Biology of Oncogenes
BIOL 370	(3)	Human Genetics Applied
BIOL 373	(3)	Biometry
BIOL 413	(1)	Directed Reading
BIOL 568	(3)	Topics on the Human Genome
BIOL 575	(3)	Human Biochemical Genetics

or other appropriate course at the 300 level or higher with the permission of an adviser.

Minor Physics (18 credits)

Required Course

3 credits

PHYS 257	(3)	Experimental Methods 1

Complementary Courses

15 credits to be selected as follows:

One of:

The Major Concentration Biology - Organismal with Minor Chemistry is one of the nine variations of the program and allows students to focus their Science degree in Organismal Biology with a subspecialization in Chemistry.

To fulfil the requirements for graduation for the Concurrent Bachelor of Science and Bachelor of Education, the 135 credits (or 165 credits for students admitted without basic sciences) include the following:

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

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/sousa/bsc/freshman.

4. The maximum number of courses per term, required, complementary, and elective, is five.

List of Approved Freshman Science Courses

Select the approved courses according to the instructions above.

Note:

* CHEM 115 (not open to students who are taking or have taken CHEM 110 or CHEM 120)

* CHEM 120 (not open to students who have taken CHEM 115)

BIOL 111	(3)	Principles: Organismal Biology
BIOL 112	(3)	Cell and Molecular Biology
CHEM 110	(4)	General Chemistry 1
CHEM 115*	(4)	Accelerated General Chemistry: Giants in Science
CHEM 120*	(4)	General Chemistry 2
COMP 202	(3)	Foundations of Programming

ESYS 104	(3)	The Earth System
MATH 133	(3)	Linear Algebra and Geometry
PSYC 100	(3)	Introduction to Psychology

First calculus course, one of:

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

Second calculus course, one of:

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

First physics course, one of:

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

Second physics course, one of:

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

Electives

Students wishing to take elective courses may choose them from introductory courses offered by departments in the Faculties of Science or of Arts. A list of recommended courses is found at http://www.mcgill.ca/science/sousa/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)
	(7)	Fourth Field Experience (Secondary)

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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
BIOL 373	(3)	Biometry
BIOL 427	(3)	Herpetology
BIOL 435	(3)	Natural Selection
BIOL 441	(3)	Biological Oceanography
BIOL 465	(3)	Conservation Biology

or other appropriate course at the 300 level or higher with the permission of an adviser.

Minor Chemistry (18 credits)

Required Courses

18 credits selected as follows:

* Note: denotes courses with CEGEP equivalents.

Substitutions for these by more advanced courses may be made at the discretion of the Adviser.

CHEM 203	(3)	Survey of Physical Chemistry
CHEM 212*	(4)	Introductory Organic Chemistry 1
CHEM 222*	(4)	Introductory Organic Chemistry 2
CHEM 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 w

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

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)	First Nations and Inuit 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 tak

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 w

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 Biologygrams", and "im(B.Ed.)Tj-0071Chemistry wi 67.52 670.24 Tm(Th4 T940 0 1 280.536 684.4 T8(w 4 T940 0 1the requents

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

First calculus course, one of:

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

Second calculus course, one of:

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

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

CHEM 222	(4)	Introductory Organic Chemistry 2
CHEM 253	(1)	Introductory Physical Chemistry 1 Laboratory
CHEM 281	(3)	Inorganic Chemistry 1
CHEM 287	(2)	Introductory Analytical Chemistry
CHEM 297	(1)	Introductory Analytical Chemistry Laboratory

Complementary Courses

18 credits selected from:

CHEM 219	(3)	Introduction to Atmospheric Chemistry
CHEM 263	(1)	Introductory Physical Chemistry 2 Laboratory
CHEM 302	(3)	Introductory Organic Chemistry 3
CHEM 334	(3)	Advanced Materials
CHEM 367	(3)	Instrumental Analysis 1
CHEM 381	(3)	Inorganic Chemistry 2
CHEM 482	(3)	Organic Chemistry: Natural Products
CHEM 531	(3)	Chemistry of Inorganic Materials
CHEM 571	(3)	Polymer Synthesis
CHEM 582	(3)	Supramolecular Chemistry
CHEM 591	(3)	Bioinorganic Chemistry

Minor Biology (24 credits)

Required Courses

15 credits

BIOL 200	(3)	Molecular Biology
BIOL 201	(3)	Cell Biology and Metabolism
BIOL 202	(3)	Basic Genetics
BIOL 205	(3)	Biology of Organisms
BIOL 215	(3)	Introduction to Ecology and Evolution

Complementary Courses

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

Additional Science Courses (9 credits)

BIOL 210	(3)	Perspectives of Science
MATH 203	(3)	Principles of Statistics 1
MATH 222	(3)	Calculus 3

Electives (6 credits)

6 credits, of which at least 3 credits must be Science Electives.

The electives must be chosen in such a way that the credit counts needed for graduation are satisfied.

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 de

Note:

* CHEM 115 (not open to students who are taking or have taken CHEM 110 or CHEM 120)

* CHEM 120 (not open to students who have taken CHEM 115)

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

First calculus course, one of:

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

Second calculus course, one of:

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

First physics course, one of:

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

Second physics course, one of:

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

Electives

Students wishing to take elective courses may choose them from introductory courses offered by departments in the Faculties of Science or of Arts. A list of recommended courses is found at http://www.mcgill.ca/science/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 f

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)	First Nations and Inuit 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:

CHEM 219	(3)	Introduction to Atmospheric Chemistry
CHEM 263	(1)	Introductory Physical Chemistry 2 Laboratory
CHEM 302	(3)	Introductory Organic Chemistry 3
CHEM 334	(3)	Advanced Materials
CHEM 367	(3)	Instrumental Analysis 1
CHEM 381	(3)	Inorganic Chemistry 2
CHEM 482	(3)	Organic Chemistry: Natural Products
CHEM 531	(3)	Chemistry of Inorganic Materials
CHEM 571	(3)	Polymer Synthesis
CHEM 582	(3)	Supramolecular Chemistry
CHEM 591	(3)	Bioinorganic Chemistry

Minor Physics (18 credits)

Required Course

3 credits

PHYS 257	(3)	Experimental Methods 1

Complementary Courses

15 credits to be selected as follows:

One of:

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PHYS 241	(3)	Signal Processing
PHYS 258	(3)	Experimental Methods 2

One of:

PHYS 214	(3)	Introductory Astrophysics
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.

8.2.16 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 fulfil all the requirements for graduation for both the B.Sc. and the B.Ed.

Graduates of the B.Ed. degree are recommended by the Uni.67 454.241 Tm6 253 Tm9gra nirrent Bac

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 hav

(4) Calculus 2

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)	First Nations and Inuit 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 discip is a plannedencs:

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

Revision, April 2016. End of revision.

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:

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)	First Nations and Inuit 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 .52 395.i()Tj1 rEie6 1 165. 2 285.123 Tm(30 credits)Tj.641To73y Se(GEP)Tje285.123 ses** NoteTj1 0 0 1 264.96 thi355Se(GEP)Tje28w0 0 1 264.

Revision, April 2016. Start of revision.

6 credits selected from:

Introductory Astrophysics

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

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

First calculus course, one of:

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

Second calculus course, one of:

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

First physics course, one of:

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

Second physics course, one of:

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

Electives

Students wishing to take elective courses may choose them from introductory courses offered by departments in the Faculties of Science or of Arts. A list of recommended courses is found at http://www.mcgill.ca/science/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 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 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 required1150.975 381.41t aer is required1pired1pired1pired1pired1piror b81 Tth 1 (ws:)Tj1 0 0 1 67.0 197ed1pir

Required Courses

27 credits

Where appropriate, Honours courses may be substituted for equivalent Major courses.

* Students select either MATH 249 or MATH 316 but not both.

MATH 222	(3)	Calculus 3
MATH 235	(3)	Algebra 1
MATH 236	(3)	Algebra 2
MATH 242	(3)	Analysis 1
MATH 243	(3)	Analysis 2
MATH 249*	(3)	Honours Complex Variables
MATH 314	(3)	Advanced Calculus
MATH 315	(3)	Ordinary Differential Equations
MATH 316*	(3)	Complex Variables
MATH 323	(3)	Probability

Complementary Courses

27 credits selected with the following specifications:

12 credits specifically required of students in the Concurrent B.Sc. and B.Ed. Major Mathematics:

COMP 202	(3)	Foundations of Programming
MATH 324	(3)	Statistics
MATH 338	(3)	History and Philosophy of Mathematics
MATH 348	(3)	Topics in Geometry

at least 3 credits from:

MATH 317	(3)	Numerical Analysis
MATH 335	(3)	Computational Algebra
MATH 340	(3)	Discrete Structures 2

12 credits from:

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

MATH 204	(3)	Principles of Statistics 2
MATH 318	(3)	Mathematical Logic
		Introduction to P

MATH 417	(3)	Mathematical Programming
MATH 423	(3)	Regression and Analysis of Variance
MATH 430	(3)	Mathematical Finance
MATH 447	(3)	Introduction to Stochastic Processes
MATH 523	(4)	Generalized Linear Models
MATH 525	(4)	Sampling Theory and Applications

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.

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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).

MUHL 186	(3)	Western Musical Traditions
MUIN 180	(3)	BMus Practical Lessons 1
MUIN 181	(3)	BMus Practical Lessons 2
MUPD 135	(1)	Music as a Profession 1
MUPD 136	(1)	Music as a Profession 2
MUSP 140	(2)	Musicianship Training 1
MUSP 141	(2)	Musicianship Training 2
MUSP 170	(1)	Musicianship (Keyboard) 1
MUSP 171	(1)	Musicianship (Keyboard) 2
MUTH 150	(3)	Theory and Analysis 1
MUTH 151	(3)	Theory and Analysis 2

Required Music Components (49 credits)

49 credits of required Music courses distributed as follows:

25 credits of Music Education

11 credits of Theory

4 credits of Musicianship

3 credits of Music History

6 credits of Performance

Music Education

25 credits:

MUCT 235	(3)	Vocal Techniques
MUGT 215	(1)	Basic Conducting Techniques
MUGT 354	(3)	Music for Children
MUGT 358	(3)	General Music for Adults and Teenagers
MUGT 401	(3)	Issues in Music Education
MUIT 202	(3)	Woodwind Techniques
MUIT 203	(3)	Brass Techniques
MUIT 204	(3)	Percussion Techniques
MUIT 356	(3)	Jazz Instruction: Philosophy and Techniques

Theory

11 credits:

MUTH 250	(3)	Theory and Analysis 3

MUTH 251	(3)	Theory and Analysis 4
MUTH 350	(3)	Theory and Analysis 5
MUTH 461	(2)	Choral and Keyboard Arranging

Musicianship

4 credits:

MUSP 240	(2)	Musicianship Training 3
MUSP 241	(2)	Musicianship Training 4

Music History

3 credits:

MUHL 286	(3)	Critical Thinking About Music

Performance

6 credits:

MUIN 280	(3)	BMus Practical Lessons 3
MUIN 281	(3)	BMus Practical Lessons 4
MUIN 283	(0)	BMus Concentration Final Examination

Complementary Music Components (21 credits)

21 credits of complementary Music courses distributed as follows:

9 credits of Music Education

2 credits of Musicianship

6 credits of Music History

4 credits of Performance

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)	First Nations and Inuit Education
EDEC 248	(3)	Equity and Education
EDEC 249	(3)	Global Education and Social Justice

1 credit from:

EDEC 253	(1)	Second Professional Seminar (Kindergarten/Elementary)
EDEC 254	(1)	Second Professional Seminar (Secondary)

3 credits from:

EDEC 260	(3)	Philosophical Foundations
EDEC 261	(3)	Philosophy of Catholic Education

3 credits from:

EDEC 262	(3)	Media, Technology and Education
MUGT 301	(3)	Technology and Media for Music Education

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

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 Quebec Ministère de l'Éducation, du Loisir et du Sport (MELS). For more information about teacher certification in Quebec, please refer to the Faculty of Education section under "Overview of Faculty Programs," "Undergraduate Education Programs," and "Quebec Teacher Certification."

Freshman Program

Students normally complete 30 credits in their Freshman (U0) year.

The Freshman year is the time to take introductory-level courses in the subjects taught in elementary school, as well as to explore areas that are not normally taken as "teachable" subject area courses within B.Ed. programs (e.g. Sociology, Psychology, Political Science, etc.). Students should also investigate the possibility of taking one of the First Year Seminar courses offered by the Faculty of Arts or the Faculty of Science.

In addition, in consultation with the Program Adviser, students may select courses from the recommended course list below or other courses. Included in the list are 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)	The Study of World Religions 1

Required Courses (78 credits)

EDEC 201	(1)	First Year Professional Seminar
EDEC 203	(3)	Communication in Education
EDEC 215	(0)	English Exam for Teacher Certification
EDEC 247	(3)	Policy Issues in Quebec Education
EDEC 253	(1)	Second Professional Seminar (Kindergarten/Elementary)

Elementary French 01Elementarr44cationation

EDEC 262	(3)	Media, Technology and Education
EDEC 405	(3)	Fourth Year Professional Seminar (K/Elem)
EDEE 223	(3)	Language Arts
EDEE 230	(3)	Elementary School Mathematics 1
EDEE 253	(3)	Kindergarten Classroom Pedagogy
EDEE 260	(3)	Reading Methods - Early Childhood
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
		Teaching 0 0 1 70.52CeC0 09

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

3-6 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

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 (21 credits)

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

12 credits in "teachable" subject area courses of the elementary school curriculum from the lists below for Art, English, Ethics and Religious Culture, French, Mathematics, Music, Natural Sciences, Physical Education, and Social Studies.

And

9 credits, 3 credits from each of any three subject areas not chosen above.

No more than 12 credits may be selected from any single course list.

Art

Students may select up to 12 credits from this list and from Art History (ARTH) courses.

EDEA 204	(3)	Drawing
EDEA 205	(3)	Painting 2
EDEA 241	(3)	Basic Art Media for Classroom
EDEA 296	(3)	Basic Design
EDEA 304	(3)	Painting 3
EDEA 305	(3)	Painting 4
EDEA 307	(3)	Drawing 2
EDEA 410	(3)	Aesthetics and Art for the Classroom
EDEA 496	(3)	Sculpture 1
EDEA 497	(3)	Sculpture 2

English

Students may select up to 12 credits from this list.

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
	(3)	Introduction to Film as Art

EPSC 181	(3)	Environmental Geology
EPSC 185	(3)	Natural Disasters
EPSC 201	(3)	Understanding Planet Earth
PHYS 180	(3)	Space, Time and Matter
PHYS 181	(3)	Everyday Physics
PHYS 182	(3)	Our Evolving Universe
PHYS 183	(3)	The Milky Way Inside and Out

Physical Education

Students may take up to 12 credits of Physical Education (EDKP) courses from the list with the permission of the Department of Kinesiology and Physical Education.

* Note: EDKP 292 is available as an academic Physical Education course. All other EDKP courses are restricted.

EDKP 204	(3)	Health Education
EDKP 208	(3)	Biomechanics and Motor Learning
EDKP 261	(3)	Motor Development
EDKP 292*	(3)	Nutrition and Wellness
EDKP 498	(3)	Sport Psychology

Social Studies

Students may take up to 12 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.

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 514-398-4533.

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.).

Students admitted to the First Nations and Inuit Studies program in U0 should consult with their program adviser for guidance on course selection. More information is also found for newly admitted students to the B.Ed. Kindergarten and Elementary Education program on the Faculty of Education website at http://www.mcgill.ca/dise/fnie/teachcert/kelemfnie/new.

Required Courses (108 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)	Aboriginal Language Requirement
EDEC 247	(3)	Policy Issues in Quebec Education
EDEC 253	(1)	Second Professional Seminar (Kindergarten/Elementary)
EDEC 260	(3)	Philosophical Foundations
EDEC 342	(3)	Intermediate Inuktitut/Amerindian Language
EDEC 344	(3)	Advanced Inuktitut/Amerindian Language
EDEC 405	(3)	Fourth Year Professional Seminar (K/Elem)
EDEC 590	(3)	Culturally Appropriate Teaching
EDEE 223	(3)	Language Arts
EDEE 230	(3)	Elementary School Mathematics 1
EDEE 250	(2)	The Kindergarten Classroom
EDEE 270	(3)	Elementary School Science
EDEE 275	(2)	Science Teaching
EDEE 280	(3)	Geography, History and Citizenship Education
EDEE 282	(2)	Teaching Social Sciences
EDEE 325	(3)	Children's Literature
EDEE 332	(3)	Teaching Elementary Mathematics 2
EDEE 353	(3)	Third Year Professional Seminar (Kindergarten/Elementary)
EDEE 355	(3)	Classroom-based Evaluation
EDER 360	(2)	Ethics and Religious Culture (K/Elementary)
EDFE 200	(2)	First Field Experience (K/Elem & Secondary)
EDFE 256	(3)	Second Field Experience (Kindergarten/Elementary)

EDFE 306	(8)	Third Field Experience (Kindergarten/Elementary)
EDFE 406	(7)	Fourth Field Experience (K/Elem)
EDKP 241	(3)	Aboriginal Physical Activities
EDKP 292	(3)	Nutrition and Wellness
EDPE 300	(3)	Educational Psychology

EDEC 278	(3)	Mohawk Language 2

Naskapi

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

Media, Technology, Computers and Education - Complementary Component

3 credits from:

EDEC 262	(3)	Media, Technology and Education
EDPT 200	(3)	Integrating Educational Technology in Classrooms
EDPT 204	(3)	Educational Media 1

Education - Complementary Component

3 credits from:

EDEC 233	(3)	First Nations and Inuit Education
EDEC 248	(3)	Equity and Education
EDEC 249	(3)	Global Education and Social Justice
EDPC 208	(3)	Native Families' Dynamics

Bac

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)	The Study of World Religions 1

Required Courses (84 credits)

EDEC 201	(1)	First Year Professional Seminar
EDEC 203	(3)	Communication in Education
EDEC 215	(0)	English Exam for Teacher Certification
EDEC 247	(3)	Policy Issues in Quebec Education
EDEC 253	(1)	Second Professional Seminar (Kindergarten/Elementary)
EDEC 262	(3)	Media, Technology and Education
		F

EDEC 233	(3)	First Nations and Inuit Education
EDEC 248	(3)	Equity and Education
EDEC 249	(3)	Global Education and Social Justice

Teaching Methods (12 credits)

3 credits from:

(3)3)3)3)**12 8redits)** Elementary

EDEC 247 (3) Policy Issues in Quebec Education

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)	The Study of World Religions 1
RELG 341	(3)	Introduction: Philosophy of Religion

French

9 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
EDEA 345	(3)	Music Curriculum and Instruction for Generalists
EDEE 325	(3)	Children's Literature
EDKP 332	(3)	Physical Education Curriculum and Instruction
MATH 111	(3)	Mathematics for Education Students

Revision, May 2016. End of revision.

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 Quebec Ministère de l'Éducation, du Loisir et du Sport (MELS). For more information about teacher certification in Quebec, please refer to the Faculty of Education section under "Overview of Faculty Programs", "Undergraduate Education Programs", and "Quebec Teacher Certification".

The Department is committed to supporting students in the development and creation of their individual professional portfolios throughout their program.

Freshman Program

Students normally complete 30 credits in their Freshman (U0) year.

The Freshman year is the time to take introductory-level courses in the subject field, as well as to explore areas that are not normally taken as academic subjects within B.Ed. programs (e.g., Sociology, Psychology, Political Science, etc.). Students should also investigate the possibility of taking one of the First Year Seminar courses offered by the Faculty of Arts or the Faculty of Science.

In consultation with the Program Adviser, students may select courses from the recommended course list below or other courses. Included in the list are several French Second Language (FRSL) courses for which placement tests are required to determine the appropriate level. In Quebec, ESL is taught within the French school system. Thus, proficiency in French is an asset for student teaching placements, and is a requirement for employment in Quebec.

To ensure that students are able to function effectively in French in the French school setting, 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.

EDEC 203	(3)	Communication in Education
EDEE 325	(3)	Children's Literature
EDEM 220	(3)	Contemporary Issues in Education
ENGL 201	(3)	Survey of English Literature 2
		Be

EDSL 412	(3)	Assessment in TESL
EDSL 415	(3)	Fourth Professional Seminar
EDSL 447	(3)	Methods in TESL 1
EDSL 458	(3)	Methods in TESL 2

Complementary Courses (30 credits)

30 credits selected as described below:

3 credits from:

EDEC 233	(3)	First Nations and Inuit Education
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:

EDPI 341	(3)	Instruction in Inclusive Schools
EDPI 440	(3)	Managing the Inclusive Classroom

3 credits from:

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

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

6-9 credits of English (ENGL) courses

And

6-9 credits of other complementary courses including

Foreign language courses (0-9 credits)

Other Complementary courses (0-9 credits)

Electives (6 credits)

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 Quebec Ministère de l'Éducation et de l'Enseignement supérieur (MEES). 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".

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EDEC 262	(3)	Media, Technology and Education
EDES 350	(3)	Classroom Practices
EDFE 209	(2)	First Field Experience (TESL)
EDFE 255	(3)	Second Field Experience (TESL)
EDFE 359**	(8)	Third Field Experience (TESL)
EDFE 459**	(7)	Fourth Field Experience (TESL)
EDPE 300	(3)	Educational Psychology
EDPI 309	(3)	Diverse Learners
EDSL 210	(1)	First Professional Seminar
EDSL 215	(3)	Effective French Communication for ESLTeachers in Quebec
EDSL 254	(1)	Second Professional Seminar (TESL)
EDSL 300	(3)	Foundations of L2 Education
EDSL 304	(3)	Sociolinguistics and L2 Education
EDSL 305	(3)	L2 Learning: Classroom Settings
EDSL 311	(3)	Pedagogical Grammar
EDSL 315	(2)	Third Year Professional Seminar
		Literacy 1:T

EDEA 345	(3)	Music Curriculum and Instruction for Generalists
EDKP 332	(3)	Physical Education Curriculum and Instruction

3 credits from:

EDPI 341	(3)	Instruction in Inclusive Schools
EDPI 440	(3)	Managing the Inclusive Classroom

3 credits from:

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

TESL and Greek Language & Culture (21 credits)

15-18 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 200	(3)	Introduction to Ancient Greek Literature
CLAS 203	(3)	Greek Mythology
CLAS 404	(3)	Classical Tradition
HIST 205	(3)	Ancient Mediterranean History
HIST 369	(3)	Greek History: Early Greece
HIST 379	(3)	Greek History: Hellenistic Period
PHIL 345	(3)	Greek Political Theory
PHIL 353	(3)	The Presocratic Philosophers
PHIL 355	(3)	Aristotle
PHIL 452	(3)	Later Greek Philosophy
PHIL 454	(3)	Ancient Moral Theory
POLI 333	(3)	Western Political Theory 1

8.3 Programs for First Nations and Inuit

The following programs are offered in First Nations and Inuit communities for First Nations and Inuit teachers by McGill's Faculty of Education.

Information may be obtained by contacting:

Faculty of Education
Office of First Nations and Inuit Education (OFNIE)
3700 McTavish Street, Room 244
Montreal QC H3A 1Y2

Telephone: 514-398-4527
Fax: 514-398-4529
Website: *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)*.

8.3.1 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
		Educational Psychology

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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 Inuktitut/Amerindian Language
EDEC 344	(3)	Advanced Inuktitut/Amerindian Language

Mi'kmaq

EDEC 237	(3)	Mi'kmaq Heritage Language 1
EDEC 238	(3)	Mi'kmaq Heritage Language 2
EDEC 239	(3)	Mi'kmaq Language 1
EDEC 240	(3)	Mi'kmaq 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:

EDEA 242	(3)	Cultural Skills 1
EDEC 243	(3)	Teaching: Multigrade Classrooms
EDEC 260	(3)	Philosophical Foundations
EDEC 262	(3)	Media, Technology and Education
EDEE 223	(3)	Language Arts
EDEE 230	(3)	Elementary School Mathematics 1
EDEE 245	(3)	Orientation to Education

EDEE 248	(3)	Reading and Writing Inuktitut/Cree
EDEE 253	(3)	Kindergarten Classroom Pedagogy
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 355	(3)	Classroom-based Evaluation

Stream B: Physical Education

24 credits from the following list:

EDEC 243	(3)	Teaching: Multigrade Classrooms
EDEC 262	(3)	Media, Technology and Education
EDEE 223	(3)	Language Arts
EDEE 245	(3)	Orientation to Education
EDKP 204	(3)	Health Education
EDKP 224	(3)	Foundations of Movement Education
EDKP 241	(3)	Aboriginal Physical Activities
EDKP 292	(3)	Nutrition and Wellness
EDKP 307	(3)	Evaluation in Physical Education
EDKP 342	(3)	Physical Education Methods
EDKP 494	(3)	Physical Education Curriculum Development

and 6 credits from the following Physical Education courses:

EDKP 214	(2)	Basketball
EDKP 217	(2)	Track & Field / Cross Country
EDKP 218	(2)	Volleyball
EDKP 223	(2)	Games: Principles and Practice 1
EDKP 226	(1)	Quebec Education Program Orientation
EDKP 229	(1)	Ice Hockey 1
EDKP 240	(1)	Winter Activities

Stream C: Culture and Language

30 credits from the following list:

EDEA 242	(3)	Cultural Skills 1
EDEA 243	(3)	Cultural Skills 2
EDEE 248	(3)	Reading and Writing Inuktitut/Cree
EDEE 270	(3)	Elementary School Science
EDEE 283	(3)	Social Studies Pedagogy
EDEE 332ED3)	(3)	Teaching Elementary Mathematics 2

EDEE 355	(3)	Classroom-based Evaluation
EDEE 370	(3)	Traditional Indigenous Life Skills
EDEE 371	(3)	Integrating Indigenous Storytelling and Creative Writing
EDEE 373	(3)	Traditional Healing
EDEE 383	(3)	Oral and Family History
EDKP 241	(3)	Aboriginal Physical Activities

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

8.3.2 Certificate (Cert.) Aboriginal Literacy Education (30 credits)

This 30-credit program is designed for Algonquin, Cree, Inuit, Mi'kmaq, and Kanienkehaka (Mohawk) students who wish to gain a deeper understanding of their Indigenous language, especially in its written form. It is aimed mainly at those who will be teaching their Indigenous language.

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

Required Courses (6 credits)

EDEC 342	(3)	Intermediate Inuktitut/Amerindian Language
EDEC 344	(3)	Advanced Inuktitut/Amerindian Language

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).

EDEC 227	(3)	Naskapi Language 1
EDEC 228	(3)	Naskapi Language 2
EDEC 239	(3)	Mi'kmaq Language 1
EDEC 240	(3)	Mi'kmaq Language 2
EDEC 241	(3)	Cree Language 1
EDEC 242	(3)	Cree Language 2
EDEC 272	(3)	Algonquin Language 1
EDEC 273	(3)	Algonquin Language 2
EDEC 277	(3)	Mohawk Language 1
EDEC 278	(3)	Mohawk Language 2
EDEC 289	(3)	Inuktitut Orthography and Grammar

Education Courses

12 credits from the list below:

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)	Aboriginal Physical Activities
EDPT 200	(3)	Integrating Educational Technology in Classrooms
EDSL 247	(3)	Second Language Education in Aboriginal Communities
EDSL 305	(3)	L2 Learning: Classroom Settings

8.3.3.1 Admission to the Certificate in Middle School Education in Aboriginal 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
EDEM 502	(3)	Native Family Dynamics & Supporting Institutions

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)	First Nations and Inuit 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

8.3.4.1 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 hav

Health Education

Professors

Theodore E. Milner; B.Sc., M.Sc., Ph.D.(Alta.)

Dilson Rassier; B.P.E., M.Sc.(Brazil), Ph.D.(Calg.)

Associate Professors

Gordon Bloom; B.Ed.(W. Ont.), M.A.(York), Ph.D.(Ott.)

Julie Côté; B.Sc., M.Sc.(Wisc.-Madison), Ph.D.(Montr.)

William Harvey; B.Ed., M.A., Ph.D. (McG.)

David J. Pearsall; B.A., B.P.H.E., M.Sc., Ph.D.(Qu.)

Tanja Taivassalo; B.Sc., Ph.D.(McG.)

René A. Turcotte; H.B.P.H.E.(Laur.), M.Sc., Ph.D.(Alta.)

Assistant Pr

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.

CEAP 250	(3)	Research Essay & Rhetoric
EDEC 202	(3)	Effective Communication
EDEM 220	(3)	Contemporary Issues in Education

Required Courses (99 credits)

EDEC 215	(0)	English Exam for Teacher Certification
EDEC 247	(3)	Policy Issues in Quebec Education
EDEC 260	(3)	Philosophical Foundations
EDFE 246	(3)	First Field Experience (Physical Education)
EDFE 373	(3)	Second Field Experience (Physical Education)
EDFE 380	(7)	Third Field Experience (Physical Education)
EDFE 480	(7)	Fourth Field Experience (Physical Education)
EDKP 100	(3)	Introduction to Physical and Health Education in Quebec
EDKP 200	(1)	Weight Training
EDKP 204	(3)	Health Education
EDKP 208	(3)	Biomechanics and Motor Learning
EDKP 213	(1)	Aquatics
EDKP 214	(2)	Basketball
EDKP 215	(0)	Standard First Aid/Cardio-Pulmonary Resuscitation Level C
EDKP 217	(2)	Track & Field / Cross Country
EDKP 218	(2)	Volleyball
EDKP 223	(2)	Games: Principles and Practice 1
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
		Personality and Social Deocial De

EDPE 300	(3)	Educational Psychology

Complementary Courses (6 credits)

6 credits selected as specified below:

Multicultural Education

3 credits from:

EDEC 233	(3)	First Nations and Inuit 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 aiolf Hono Tm(25 p Eu0 10s0 Tw1 0 0 1 67e460.186 325.428,,0 0 1 6 of the Kinesiology pryTm(ailablec7ho425Tj1 0 0am pro)Tj1 0 y) 70 1 6 (

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

One of the following Winter term PHYS courses:

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

Required Courses (64 credits)

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 485	(3)	Exercise Pathophysiology 1
EDKP 495	(3)	Scientific Principles of Training
EDKP 498	(3)	Sport Psychology
PHGY 209	(3)	Mammalian Physiology 1
PHGY 210	(3)	Mammalian Physiology 2

Complementary Courses (12 credits)

12 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

9 credits from:

EDKP 200	(1)	Weight Training
EDKP 201	(3)	Physical Activity Leadership
EDKP 244	(1)	Dance and Fitness
EDKP 311	(3)	Athletic Injuries
EDKP 394	(3)	Historical Perspectives
EDKP 444	(3)	Ergonomics
EDKP 445	(3)	Exercise Metabolism
EDKP 446	(3)	Physical Activity and Ageing
EDKP 449	(3)	Exercise Pathophysiology 2
EDKP 451	(3)	Personal Trainer Practicum
EDKP 452	(3)	Fitness & Lifestyle Consulting
EDKP 453	(3)	Research Practicum in Kinesiology
EDKP 542	(3)	Environmental Exercise Physiology
EDKP 566	(3)	Advanced Biomechanics Theory
NUTR 503	(3)	Bioenergetics and the Lifespan

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 F

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