Faculty of Education

Programs, Courses and Univer

Publication Information

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1 About the Faculty

The Faculty serves approximately 2,000 students enrolled in undergraduate, graduate and professional development programs. The Faculty is organized into three departments and the School of Information Studies. In addition, the Faculty has a number of research and service centres, most 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 activities, projects, some of which involve students as well as staff, include those in Japan, Indonesia, South Africa and Mexico.

2 History

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

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

The Institute was reconstituted as the Faculty of Education in 1965 and the work continued on both the McGill and Macdonald Campuses. The St. Joseph Teachers College and the Faculty of Education were amalgamated in 1970 and relocated in a new building on the McGill Campus. In 1996, the School of Information Studies became affiliated with the Faculty.

3 Faculty of Education Facilities

3.1 Education Library and Curriculum Resources Centre

The Education Library and Curriculum Resources Centre, located on the first floor of the Education Building, provides materials and services to support the teaching and research programs of the Faculty. The library collection includes over 122,000 monographic volumes, 500 periodical titles, microforms, government publications and access to a vast range of full-text electronic journals.

The Curriculum Resources Centre collection includes elementary and secondary school textbooks, teachers' resource guides, videos, DVDs, CDs, games, kits, puppets, big books, and equipment for viewing and listening. A Children's Literature Collection of fiction, non-fiction, poetry, folklore, and picture books is located on the left as you enter the Library.

Tours and instructional workshops are offered at the beginning of each term to individual students and to classes. These provide an introduction to library resources and information skills that will help in preparing course assignments and writing research papers. They cover topics such as searching the Library Catalogue (MUSE), finding course materials on reserve, and locating articles and other materials via databases such as ERIC; PsychINFO; Education Full Text and others. EndNote workshops will provide help on how to easily create footnotes and reference lists for term papers.

The Education Library provides computers for student use, tables and carrels to connect laptops, wireless access, as well as photocopiers, printers and scanners. You may select to work in the quiet study area of the E-Zone, prefer group study in the Curriculum Resources Centre or in one of the two study rooms, or just relax on a lounge chair in an informal seating area.

Lending Services for laptops, digital and video cameras, digital recorders and tripods are now handled by the Education Library. These services are available during regular Library operating hours, as indicated on the Library's website at www.mcgill.ca/library/library-using/branches/education-library.

Visit the Education Library website to learn more about library loans, hours, research guides, and links to important education sites. We look forward to seeing you in the Library.

Head Librarian: Sara Holder
Telephone: 514-398-4689
Website: www.mcgill.ca/education-library

3.6 A.S. Lamb Learning Centre

The A.S. Lamb Learning Centre, consisting of the Computer Laboratory, the multimedia unit and the reading room, is located on the second floor of the Sir Arthur Currie Memorial Gymnasium. The computer lab houses 25 computers connected to the McGill network and is available for courses, workshops and individual use by students and staff. Laser printing is also available at a cost. Access to the McGill wireless network is available for laptops equipped with a wireless card.

The multimedia unit features two MAC computers with "Final Cut" SD and HDV video editing software, one VHS & DVD recorder and a Flatbed Duplo

4 Revisions F aculty of Education

Integrated Studies in Education

section 10.9Bachelor of Education (B.Ed.) - Secondary Science and Technology (120 credits)

section 10.23Bachelor of Education (B.Ed.) Teaching French as a Second Language - TFSL - Joint Program with the Université de Montréal (120 credits)

5 About the Faculty of Education(Undergraduate)

5.1 Department of Integrated Studies in Education

The Department of Integrated Studies in Education offers undergraduate programs that are committed to the preparation of exceptional teachers for work in elementary and secondary schools. We have four-ye91483tgs.73tmce 48i.617vEP 3.279 49s,Secondary/F2

5.4 Location

3700 McTavish Street
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Canada

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

5.5 Administrative Officers

Hélène Perrault; B.Sc.(C'dia), M.Sc., Ph.D.(Montr	Dean
Andrew Large; B.Sc.(Lond.), Ph.D.(Glas.), Dip.Lib.(Lond.) (CN-Pratt-Grinstad Professor of Information Studies)	Associate Dean (Research and Graduate Students) (on sabbatical)
Elizabeth Wood; B.F.A.(York (Can.)), B.F.A.(C'dia), Dip.Ed., M.A., Ph.D.(McG.)	Associate Dean (Academic Affairs)
Jeffrey Derevensky; B.A.(C.W.POST), M.A., Ph.D.(McG.)	Executive Director, Physical Infrastructure (on sabbatical)
Ronald Morris; B.Ed., M.A., Ph.D.(McG.)	Executive Director (Student Affairs)
Victoria Talwar; M.A. Hons(St.Andr.), M.A., Ph.D.(Qu.)	Assistant Dean, Graduate Programs (on sabbatical)
Alenoush Saroyan; B.A.(Pahlavi), M.Ed.(Loyola-Ill.), Ph.D.(McG.)	Chair, Department of Educational and Counselling Psychology
France Bouthillier; B.Ed.(UQAM), MBSI(Mont.), Ph.D.(Tor.)	Director, School of Information Studies
Steven Jordan; B.A.(Kent), M.Sc.(Lond.), Ph.D.(McG.)	Chair, Department of Integrated Studies in Education
Theodore E. Milner; B.Sc., M.Sc., Ph.D.(Alta.)	Chair, Department of Kinesiology and Physical Education
Romy Schnaiberg	Faculty Administrator
Joan Barrett	Student Affairs Officer
Susan Maocheia	Financial Officer

6 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 B.Sc.(Kinesiology) Advanced standing may be given to those already holding a university 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 given 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 masters and doctoral degrees in various fields of education and psychology and librarTj /F2 8.1 Tf ( )Tj /F1 us inTm (ogrSG)Tj /F1 0 0 14a3.975 Tm (,

than ve (5) years old in other subject areas may be considered on an individual subject basis by the program director. For more details, see the Undergraduate Admissions Guide found at www.mcgill.ca/applying.

6.1.3 Quebec Teacher Certification

Teacher Certi cation in Quebec is the responsibility of the Ministère de l'Éducation, du Loisir et du Sport (MELS). Students who complete requirements for the Bachelor of Education degree and who meet the MELS requirements (speci ed below) will be recommended by the University for certi cation.

Language Pro ciency

Fluency (oral and written) in the language of instruction is a requirement for all those seeking certi cation.

Con dential declaration concerning judicial r ecord

In June 2005, the National Assembly of Quebec adopted Act amending the Education Act and the Act respecti

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Email: dean.thomson@mcgill.ca

6.2.2 Department of Integrated Studies in Education

First Nations and Inuit Education (FNIE): The Faculty of Education collaborates with various Indigenous communities and institutions in offering programs whose courses are given either at McGill or off campus. In collaboration with the Kativik School Board, the Cree School Board, the Kahnawake Education Centre, and various other Indigenous communities in Quebec, FNIE delivers field-based teacher education programs leading to initial teacher certification and to the B.Ed. and Teach. degree. FNIE also works with departments to meet other educational needs of Indigenous peoples.

Director of Programs in First Nations and Inuit Education: Professor Donna-Lee Smith
Office: Education Building, Room 244
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7 Faculty Regulations for Undergraduate Programs

Please consult the University Regulations and General Information section of this publication for regulations and procedures regarding registration, fees, course load, course change (drop/add), withdrawal, verification, examinations, interuniversity transfer, and graduation. In addition, the following section provides regulations specific to Faculty of Education students.

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

7.1 Advising

Refer to the University Regulations and Gener

7.4 Additional Requirements for Students admitted to B.Ed. TFSL program

Students admitted to the B.Ed. TFSL program are required to write diagnostic tests in French language and mathematics. Based on test results students may be required to successfully complete remedial courses as additional degree requirements. In addition there will be a compulsory French language test coordinated by an independent body for TFSL students, prior to their third Field Experience, that will be required to pass in order to continue in the program.

7.4.1 Additional Requirements for Students admitted to B.Ed. Kindergarten/Elementary program

Students admitted to the B.Ed. Kindergarten/Elementary program are required to write a diagnostic test in mathematics. Students who do not pass this test will be required to successfully complete Math 111 prior to taking EDEE 230. Students who have taken CEGEP course 201-101 or an equivalent, Math 111 will be above and beyond degree requirements.

7.5 Judicial Record Verification for Students in the Bachelor of Education Programs

Quebec's Education Act, section 261.0.2, grants school boards the right to verify the judicial record of any person regularly in contact with minors, and this includes student teachers. Each school board or private school may have its own administrative procedures for verification. Students are responsible for complying with their request. Anyone unable to obtain the required security clearance will not be permitted to undertake Field Experiences, which is a mandatory requirement of the program, and consequently will have to withdraw from the program.

7.6 Course and Program Regulations

7.6.1 Course Load

Undergraduate Education programs can normally only be offered on a full-time basis. Students must take a minimum of twelve (12) credits per term unless the Executive Director, Student Affairs gives them special permission. Special permission must be requested prior to the end of Add/Drop period.

Any absence or reduction in course load that may impact on the progression of a student's program must have written approval by the Executive Director, Student Affairs.

The normal course load per term is 15 credits. Students in Satisfactory Standing may take up to 17 credits per term. Students whose ACGP is above 3.00 may request permission to take an overload. Overloads are not allowed in major Field Experience terms for students in the B.Ed. programs. Students in Probationary Standing take a maximum of 12 credits.

7.6.2 Time Limit and Credits for Completion of Degrees

Students are expected to complete their program in no more than five (5) years after their initial registration for the B.Ed. degree and after four (4) years for the B.Sc.(Kinesiology) degree. Students who enter into a freshman year become subject to these limits one year after their initial registration. Students who exceed these limits must apply to the Faculty for permission to continue.

Students registered in the B.Ed. or B.Sc. are expected to complete the requirements of their programs and their degree within 150 or 120 credits respectively. Students will receive credits for all courses (subject to grade regulations) taken up to and including the semester in which they obtain the full degree credit requirements. Students who wish to remain at McGill beyond that semester must seek permission of the Executive Director, Student Affairs. Students who wish to exceed the specified minimum number of credits required for their degree must also seek permission of the Executive Director, Student Affairs. Credits over the credit limit will be flagged for no credit and the grades will not count in the ACGP.

Permission for exceeding the time and or credit limits will normally be granted only for valid academic reasons, such as change of program or approved part-time status. If permission is granted, students will receive credit only for required and complementary courses necessary to complete their program requirements.

7.6.3 Course Requirements

All Required and Complementary courses used to fulfill program requirements must be completed with a grade of C. Students who fail to obtain a satisfactory grade in a Required course must either pass the supplemental examination if available, or repeat the course. If the failed course is a Complementary course required by the program, a student may choose to replace it with another complementary course. If a student repeats a Required course in which was received, credit will only be given once. A failure (F, J, KF, WF) in any level of Field Experience or in the English Examination for Teacher Certification, second attempt, places a student in unsatisfactory standing requiring withdrawal from the program. Further details on requirements for Field Experience are listed in section 8 Student Teaching/Field Experience.

7.11.1 Supplemental Examinations

Students who wish to write a supplemental examination for a course in which a supplemental examination is available must apply on Minerva within the published deadline. Please refer to the Student Record website: www.mcgill.ca/student-records/exam

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

7.12.2.2 Probationary Standing at the end of the Winter term

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

7.12.2.3 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 any level Field Experience course and were previously in satisfactory standing;
if their CGPA falls between 1.50 and 1.99 and their TGPA in Fall or Winter is 2.50 or higher, and if they were previously in probationary or interim unsatisfactory standing;
if their CGPA is between 1.50 and 1.99 and their TGPA is 2.50 or higher, they were previously in unsatisfactory readmitted standing, and have satisfied the relevant conditions specified in their letter of readmission.

7.12.3 Unsatisfactory/Interim Unsatisfactory Standing

7.12.3.1 Interim Unsatisfactory standing at the end of the Fall term

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

7.12.3.2 Unsatisfactory Standing at the end of the Winter term

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

7.12.3.3 Readmitted Unsatisfactory Standing

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

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

if their CGPA falls or remains below 1.50;
if their TGPA falls below 2.50 and their CGPA is below 2.00 and they were previously in probationary, unsatisfactory readmitted, or interim unsatisfactory standing;
if they receive a failure (F, J, KF, WF) in any level of student teaching/Field Experience course;
if they receive a failure in the English Examination for Teacher Certification (EETC) for the second time;
if they were previously in unsatisfactory standing and were readmitted to the Faculty by the Executive Director, Student Affairs or the Committee on Student Standing and have not at least satisfied the conditions to attain probationary standing that were specified in the letter of readmission.

Note: Students in either the Concurrent B.Sc. and B.Ed. or the B.Mus. and B.Ed. program who earn F or J in any Education Field Experience course, or fail the English Examination for Teacher Certification (EETC) for the second time, are placed in unsatisfactory standing. Although they may complete their term, they are required to withdraw from the Concurrent program. They may, however, contact the Faculties of Science or Music regarding application to a Bachelor of Science or a Bachelor of Music degree.

7.12.3.5 Readmission

Appeals for readmission by students in unsatisfactory standing should be addressed to the Executive Director, Student Affairs no later than June 1 for readmission to the Fall term. Readmission will be considered only when proof of mitigating circumstances that affected academic performance can be provided (e.g., medical or other documentation). Students who have failed the English Examination for Teacher Certification (EETC) twice must pass the examination as part of the readmission criteria.

Students in unsatisfactory standing for the second time must withdraw permanently. Students who were placed in unsatisfactory standing due to a failure in student teaching/Field Experience cannot apply for readmission for at least one full year. Please refer to the Student Affairs Office website for further information: www.mcgill.ca/edu-sao/current/transfers.

7.12.3.6 Incomplete Standings

Standing awaits deferred or supplemental exams;

Must clear K's, L's or Supplementals;

Standing 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 Associate Dean of Student Affairs as soon as they are placed in unsatisfactory standing. Readmission will be considered only when proof of mitigating circumstances that affected academic performance can be provided (e.g., medical or other documentation).

Students whose standing is still incomplete by the end of course change period should immediately consult with the Student Affairs Office.

the designation is based on the sessional (Fall and Winter) GPA.

7.14.3 Scholarships and Awards

Various scholarships and awards are open to both graduating and in-course students. Full details may be found in the Undergraduate Scholarships and Awards Calendar available on the web at www.mcgill.ca/students/courses/calendars.

8 Student Teaching/Field Experience

The Office of Student Teaching (OST)

corequisites, restrictions, and Faculty regulations that apply to the courses in which they register. Students should consult an academic adviser for assistance.

In B.Ed programs who wish to transfer from one program to another will not be required to repeat Field Experience 1.

8.3 Student Responsibilities

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

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

8.3.1 Guidelines (Syllabus)

Detailed guidelines and evaluation forms for every Field Experience are posted on the OST website, arranged by program and year. Students are responsible for familiarizing themselves with the objectives, of a Field Expe nor re. .cal and

Where a student is experiencing serious difficulties in a Field Experience but has demonstrated some potential to successfully reach the required standard, the student will be granted a "D" grade. In this case, the director of the OST has the authority to grant special permission for a student to repeat a Field Experience during the next term in which the course is offered. This special permission will be granted once only in a student's program. Students who receive a 'D' grade are also required to repeat the corequisite seminar or other corequisite course as specified by the director. The original grade for the corequisite seminar or course will be excluded from the GPA and credits; only the second grade will be retained.

Students must receive a Pass grade in order to proceed in the B.Ed. program. Failure (F, J, KF, WF) in any Field Experience places a student in "Unsatisfactory Standing", requiring withdrawal from the Teacher Education Program. Students within a Fall term Field Experience may be allowed to continue taking courses in the program to enable transfer to another faculty.

A student may appeal a failing grade or termination of a Field Experience by making a formal application to the Executive Director, Student Affairs.

8.4.1 Termination of Field Experience

At any time, students may be removed from their Field Experience placement at the request of the host school administrator and cooperating teacher or at the request of the director of Student Teaching. Students who are removed from a Field Experience placement will be informed of the reason for the termination and will meet with the director

Circumstances that could lead to termination include, but are not limited to:

- Prerequisite courses not successfully completed.
- Exceeding the number of permissible excused absences for corequisite courses (consult the syllabus for each course).
- Failure to pass a judicial record check, if required by the school or school board where the student is placed.
- Unprofessional behaviour; behaviour that contravenes the Code of Ethics for Student Teachers.
- Failure to make the improvements outlined on a Noti

8.5 Code of Professional Conduct: Code of Ethics for Student Teachers

8.5.1 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 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 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 answers to all ethical questions or situations. Rather, it seeks to outline the guiding principles to ethical conduct and to identify major issues which 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 acquire 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.

8.5.2 Academic Freedom and Responsibilities

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

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

8.5.3 Ethics and Law

"Teaching is governed by a legal and regulatory framework" (MEQ 2001, p. 120).

3. Respect for Con dentiality and Privacy

   Respects the con dential 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 con dential 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 con icts 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 standards 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 Bene ts

   Acknowledges that any potentially harmful practices (e.g., science labs and physical education activities) must be balanced with anticipated bene ts and conducted in a prudent, informed manner

8.5.5 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.

9 Department of Educational and Counselling Psychology

9.1 Location

Faculty of Education
3700 McTavish Street, Room 614
Montreal, Quebec H3A 1Y2

Telephone: 514-398-4242
Fax: 514-398-6968
Website: www.mcgill.ca/edu-ecp

9.2 About the Department of Educational and Counselling Psychology

Educational Psychology encompasses a) the theoretical and applied study of learning, cognition, and instruction activity in educational settings across ages and domains; b) instructional technology and computers as cognitive tools in learning; c) cognitive and social processes in learning; d) evaluation and enhancement of learning and teaching; e) methods for fostering individual differences in education; f) relationships of phenomena related to teaching, learning and assessment in human development; and g) the impact of family and community on children's learning and development.

At the undergraduate level, the Department of Educational and Counselling Psychology is responsible for the B.A. degree in Arts > : Education Psychology Minor Concentration for more information and for a variety of undergraduate courses in the areas of learning, cognition and development, inclusive education, gifted education, educational media and computers, and educational measurement evaluation and assessment.

In professional development, the Department offers diploma or certi cate programs in Human Relations and Life Education, Inclusive Education, and First Nations and Inuit Student Personnel Services. For more information please consult our website, www.mcgill.ca/edu-ecp/undergraduate, or contact the Undergraduate Program Coordinator in Educational and Counselling Psychology:

Dean Thomson
Undergraduate Program Coordinator
Telephone: 514-398-4248

Email: dean.thomson@mcgill.ca

At the graduate level, the Department of Educational and Counselling Psychology offers Master's degrees (M.A.) in Counselling Psychology with major concentrations in Project (Research-based) or Professional/Internship (Practicum-based) and in Educational Psychology with streams in Health Professions Education, Human Development, Learning Sciences and School/Applied Child Psychology. Also offered are Master's of Education degrees (M.Ed.) in Educational Psychology with streams in General Educational Psychology, Inclusive Education and Learning Sciences. Students can also obtain Doctoral degrees (Ph.D.) in Counselling Psychology, School/Applied Child Psychology and Educational Psychology with streams in Human Development or Learning Sciences. The department also offers a Postdoctoral Degree Graduate Diploma in School/Applied Child Psychology and a Graduate Certificate in Counselling Applied to Teaching. For further information, consult the most current Graduate and Postdoctoral Studies Calendar at www.mcgill.ca/students/courses/calendars.

Special services offered by the Department include the McGill-EMSB Gifted Summer School (Explorations), and the Psychoeducational and Counselling Clinic, the Neuroscience Lab for Research and Education in Developmental Disorders and the International Centre for Youth Gambling and High Risk Behaviour.

9.3 Department of Educational and Counselling Psychology Faculty

Emeritus Professors

Janet G. Donald; B.A., M.A.(W.Ont.), Ph.D.(Tor.) (joint appt. with Teaching and Learning Services)

Florent R. Dumont; A.B.(Col.), M.S.(S. Conn. St.), Ed.D.(Mass.)

Lynn McAlpine; B.A.(McG.), M.A.(C'dia.), Ph.D.(Tor.)

Eigil Pedersen; B.A.(Sir G.Wms.), M.A.(McG.), Ed.D.(Harv.)

Howard A. Stutt; B.A.(Qu.), B.Ed., M.Ed.(Mont.), C.C.T.

Professors

Robert J. Bracewell; B.Sc., M.A.(McM.), Ph.D.(Tor.)

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.) (sabbatical leave)

Nancy L. Heath; B.A.(McG.), M.Ed.(Ott.), Ph.D.(Tor.) (James McGill Professor)

Susanne P. Lajoie; B.A., M.A.(McG.), Ph.D.(Stan.) (James McGill Professor)

Alenoush Saroyan; B.A.(Pahlavi), M.Ed.(Loyola-Ill.), Ph.D.(McG.)

Cynthia B. Weston; B.A.(Gtown), M.L.S.(SUNY), D.Ed.(Wash.) (joint appt. with Teaching and Learning Services)

Associate Professors

Alain Breuleux; B.Sc., M.Sc., Ph.D.(Mont.)

Martin Drapeau; B.A.(Mont.), B.A.Ps.(UQTR), M.P.La

Assistant Professors

Steven R. Shaw; B.S., M.Ed., Ed.S., Ph.D.(Flor)

Nathan Smith; M.Sc., Ph.D.(VCU)

Faculty Lecturer

Jack de Stefano; B.A.(Loy 1cC5u1tOa.B 652.648 0 1 223.993 709.84 .216 0.8431 rg 0.9804 0.9216 0.8431 RG ET 67.52 662.427 m 67.52 6284317 l 569

Part-time Instructors
Maureen Baron
Dianne Bateman
Antonio Bernardelli
Elana Bloom
Sam Bruzzese
Scott Conrod
Dominic D'Abate
Sandy Freedman
Lisa French
Karen Gazith-Cohen
David Hoida
Rita McDonough
Judith Norton
Carolyn Nelham
Monica Oala
Caroline Zanni-Dansereau

10 Department of Integrated Studies in Education

10.1 Location

Faculty of Education
3700 McTavish Street, Room 244
Montreal, Quebec H3A 1Y2

Telephone: 514-398-6960
Website: www.mcgill.ca/edu-dise

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

Graduate and Certificate Programs :
Telephone: 514-398-1591 or 514-398-6985
Fax: 514-398-4529

10.2 About the Department of Integrated Studies in Education

The Department of Integrated Studies in Education, created in September 2001, incorporates the programs previously associated with the Departments of Culture and Values in Education, Educational Studies, Second Language Education and First Nations and Inuit Education.

The Department offers four-year programs for CEGEP graduates and 1-year programs for out-of-province students leading to a B.Ed. degree.

For B.Ed. program overviews, see www.mcgill.ca/edu-dise/students/undergraduate/new.

10.3 Department of Integrated Studies in Education Faculty

Chair

Steven Jordan

Director of Undergraduate Programs

Caroline Riches

Director of Graduate Programs

Mela Sarkar

Emeritus Professors

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

Margaret Gillett; B.A., Dip.Ed.(Syd.), M.A.(Russel Sage), Ed.D.(Colum.), (William C. Macdonald Emeritus Professor of Education)

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

Wayne C. Hall; B.A., M.A.(Bishop's), (William C. Macdonald Emeritus Professor of Education)

Norman Henchey; B.A., B.Ped., Lic.Ped.(Montr.), Ph.D.(McG.)

Denise Lussier; B.A.(Coll. Jesus Marie de Sillery), M.Ed.(Boston), M.A., Ph.D.(La

Jacques J. Rauthot; B.ès L., L.ès L., D.E.S.(Aix-Marseilles), Dip. I.E.P., Dr. 3rd Cy(Stras.)

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

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

Professors

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

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

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

Barry Levy; B.A., M.A., BRE(Yeshiva), Ph.D.(NYU)

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

Mary H. Maguire; B.A., B.Ed., M.A.(Mont.), M.Ed., Cert. Reading(McG.), Ph.D.(Ariz.)

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

Anthony Paré; B.Ed, M.Ed., Ph.D.(McG.)

Associate Professors

Helen Amoriggi; B.Sc., M.A.(Rhode Is.), Ed.D.(Boston)

Jon G. Bradley; B.A., M.A.(Sir G.Wms.)

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

Michael Doxtater; B.A.(McM.), M.Sc., Ph.D.(C nell)

Michael Hoechsmann; B.A., M.A.(S. Fraser), Ph.D.(T

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

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

Christopher S. Milligan; B.A.(Sir G.Wms.), Dip.Ed., M.Ed.(McG.), Ed.D.(T.)

Ronald Morris; B.Ed., M.A., Ph.D.(McG.)

Joan Russell; B.Mus., L.Mus., M.Ed., Ph.D.(McG.)

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

Associate Professors

Gale Seiler; B.Sc.(Fairleigh Dickinson), M.Sc.(Montana), Ph.D.(Penn.)

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

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

Shirley Steinberg; B.Ed., M.Ed.(Leth.), Ph.D.(Penn. St.)

Teresa Strong-Wilson; B.A.(Calg.), B.A., Dip.Ed.(McG.), M.A., Ph.D.(U.B.C. (BC))

Carolyn E.Turner; B.A.(Ariz.), M.Ed., Ph.D.(McG.)

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

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

Elizabeth Wood; B.F.A.(York (Can.)), B.F.A.(C'dia), Dip.Ed., M.A., Ph.D.(McG.)

Assistant Professors

Spencer Boudreau; B.A.(Don Bosco), B.A., M.A.(Sher.), Ph.D.(C'dia)

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

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

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

Sylvia Sklar; Dip.Ed.(McG.), B.A.(C'dia), M.Ed.(McG.)

Associate Members

Brian J.Alters; B.Sc., Ph.D.(USC)(William Dawson Scholar)

Richard Harris; B.A.(Oxf.), D.Phil.(Sus.)

Adrienne Carye Hurley; B.A.(Colo.), M.A.(Mich.), Ph.D.(Calif.)

Lynn McAlpine; B.A.(McG.), M.A.(C'dia), Ph.D.(Tor.)

Faculty Lecturers

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

Charlotte Hussye; B.A.(Wheaton), M.A.(Cdia), M.F.A.(W. Wilson), Ph.D.(McG.)

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

Louise Savoie; B.S.S.(Laval), M.A.(Ott.)

Donna-Lee Smith; B.A., M.A.(C'dia)

Sharron Wall; B.A., Dip.Human Relations, M.A.(McG.)

Adjunct Professors

Abigail Anderson; B.A., Dip.Ed., M.A.(McG.)

Luci Bobbish-Salt; B.Ed.(UQAC)

Tino Bordonaro; B.A.(Bishop's), M.A.(McG.)

Noel Burke; B.Ed., M.Ed.(McG.)

Gretta Chambers; B.A.(McG.)

Bachelor of Education (Kindergarten and Elementar

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

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

EAPR 250	(3)	Research Essay & Rhetoric
EDEC 203	(3)	Communication in Education
EDEM 220	(3)	Contemporary Issues in Education
ENGL 201	(3)	Survey of English Literature 2
ENGL 215	(3)	Introduction to Shakespeare
ENGL 226	(3)	American Literature 2
FRSL 101D1	(3)	Beginners' French
FRSL 101D2	(3)	Beginners' French
FRSL 207D1	(3)	Elementary French 01
FRSL 207D2	(3)	Elementary French 01
FRSL 211D1	(3)	Oral and Written French 1
FRSL 211D2	(3)	Oral and Written French 1
RELG 207	(3)	The Study of World Religions 1

Required Courses (45 credits)

EDEC 201	(1)	First Year Professional Seminar
EDEC 215	(0)	English Language Requirement
EDEC 247	(3)	Policy Issues in Quebec Education
EDEC 254	(1)	Second Professional Seminar (Secondary)
EDEC 351	(2)	Third Professional Seminar (Secondary)
EDEC 404	(3)	Fourth Year Professional Seminar (Sec)
EDES 350	(3)	Classroom Practices (Secondary)
EDFE 200	(2)	First Field Experience (K/Elem & Secondary)
EDFE 254	(3)	Second Field Experience (Secondary)
EDFE 351	(8)	Third Field Experience (Secondary)
EDFE 451	(7)	Fourth Field Experience (Secondary)
EDPE 300	(3)	Educational Psychology
EDPE 304	(3)	Measurement and Evaluation
EDPI 309	(3)	Exceptional Students
EDPI 341	(3)	Instruction in Inclusive Schools

Complementary Courses (15 credits)

15 credits selected as described below

Multicultural Education

3 credits from:

EDEC 233	(3)	First Nations and Inuit Education
EDEC 248	(3)	Multicultural Education

EDEC 249	(3)	Global Education and Social Justice

Philosophy of Education

3 credits from:

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

Media, Technology, Computers and Education

3 credits from:

EDEC 262	(3)	Media, Technology and Education
		Integrating Educational

And must also tak

3 credits of Secondary Teaching Methods for the teachable subject area

(Note: this additional Methods course counts as a 3-credit elect the program.)

Students in other secondary subject areas (i.e., Mathematics, Social Sciences or Science and Technology) who select English as their other "teachable subject area" tak

18 credits selected as follows:

3 credits of "Required Literature"

3 credits from the "Communication/Language Learning/Linguisitcs" course list

6 credits from the "Literature" course list

6 credits from the "Media/Cultural Studies" course list with a minimum of 3 credits at the 300-le

And

3 credits of "Secondary Teaching Methods - English"

(Note: this additional Methods course counts as a 3-credit elect the program.)

Required Literature

3 credits:

EDES 366	(3)	Literature for Young Adults

Communication/Language Learning/Linguisitcs

6 credits for students following the Secondary English (option 1 or option 2), or

3 credits for students in other secondary subject areas with English as their other "teachable" subject area

EDEC 203	(3)	Communication in Education
EDSL 305	(3)	L2 Learning: Classroom Settings
EDSL 350	(3)	Essentials of English Grammar
ENGL 340	(3)	History of the English Language
LING 200	(3)	Introduction to the Study of Language
LING 201	(3)	Introduction to Linguistics
LING 355	(3)	Language Acquisition 1

Literature

Secondary English Option 1 students tak 30 credits of "Literature" courses 1 153.251 660.52 TrT5credits at the 300-le

ENGL 321	(3)	Caribbean Fiction
ENGL 325	(3)	ModernAmerican Fiction
ENGL 327	(3)	Canadian Prose Fiction 1
ENGL 329	(3)	English Novel: 19th Century 1
ENGL 330	(3)	English Novel: 19th Century 2
ENGL 331	(3)	Literature Romantic Period 1
ENGL 339	(3)	Canadian Prose Fiction 2
ENGL 347	(3)	GreatWritings of Europe 1
ENGL 348	(3)	GreatWritings of Europe 2
ENGL 361	(3)	Poetry of the 20th Century 1
ENGL 362	(3)	Poetry of the 20th Century 2
	(3)	Theatre HistoryThe Long Eighteenth Century

- Literature

- Media/Cultural Studies

Electives (6 credits)

6 credits of electives

Note: Students who have chosen to do 36 credits in one teachable subject and 18 credits in another will use 3 credits of electives to take the Secondary Teaching Methods course needed for their second teachable subject.

10.6 Bachelor of Education (B.Ed.) - Secondary Mathematics (120 credits)

The Bachelor of Education (B.Ed.) Secondary Mathematics program requires 120 credits and leads to teacher certification. Students who have 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 students for becoming teachers for the secondary school level. This integrated program consists of academic studies, professional studies, and school-based practicum components. All of this is supported by studies in pedagogy, curriculum and educational foundations.

The Secondary Mathematics program provides students with the learning opportunities needed to become proficient Mathematics teachers.

Please note that graduates of teacher education programs are recommended by this University for Quebec certification to the Quebec Ministère de l'Éducation, du Loisir et du Sport (MELS). For more information about teacher certification in Quebec, please refer to the Faculty of Education section under "Overview of Faculty Programs," "Undergraduate Education Programs," and "Quebec Teacher Certification."

Freshman Program

Students normally complete 30 credits in their freshman (U0) year

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

Students in the Secondary Mathematics program must complete three Math prerequisite courses in their freshman year: MATH 133, MATH 140 and MATH 141.

In addition, students select courses from the recommended list below or other courses in consultation with the program advisor. The French Second Language (FRSL) courses suggested require a placement test to determine the appropriate level of course.

EAPR 250	(3)	Research Essay & Rhetoric
EDEM 220	(3)	Contemporary Issues in Education
FRSL 101D1	(3)	Beginners' French
FRSL 101D2	(3)	Beginners' French
FRSL 207D1	(3)	Elementary French 01
FRSL 207D2	(3)	Elementary French 01
FRSL 211D1	(3)	Oral and Written French 1
FRSL 211D2	(3)	Oral and Written French 1
MATH 133	(3)	Linear Algebra and Geometry
MATH 140	(3)	Calculus 1
MATH 141	(4)	Calculus 2
RELG 204	(3)	Judaism, Christianity and Islam
RELG 207	(3)	The Study of World Religions 1

Required Courses (45 credits)

EDEC 201	(1)	First Year Professional Seminar
EDEC 215	(0)	English Language Requirement
EDEC 247	(3)	Policy Issues in Quebec Education
EDEC 254	(1)	Second Professional Seminar (Secondary)

EDEC 351	(2)	Third Professional Seminar (Secondary)
EDEC 404	(3)	Fourth-Year Professional Seminar (Sec)
EDES 350	(3)	Classroom Practices (Secondary)
EDFE 200	(2)	First Field Experience (K/Elem & Secondary)
EDFE 254	(3)	Second Field Experience (Secondary)
EDFE 351	(8)	Third Field Experience (Secondary)
EDFE 451	(7)	Fourth Field Experience (Secondary)
EDPE 300	(3)	Educational Psychology
EDPE 304	(3)	Measurement and Evaluation
EDPI 309	(3)	Exceptional Students
EDPI 341	(3)	Instruction in Inclusive Schools

Complementary Courses (15 credits)

15 credits selected as described below

Multicultural Education

3 credits from:

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

Philosophy of Education

3 credits from:

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

Media, Technology, Computers and Education

3 credits from:

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

For students with a background in computers or other media applications in education, the following courses may be substituted for the above

EDPT 341	(3)	Instructional Programming 1
EDPT 420	(3)	Media Literacy for Education

Secondary Teaching Methods - Mathematics

6 credits:

Note: Students selecting 18 credits of Secondary Mathematics courses as their other "teachable" subject will take 3 credits of Mathematics Secondary Teaching Methods courses to count as an elective in their program.

EDES 353	(3)	Teaching Secondary Mathematics 1
EDES 453	(3)	Teaching Secondary Mathematics 2

Secondary Mathematics Subject Area (54 credits)

Secondary Mathematics students complete 54 credits selected in consultation with the program adviser in one of two options. They are expected to have completed the prerequisite courses MATH 133, MATH 140 and MATH 141 or their equivalents. Freshman students will take them as part of their freshman program.

Students entering from CEGEP should only choose this program if they have a strong background in their CEGEP mathematics courses. These 100-level prerequisite courses (MATH 133, MATH 140 and MATH 141) are considered CEGEP-level and only students entering a 5-year program (out-of-province and directly from high school) are eligible to take them. Students entering with advanced standing without having completed these prerequisites will be required to make up any deficiencies in these courses over and above the degree requirements.

Option 1

30 credits from the list of "Required Mathematics Courses" and

24 credits from the list of "Complementary Mathematics Courses"

0r

Option 2:

30 credits from the list of "Required Mathematics Courses" and

6 credits from the list of "Complementary Mathematics Courses"

And

18 credits of designated courses in another "teachable" subject area (English, Social Sciences, or Science and Technology - see these Secondary Education programs for courses)

And must also take

3 credits of Secondary Teaching Methods for the teachable subject area

(Note: this additional Methods course counts as a 3-credit elective in the program.)

Students in other secondary subject areas (i.e., English, Social Sciences or Science and Technology) who select Mathematics as their other "teachable subject area" take

18 credits from the list of "Mathematics Courses for Other Secondary Subject Areas"

And

3 credits of "Secondary Teaching Methods - Mathematics"

(Note: this additional Methods course counts as a 3-credit elective in the program.)

Required Mathematics Courses

30 credits for Secondary Mathematics Option 1 and Option 2 students

Note: Students with Mathematics as their "other teachable subject area" select from the list of "Mathematics Courses for Students in Other Secondary Subject Areas."

COMP 202	(3)	Introduction to Computing 1
MATH 222	(3)	Calculus 3
MATH 223	(3)	Linear Algebra
MATH 235	(3)	Algebra 1
MATH 242	(3)	Analysis 1
MATH 315	(3)	Ordinary Differential Equations
MATH 323	(3)	Probability
MATH 324	(3)	Statistics
MATH 338	(3)	History and Philosophy of Mathematics
MATH 348	(3)	Topics in Geometry

Complementary Mathematics Courses

24 credits from the list below for Secondary Mathematics Option 1 students or

6 credits from the list below for Secondary Mathematics Option 2 students

Note: Students with Mathematics as their "other teachable subject area" select from the list of "Mathematics Courses for Students in Other Secondary Subj Areas."

COMP 230	(3)	Logic and Computability
MATH 314	(3)	Advanced Calculus
MATH 317	(3)	Numerical Analysis
MATH 318	(3)	Mathematical Logic
MATH 326	(3)	Nonlinear Dynamics and Chaos
MATH 329	(3)	Theory of Interest
MATH 339	(3)	Foundations of Mathematics
MATH 340	(3)	Discrete Structures 2
MATH 346	(3)	Number Theory

Mathematics Courses for Students in Other Secondary Subject Areas

Students in other secondary subject areas selecting Mathematics as their "other teachable subject area" take the following 18 credits.

MATH 222	(3)	Calculus 3
MATH 223	(3)	Linear Algebra
MATH 315	(3)	Ordinary Differential Equations
MATH 323	(3)	Probability
MATH 324	(3)	Statistics
MATH 348	(3)	Topics in Geometry

Electives (6 credits)

6 credits of electives

Note: Students who have chosen to do 36 credits in one teachable subject and 18 credits in another will use 3 credits of electives to take the Secondary Teaching Methods course needed for their second teachable subject.

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

Bachelor of Education (B.Ed.) - Secondary Social Sciences - History and Citizenship, Ethics and Religious Culture program requires 120 credits and lead to teacher certification. Students who have not completed Quebec CEGEP, French Baccalaureate, International Baccalaureate, or at least one year of univers 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) fo a total of 150 credits.

The aim of the B.Ed. Secondary Education Program is to prepare students for becoming teachers for the secondary school level. This integrated program consists of academic studies, professional studies, and school-based practicum components. All of this is supported by studies in pedagogy, curriculum and educational foundations.

The Secondary 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 History and Ethics and Religion.

Please note that graduates of teacher education programs are recommended by this program 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 advisor, students may select courses from the recommended course list or other courses. The list includes History, Geography and Religious Studies courses that may be used to meet 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 le

EAPR 250	(3)	Research Essay & Rhetoric
EDEM 220	(3)	Contemporary Issues in Education
FRSL 101D1	(3)	Beginners' French
FRSL 101D2	(3)	Beginners' French
FRSL 207D1	(3)	Elementary French 01
FRSL 207D2	(3)	Elementary French 01
FRSL 211D1	(3)	Oral and Written French 1
FRSL 211D2	(3)	Oral and Written French 1
GEOG 200	(3)	Geographical Perspectives: World Environmental Problems
GEOG 205	(3)	Global Change: Past, Present and Future
GEOG 210	(3)	Global Places and Peoples
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 (45 credits)

EDEC 201	(1)	First Year Professional Seminar
EDEC 215	(0)	English Language Requirement
EDEC 247	(3)	Policy Issues in Quebec Education
EDEC 254	(1)	Second Professional Seminar (Secondary)
EDEC 351	(2)	Third Professional Seminar (Secondary)
EDEC 404	(3)	Fourth Year Professional Seminar (Sec)
EDES 350	(3)	Classroom Practices (Secondary)
EDFE 200	(2)	First Field Experience (K/Elem & Secondary)
EDFE 254	(3)	Second Field Experience (Secondary)
EDFE 351	(8)	Third Field Experience (Secondary)
EDFE 451	(7)	Fourth Field Experience (Secondary)
EDPE 300	(3)	Educational Psychology
EDPE 304	(3)	Measurement and Evaluation
EDPI 309	(3)	Exceptional Students
EDPI 341	(3)	Instruction in Inclusive Schools

Complementary Courses (15 credits)

15 credits selected as described below

Multicultural Education

3 credits from:

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

Philosophy of Education

3 credits from:

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

Media, Technology, Computers and Education

3 credits from:

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

For students with a background in computers or other media applications in education, the following courses may be substituted for the above

EDPT 341	(3)	Instructional Programming 1
EDPT 420	(3)	Media Literacy for Education

Secondary Teaching Methods - Social Sciences

6 credits:

EDER 372	(3)	Ethics and Religious Culture (Secondary)
EDES 334	(3)	Teaching Secondary Social Studies 1

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:

36 credits of History and Citizenship courses

9 credits of "Required History" courses from the list

and

27 credits "Complementary History" distributed as follows:

6 - 9 credits in European History

6 - 9 credits in Asian, African, American, Latin American or Ancient History

12 credits at the 300- or 400-level 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.)

And

18 credits chosen from the Ethics and Religious Culture course list as specified below

Required History

9 credits:

*Note: Students select either HIST 303 or HIST 353.

HIST 202	(3)	Survey: Canada to 1867
HIST 203	(3)	Survey: Canada since 1867
HIST 303*	(3)	History of Quebec
HIST 353*	(3)	History of Montreal

Ethics and Religious Culture

18 credits as specified below

6 credits from:

*Note: Either EDER 309 or RELG 204 may be selected but not both.

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

6 credits from:

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

10.8 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 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 students for the teaching profession. This integrated program consists of academic studies, professional studies, and school-based practicum components. All of this is supported by studies in pedagogy, curriculum and educational foundations.

The Secondary Social Sciences - History and Citizenship, Geography program provides students with the learning opportunities needed to become pro cient Social Science teachers with a strong knowledge base in History and Geography.

Please note that graduates of teacher education programs are recommended by this University for Quebec certi cation to the Quebec Ministère de l'Éducation, du Loisir et du Sport (MELS). For more information about teacher certi cation in Quebec, please refer to the Faculty of Education section under "Overview of Faculty Programs," "Undergraduate Education Programs," and "Quebec Teacher Certi cation."

Freshman Pr(w)Tj0 Tw1 67.52 D21 8.1 Tf6841L9

EDPE 304	(3)	Measurement and Evaluation
EDPI 309	(3)	Exceptional Students
EDPI 341	(3)	Instruction in Inclusive Schools

Complementary Courses (15 credits)

15 credits selected as described below

Multicultural Education

3 credits from:

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

Philosophy of Education

3 credits from:

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

Media, Technology, Computers and Education

3 credits from:

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

For students with a background in computers or other media applications in education, one of the following courses may be substituted for the above:

EDPT 341	(3)	Instructional Programming 1
EDPT 420	(3)	Media Literacy for Education

Secondary Teaching Methods - Social Sciences

6 credits:

EDES 334	(3)	Teaching Secondary Social Studies 1
EDES 434	(3)	Teaching Secondary Social Studies 2

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:

36 credits of History and Citizenship courses

12 credits at the 300- or 400-level of history courses on social history, gender history, identity, culture, religion and values, political life and institutions, con ict, 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.)

And

18 credits of Geography chosen for the "Geography" course list or chosen from the courses that comprise the B.A. Minor Concentration Geography program.

Required History

9 credits

*Note: Students select either HIST 303 or HIST 353.

HIST 202	(3)	Survey: Canada to 1867
HIST 203	(3)	Survey: Canada since 1867
HIST 303*	(3)	History of Quebec
HIST 353*	(3)	History of Montreal

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 advisor, students may choose their Geography courses from those that comprise the B.A. Minor Concentration Geography program.

Electives (6 credits)

6 credits

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

Revision, Fall 2010. Start of revision.

The Bachelor of Education (B.Ed.) - Secondary Science and Technology program requires 120 credits and leads to teacher certi cation. 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 students for the teachers for the secondary school level. This integrated program consists of academic studies, professional studies, and school-based practicum components. All of this is supported by studies in pedagogy, curriculum and educational foundations.

The Secondary 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 this University for Quebec certi cation to the Quebec Ministère de l'Éducation, du Loisir et du Sport (MELS). For more information about teacher certi cation in Quebec, please refer to the Faculty of Education section under "Overview of Faculty Programs," "Undergraduate Education Programs," and "Quebec Teacher Certi cation."

Freshman Program - Basic Sciences

Students who start their Education program in U0 normally complete 30 credits in their freshman year

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

F

EDFE 351	(8)	Third Field Experience (Secondary)
EDFE 451	(7)	Fourth Field Experience (Secondary)
EDPE 300	(3)	Educational Psychology
EDPE 304	(3)	Measurement and Evaluation
EDPI 309	(3)	Exceptional Students
EDPI 341	(3)	Instruction in Inclusive Schools

Complementary Courses (15 credits)

15 credits selected as described below

Multicultural Education

3 credits from:

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

Philosophy of Education

3 credits from:

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

Media, Technology, Computers and Education

3 credits from:

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

For students with a background in computers or other media applications in education, the following courses may be substituted for the above

EDPT 341	(3)	Instructional Programming 1
EDPT 420	(3)	Media Literacy for Education

Secondary Teaching Methods - Science and Technology

6 credits

EDES 335	(3)	Teaching Secondary Science 1
EDES 435	(3)	Teaching Secondary Science 2

Secondary Science and Technology (54 credits)

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

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

Note: Students entering this program from CEGEP should have completed the basic science courses equivalents in CEGEP. The 100-level basic sciences are considered CEGEP level and only students entering a 5-year program (out-of-province and directly from high school) are eligible to take them. Students entering with advanced standing without having completed these prerequisites (or their equivalents) will be required to make up any deficiencies in these courses over and above the degree requirements.

Overview of the 54 credits for the program:

A minimum of 12 credits at the 300-level or above;

39 credits of courses across the 4 subject areas:

- 3 credits of Statistics

- 3 credits of History of Science

- 9 credits minimum from courses on the Living World

- 9 credits minimum from courses on Earth and Space

- 9 credits minimum from courses on the Material World

- 6 credits minimum from courses on the Technological World

15 credits of complementary courses either spread across the 4 subjects areas or concentrated in 1 subject area. Students who plan to teach Grade 11 Chemistry or Physics should concentrate their 15 complementary credits in the Material World.

All students need to plan their course selections with attention to the prerequisites.

Statistics

3 credits:

MATH 203	(3)	Principles of Statistics 1

History of Science

3 credits from:

BIOL 210	(3)	Perspectives of Science
HIST 238	(3)	Histories of Science
HIST 319	(3)	The Scientific Revolution
HIST 350	(3)	Science and the Enlightenment

The Living World - Required

6 credits:

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

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

The Living World - Complementary

Students select a minimum of 3 credits to a maximum of 15 credits from courses in the Living World in the areas of:

Cell and Molecular Biology

Human and Organismal Biology

Populations, Ecosystems, and Evolution

The Living World - Cell and Molecular Biology

BIOL 201	(3)	Cell Biology and Metabolism
BIOL 202	(3)	Basic Genetics
BIOL 300	(3)	Molecular Biology of the Gene
BIOL 301	(4)	Cell and Molecular Laboratory

BIOL 313	(3)	Eukaryotic Cell Biology

The Living World - Human and Organismal Biology

BIOL 205	(3)	Biology of Organisms
EDKP 292	(3)	Nutrition and Wellness
EDKP 395	(3)	Exercise Physiology
NUTR 207	(3)	Nutrition and Health
NUTR 307	(3)	Human Nutrition
PHGY 209	(3)	Mammalian Physiology 1
PHGY 210	(3)	Mammalian Physiology 2

The Living World - Populations, Ecosystems, and Evolution

BIOL 215	(3)	Introduction to Ecology and Evolution
BIOL 240	(3)	Montereg ian Flora
BIOL 304	(3)	Evolution
BIOL 305	(3)	Animal Diversity
BIOL 308	(3)	Ecological Dynamics
BIOL 310	(3)	Biodiversity and Ecosystems
BIOL 331	(3)	Ecology/Behaviour Field Course
BIOL 352	(3)	Vertebrate Evolution
ENVB 305	(3)	Population & Community Ecology
EPSC 334	(3)	Invertebrate Paleontology

Earth and Space - Complementary

Students select a minimum of 9 credits to a maximum of 24 credits from courses on Earth and Space with the following qualifications:

a minimum of 6 to a maximum of 21 credits from Earth and Space

a minimum of 3 to a maximum of 18 credits from Environment

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)	Water in the Atmosphere
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
EPSC 405	(3)	Planetary Geology

CHEM 287*	(2)	Introductory Analytical Chemistry
CHEM 297*	(1)	Introductory Analytical Chemistry Laboratory
CHEM 301	(3)	Modern Inorganic Chemistry 2
CHEM 302	(3)	Introductory Organic Chemistry 3
CHEM 307	(3)	Analytical Chemistry of Pollutants
CHEM 319	(3)	Chemistry of Energy, Storage and Utilization
CHEM 381	(3)	Inorganic Chemistry 2
CHEM 392	(3)	Integrated Inorganic/Organic Laboratory
MATH 222	(3)	Calculus 3
PHYS 224	(3)	Physics 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 436	(3)	Modern Physics
PHYS 439	(3)	Majors Laboratory in Modern Physics
PHYS 446	(3)	Majors Quantum Physics

The Technological World

Students select a minimum of 6 credits to a maximum of 15 credits from courses on the Technological World.

*Note: Students may take either COMP 102 or COMP 280 but not both.

**Note: Credit will not be given for COMP 102 if it is taken concurrently with or after COMP 202.

COMP 102*	(3)	Computers and Computing
COMP 202**	(3)	Introduction to Computing 1
COMP 206	(3)	Introduction to Software Systems
COMP 280*	(3)	History and Philosophy of Computing
COMP 364	(3)	Computer Tools for Life Sciences
MATH 204	(3)	Principles of Statistics 2
PHYS 334	(3)	Advanced Materials

Revision, Fall 2010. End of revision.

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

The Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Biology - Cell/Molecular with Minor Chemistry for Teachers is jointly offered by the Faculty of Science and the Faculty of Education. Separately, the Bachelor of Science degree requires 90 credits (or 120 credits for students who have not completed the basic sciences) and the Bachelor of Education degree requires 120 credits. In the concurrent program, the requirements for the two degrees are combined in such a way that students complete 135 (or 165 credits) to fulfill all the requirements for graduation for both the B.Sc. and the B.Ed.

Graduates of the B.Ed. degree are recommended by the Uni

Note:

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

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

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

First calculus course, one of:

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

Second calculus course, one of:

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

First physics course, one of:

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

Second physics course, one of:

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

Electives

Students wishing to take elective courses may choose them from introductory courses offered by departments in the Faculties of Science or Arts. A list of recommended courses is found at http://www.mcgill.ca/science/sousa/bsc/freshman/appendix. Certain courses offered by other faculties may also be taken, but some restrictions apply.

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

Education Component (60 credits)

60 credits of Education Component consists of:

54 credits of required courses

6 credits of complementary courses

Required Courses

54 credits

*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

The English Language Requirement (EDEC 215) must be taken the Fall semester following the Freshman Year.

EDEC 201	(1)	First Year Professional Seminar
EDEC 215	(0)	English Language Requirement
EDEC 247*	(3)	Policy Issues in Quebec Education
EDEC 254	(1)	Second Professional Seminar (Secondary)
EDEC 262*	(3)	Media, Technology and Education
EDEC 351	(2)	Third Professional Seminar (Secondary)
EDEC 404	(3)	Fourth Year Professional Seminar (Sec)
EDES 335	(3)	Teaching Secondary Science 1
EDES 350	(3)	Classroom Practices (Secondary)
EDES 435	(3)	Teaching Secondary Science 2
EDFE 200	(2)	First Field Experience (K/Elem & Secondary)
EDFE 254	(3)	Second Field Experience (Secondary)
EDFE 351	(8)	Third Field Experience (Secondary)
EDFE 451	(7)	Fourth Field Experience (Secondary)
EDPE 300*	(3)	Educational Psychology
EDPE 304	(3)	Measurement and Evaluation
EDPI 309*	(3)	Exceptional Students
EDPI 341	(3)	Instruction in Inclusive Schools

Complementary Courses

6 credits selected as follows:

*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

3 credits, one of the three following courses:

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

3 credits, one of the two following courses:

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

Major Concentration Biology - Cell/Molecular (36 credits)

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

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

Required Courses

25 credits selected as follows:

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 Electi

B.Sc. and B.Ed. - Major in Biology with Minor in Physics for Teachers (135 credits) - Major Concentration Biology - Cell/Molecular

The Bachelor of Education (B.Ed.) - Major may not be credited for graduate degree requirements unless all requirements for graduation are satis ed.

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

The Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Biology - Cell/Molecular with Minor Physics for Teachers is jointly offered by the Faculty of Science and the Faculty of Education. Separately, the Bachelor of Science degree requires 90 credits (or 120 credits for students who have not completed the basic sciences) and the Bachelor of Education degree requires 120 credits. In the concurrent program, the

Science Complementary

The seventh course is chosen from the list of Approved Freshman Science Courses.

Notes:

1. Students who have not studied all of Biology, Chemistry and Physics at the grade 12 level or equivalent are strongly advised to include at least one course in the missing discipline in their freshman program.

2. Many students will complete more than 7 courses from the Approved Freshman Science Courses list, particularly those who wish to keep several options open for their choice of major.

Electives

Students wishing to take elective courses may choose them from introductory courses offered by departments in the Faculties of Science or Arts. A list of recommended courses is found at http://www.mcgill.ca/science/sousa/bsc/freshman/appendix. Certain courses offered by other faculties may also be taken, but some restrictions apply.

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

Education Component (60 credits)

60 credits of Education Component consists of:

54 credits of required courses

6 credits of complementary courses

Required Courses

54 credits

*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

The English Language Requirement (EDEC 215) must be taken the Fall semester following the Freshman Year.

EDEC 201	(1)	First Year Professional Seminar
EDEC 215	(0)	English Language Requirement
EDEC 247*	(3)	Policy Issues in Quebec Education
EDEC 254	(1)	Second Professional Seminar (Secondary)
EDEC 262*	(3)	Media, Technology and Education
EDEC 351	(2)	Third Professional Seminar (Secondary)
EDEC 404	(3)	Fourth Year Professional Seminar (Sec)
EDES 335	(3)	Teaching Secondary Science 1
EDES 350	(3)	Classroom Practices (Secondary)
EDES 435	(3)	Teaching Secondary Science 2
EDFE 200	(2)	First Field Experience (K/Elem & Secondary)

3 credits, one of the following courses:

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

Major Concentration Biology - Cell/Molecular (36 credits)

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

Advising Note: Freshman students should be a

one of:

PHYS 230	(3)	Dynamics of Simple Systems
PHYS 251	(3)	Honours Classical Mechanics 1

one of:

PHYS 232	(3)	Heat and Waves
PHYS 253	(3)	Thermal Physics

one of:

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

one of:

PHYS 214	(3)	Introductory Astrophysics
PHYS 225	(3)	Musical Acoustics
		Modern Ph

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

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

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

(30 credits of Science Freshman Program (for students admitted without basic sciences))

60 credits of Education Component

69 credits of Science Component consisting of:

- 36 credits of Major Concentration Biology - Organismal

- 18 credits of Minor Chemistry

- 15 credits of Additional Science Courses

6 credits of Electives, of which at least 3 credits must be Science Electives, depending on how many credits count toward both the B.Sc. and the B.Ed. degrees

For details on the counting of credits toward both degrees (double-counting) visit the program website http://www.mcgill.ca/scienceforteachers/.

B.Sc. Freshman Program

Students who enter Science in U0 will normally be registered in the Science Freshman Program until they complete their first year. They must consult an adviser in the Science Office for Undergraduate Student Advising (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 7 courses from the Approved Freshman Science courses, selected as follows:

General Math and Science Breadth

Six of the freshman courses must satisfy one of the following:

Option 1) 2 courses from MATH and 4 courses from BIOL, CHEM or PHYS;

or

Option 2) 3 courses from MATH and 3 courses from BIOL, CHEM or PHYS.

Science Complementary

The seventh course is chosen from the list of Approved Freshman Science Courses.

Notes:

1. Students who have not studied all of Biology, Chemistry and Physics at the grade 12 level or equivalent are strongly advised to include at least one course in the missing discipline in their freshman program.

2. Many students will complete more than 7 courses from the Approved Freshman Science Courses list, particularly those who wish to keep 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.

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

(4) General Chemistry 2

EDEC 262*	(3)	Media, Technology and Education
EDEC 351	(2)	Third Professional Seminar (Secondary)
EDEC 404	(3)	Fourth Year Professional Seminar (Sec)
EDES 335	(3)	Teaching Secondary Science 1
EDES 350	(3)	Classroom Practices (Secondary)
EDES 435	(3)	Teaching Secondary Science 2
EDFE 200	(2)	First Field Experience (K/Elem & Secondary)
EDFE 254	(3)	Second Field Experience (Secondary)
EDFE 351	(8)	Third Field Experience (Secondary)
EDFE 451	(7)	Fourth Field Experience (Secondary)
EDPE 300*	(3)	Educational Psychology
EDPE 304	(3)	Measurement and Evaluation
EDPI 309*	(3)	Exceptional Students
EDPI 341	(3)	Instruction in Inclusive Schools

Complementary Courses

6 credits selected as follows:

*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

3 credits, one of the three following courses:

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

3 credits, one of the two following courses:

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

Major Concentration Biology -52 nools

BIOL 308	(3)	Ecological Dynamics

Complementary Courses

12 credits selected from:

BIOL 303	(3)	Developmental Biology
BIOL 305	(3)	Animal Diversity
BIOL 306	(3)	Neural Basis of Behaviour
BIOL 307	(3)	Behavioural Ecology/Sociobiology
BIOL 310	(3)	Biodiversity and Ecosystems
BIOL 331	(3)	Ecology/Behaviour Field Course
BIOL 342	(3)	Marine Biology
BIOL 350	(3)	Insect Biology and Control
BIOL 373	(3)	Biometry
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 281	(3)	Inorganic Chemistry 1
CHEM 287	(2)	IntroductoryAnalytical Chemistry
CHEM 297	(1)	IntroductoryAnalytical Chemistry Laboratory

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.

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

The Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Biology - Organismal with Minor Physics for Teachers is jointly offered by the Faculty of Science and the Faculty of Education. Separately, the Bachelor of Science de

Notes:

1. Students who have not studied all of Biology, Chemistry and Physics at the grade 12 level or equivalent are strongly advised to include at least one course in the missing discipline in their freshman program.

2. Many students will complete more than 7 courses from the Approved Freshman Science Courses list, particularly those who wish to keep 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.

List of Approved Freshman Science Courses

Select the approved courses according to the instructions above.

Note:

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

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

BIOL 111	(3)	Principles: Organismal Biology
BIOL 112	(3)	Cell and Molecular Biology
CHEM 110	(4)	General Chemistry 1
CHEM 115	(4)	Accelerated General Chemistry: Giants in Science
CHEM 120	(4)	General Chemistry 2
COMP 202	(3)	Introduction to Computing 1
	(3)	The Earth System

Students wishing to take elective courses may choose them from introductory courses offered by departments in the Faculties of Science or Arts. A list of recommended courses is found at http://www.mcgill.ca/science/sousa/bsc/freshman/appendix. Certain courses offered by other faculties may also be taken, but some restrictions apply

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

Education Component (60 credits)

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

Major Concentration Biology - Organismal (37 credits)

The Major Concentration Biology - Organismal is a planned sequence of courses designed to permit a degree of specialization in organismal biology.

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

Required Courses*

28 credits selected as follows:

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

BIOL 200	(3)	Molecular Biology
BIOL 201	(3)	Cell Biology and Metabolism
BIOL 202	(3)	Basic Genetics
BIOL 205	(3)	Biology of Organisms
BIOL 206	(3)	Methods in Biology of Organisms
BIOL 215	(3)	Introduction to Ecology and Evolution
BIOL 304	(3)	Evolution
BIOL 308	(3)	Ecological Dynamics
CHEM 212*	(4)	Introductory Organic Chemistry 1

Complementary Courses

9 credits selected from:

BIOL 303	(3)	Developmental Biology
BIOL 305	(3)	Animal Diversity
BIOL 306	(3)	Neural Basis of Behaviour
BIOL 307	(3)	Behavioural Ecology/Sociobiology
BIOL 310	(3)	Biodiversity and Ecosystems
BIOL 331	(3)	Ecology/Behaviour Field Course
BIOL 342	(3)	Marine Biology
BIOL 350	(3)	Insect Biology and Control
BIOL 352	(3)	Vertebrate Evolution
BIOL 373	(3)	Biometry
BIOL 427	(3)	Herpetology
BIOL 435	(3)	Natural Selection
BIOL 441	(3)	Biological Oceanography
BIOL 465	(3)	Conservation Biology

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

Minor Physics (18 credits)

Required Course

3 credits

PHYS 257	(3)	Experimental Methods 1

Complementary Courses

15 credits to be selected as follows:

one of:

PHYS 230	(3)	Dynamics of Simple Systems
PHYS 251	(3)	Honours Classical Mechanics 1

one of:

PHYS 232	(3)	Heat and Waves
PHYS 253	(3)	Thermal Physics

one of:

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

one of:

PHYS 214	(3)	Introductory Astrophysics
PHYS 225	(3)	Musical Acoustics
PHYS 260	(3)	Modern Physics and Relativity
PHYS 271	(3)	Introduction to Quantum Physics

one of:

PHYS 340	(3)	Majors Electricity and Magnetism
PHYS 350	(3)	Honours Electricity and Magnetism

Additional Science Courses (15 credits)

BIOL 210	(3)	Perspectives of Science
MATH 203	(3)	Principles of Statistics 1
MATH 222	(3)	Calculus 3
MATH 223	(3)	Linear Algebra
MATH 314	(3)	Advanced Calculus

Electives (5 credits)

5 credits, of which at least 2 credits must be Science Electives.

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

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

The Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Chemistry with Minor Biology for Teachers is jointly offered by the Faculty of Science and the Faculty of Education. Separately, the Bachelor of Science degree requires 90 credits (or 120 credits for students who have not completed the basic sciences) and the Bachelor of Education degree requires 120 credits. In the concurrent program, the requirements for the two degrees are combined in such a way that students complete 135 (or 165 credits) to fulfill all the requirements for graduation for both the B.Sc. and the B.Ed.

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

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

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

(30 credits of Science Freshman Program (for students admitted without basic sciences))

60 credits of Education Component

69 credits of Science Component consisting of:

- 36 credits of the Major Concentration Chemistry

- 24 credits of the Minor Biology

- 9 credits of Additional Science Courses

6 credits of Electives, of which at least 3 credits must be Science Electives, depending on how many credits count toward both the B.Sc. and the B.Ed. degrees

For details on the counting of credits toward both degrees (double-counting) visit the program website http://www.mcgill.ca/scienceforteachers/.

B.Sc. Freshman Program

Students who enter Science in U0 will normally be registered in the Science Freshman Program until they complete their first year. They must consult an adviser in the Science Office for Undergraduate Student Advising (SOUSA) to obtain advice and approval of their course selection. Full details are available on the SOUSA website at http://www.mcgill.ca/science/sousa. Academic advising is also available by email. The address is newstudentadvising.science@mcgill.ca.

Students normally complete 30 credits which must include at least 7 courses from the Approved Freshman Science courses, selected as follows:

General Math and Science Breadth

Six of the freshman courses must satisfy one of the following:

Option 1) 2 courses from MATH and 4 courses from BIOL, CHEM or PHYS;

or

Option 2) 3 courses from MATH and 3 courses from BIOL, CHEM or PHYS.

Science Complementary

The seventh course is chosen from the list of Approved Freshman Science Courses.

Notes:

1. Students who have not studied all of Biology, Chemistry and Physics at the grade 12 level or equivalent are strongly advised to include at least one course in the missing discipline in their freshman program.

2. Many students will complete more than 7 courses from the Approved Freshman Science Courses list, particularly those who wish to keep 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.

List of Approved Freshman Science Courses

Select the approved courses according to the instructions above

Note:

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

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

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

First calculus course, one of:

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

Second calculus course, one of:

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

First physics course, one of:

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

Second physics course, one of:

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

Electives

Students wishing to take elective courses may choose them from introductory courses offered by departments in the Faculties of Science or Arts. A list of recommended courses is found at http://www.mcgill.ca/science/sousa/bsc/freshman/appendix. Certain courses offered by other faculties may also be taken, but some restrictions apply.

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

*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 the fall semester following the Freshman Year.

EDEC 201	(1)	First Year Professional Seminar
EDEC 215	(0)	English Language Requirement
EDEC 247*	(3)	Policy Issues in Quebec Education
EDEC 254	(1)	Second Professional Seminar (Secondary)
EDEC 262*	(3)	Media, Technology and Education
EDEC 351	(2)	Third Professional Seminar (Secondary)
EDEC 404	(3)	Fourth Year Professional Seminar (Sec)
EDES 335	(3)	Teaching Secondary Science 1
EDES 350	(3)	Classroom Practices (Secondary)
EDES 435	(3)	Teaching Secondary Science 2
EDFE 200	(2)	First Field Experience (K/Elem & Secondary)
EDFE 254	(3)	Second Field Experience (Secondary)
EDFE 351	(8)	Third Field Experience (Secondary)
EDFE 451	(7)	Fourth Field Experience (Secondary)
EDPE 300*	(3)	Educational Psychology
EDPE 304	(3)	Measurement and Evaluation
EDPI 309*	(3)	Exceptional Students
EDPI 341	(3)	Instruction in Inclusive Schools

Complementary Courses

6 credits selected as follows:

*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

3 credits, one of the three following courses:

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

3 credits, one of the two following courses:

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

Major Concentration Chemistry (36 credits)

The Major Concentration Chemistry is not certified by the Ordre des Chimistes du Québec. Students interested in pursuing a career in Chemistry in Quebec are advised to take an appropriate B.Sc. program in Chemistry.

The Major Concentration is a planned sequence of courses designed to permit a degree of specialization in this discipline.

Required Courses*

18 credits

*Note: Required courses taken at CEGEP or elsewhere that are not credited toward the Concurrent B.Sc. and B.Ed. must be replaced by courses from the Complementary Course List equal to or exceeding their credit value. Regardless of the substitution, students must take at least 36 credits in this program.

CHEM 203	(3)	Survey of Physical Chemistry
CHEM 212	(4)	Introductory Organic Chemistry 1
CHEM 222	(4)	Introductory Organic Chemistry 2
CHEM 253	(1)	Introductory Physical Chemistry 1 Laboratory
CHEM 281	(3)	Inorganic Chemistry 1
CHEM 287	(2)	Introductory Analytical Chemistry
CHEM 297	(1)	Introductory Analytical Chemistry Laboratory

Complementary Courses

18 credits selected from:

CHEM 219	(3)	Introduction to Atmospheric Chemistry
CHEM 263	(1)	Introductory Physical Chemistry 2 Laboratory
CHEM 302	(3)	Introductory Organic Chemistry 3
CHEM 307	(3)	Analytical Chemistry of Pollutants
CHEM 334	(3)	Advanced Materials
CHEM 367	(3)	Instrumental Analysis 1
CHEM 381	(3)	Inorganic Chemistry 2
CHEM 382	(3)	Organic Chemistry: Natural Products
CHEM 531	(3)	Chemistry of Inorganic Materials
CHEM 571	(3)	Polymer Synthesis
CHEM 582	(3)	Supramolecular Chemistry
CHEM 591	(3)	Bioinorganic Chemistry

Minor Biology (24 credits)

Required Courses

15 credits

BIOL 200	(3)	Molecular Biology
BIOL 201	(3)	Cell Biology and Metabolism
BIOL 202	(3)	Basic Genetics
		Biology of Organisms

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.

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

The Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Chemistry with Minor Physics for Teachers is jointly offered by the Faculty of Science and the Faculty of Education. Separately, the Bachelor of Science degree requires 90 credits (or 120 credits for students who have not completed the basic sciences) and the Bachelor of Education degree requires 120 credits. In the concurrent program, the requirements for the two degrees are combined in such a way that students complete 135 (or 165 credits) to fulfill all the requirements for graduation for both the B.Sc. and the B.Ed.

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

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

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

(30 credits of Science Freshman Program (for students admitted without basic sciences))

60 credits of Education Component

69 credits of Science Component consisting of:

- 36 credits of the Major Concentration Chemistry

- 18 credits of the Minor Physics

- 15 credits of Additional Science Courses

6 credits of Electives, of which at least 3 credits must be Science Electives, depending on how many credits count toward both the B.Sc. and the B.Ed. degrees

For details on the counting of credits toward both degrees (double-counting) visit the program website http://www.mcgill.ca/scienceforteachers/.

B.Sc. Freshman Program

Students who enter Science in U0 will normally be registered in the Science Freshman Program until they complete their first year. They must consult an adviser in the Science Office for Undergraduate Student Advising (SOUSA) to obtain advice and approval of their course selection. Full details are available on the SOUSA website at http://www.mcgill.ca/science/sousa. Academic advising is also available by email. The address is newstudentadvising.science@mcgill.ca.

Students normally complete 30 credits which must include at least 7 courses from the list of Approved Freshman Science courses, selected as follows:

General Math and Science Breadth

Six of the freshman courses must satisfy one of the following:

Option 1) 2 courses from MATH and 4 courses from BIOL, CHEM or PHYS;

or

Option 2) 3 courses from MATH and 3 courses from BIOL, CHEM or PHYS.

Science Complementary

The seventh course is chosen from the list of Approved Freshman Science Courses.

Notes:

1. Students who have not studied all of Biology, Chemistry and Physics at the grade 12 level or equivalent are strongly advised to include at least one course in the missing discipline in their freshman program.

2. Many students will complete more than 7 courses from the Approved Freshman Science Courses list, particularly those who wish to keep 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.

List of Approved Freshman S

60 credits of Education courses:

54 credits of required courses

6 credits of complementary courses

Required Courses

54 credits

*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

The English Language Requirement (EDEC 215) must be taken the Fall semester following the Freshman Year.

EDEC 201	(1)	First Year Professional Seminar
EDEC 215	(0)	English Language Requirement
EDEC 247*	(3)	Policy Issues in Quebec Education
EDEC 254	(1)	Second Professional Seminar (Secondary)
EDEC 262*	(3)	Media, Technology and Education
EDEC 351	(2)	Third Professional Seminar (Secondary)
EDEC 404	(3)	Fourth Year Professional Seminar (Sec)
EDES 335	(3)	Teaching Secondary Science 1
EDES 350	(3)	Classroom Practices (Secondary)
EDES 435	(3)	Teaching Secondary Science 2
EDFE 200	(2)	First Field Experience (K/Elem & Secondary)
EDFE 254	(3)	Second Field Experience (Secondary)
EDFE 351	(8)	Third Field Experience (Secondary)
EDFE 451	(7)	Fourth Field Experience (Secondary)
EDPE 300*	(3)	Educational Psychology
EDPE 304	(3)	Measurement and Evaluation
EDPI 309*	(3)	Exceptional Students
EDPI 341	(3)	Instruction in Inclusive Schools

Complementary Courses

6 credits selected as follows:

*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

3 credits, one of the three following courses:

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

3 credits, one of the two following courses:

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

Major Concentration Chemistry (36 credits)

The Major Concentration Chemistry is not certified by the Ordre des Chimistes du Québec. Students interested in pursuing a career in Chemistry in Quebec are advised to take an appropriate B.Sc. program in Chemistry

The Major Concentration is a planned sequence of courses designed to permit a degree of specialization in this discipline.

Required Courses*

18 credits selected as follows:

*Note: Required courses taken at CEGEP or elsewhere that are not credited toward the Concurrent B.Sc. and B.Ed. must be replaced by courses from the Complementary Course List equal to or exceeding their credit value. Regardless of the substitution, students must take at least 36 credits in this program.

CHEM 203	(3)	Survey of Physical Chemistry
CHEM 212	(4)	Introductory Organic Chemistry 1
CHEM 222	(4)	Introductory Organic Chemistry 2
CHEM 253	(1)	Introductory Physical Chemistry 1 Laboratory
CHEM 281	(3)	Inorganic Chemistry 1
CHEM 287	(2)	Introductory Analytical Chemistry
CHEM 297	(1)	Introductory Analytical Chemistry Laboratory

Complementary Courses

18 credits selected from:

CHEM 219	(3)	Introduction to Atmospheric Chemistry
CHEM 263	(1)	Introductory Physical Chemistry 2 Laboratory
CHEM 302	(3)	Introductory Organic Chemistry 3
CHEM 307	(3)	Analytical Chemistry of Pollutants
CHEM 334	(3)	Advanced Materials
CHEM 367	(3)	Instrumental Analysis 1
CHEM 381	(3)	Inorganic Chemistry 2
CHEM 382	(3)	Organic Chemistry: Natural Products
CHEM 531	(3)	Chemistry of Inorganic Materials
CHEM 571	(3)	Polymer Synthesis
CHEM 582	(3)	Supramolecular Chemistry
CHEM 591	(3)	Bioinorganic Chemistry

Minor Physics (18 credits)

Required Course

3 credits

PHYS 257	(3)	Experimental Methods 1

Complementary Courses

15 credits to be selected as follows:

one of:

PHYS 230	(3)	Dynamics of Simple Systems
PHYS 251	(3)	Honours Classical Mechanics 1

one of:

PHYS 232	(3)	Heat and Waves
PHYS 253	(3)	Thermal Physics

one of:

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

one of:

PHYS 214	(3)	Introductory Astrophysics
PHYS 225	(3)	Musical Acoustics
PHYS 260	(3)	Modern Physics and Relativity
PHYS 271	(3)	Introduction to Quantum Physics

one of:

PHYS 340	(3)	Majors Electricity and Magnetism
PHYS 350	(3)	Honours Electricity and Magnetism

Additional Science Courses (15 credits)

BIOL 210	(3)	Perspectives of Science
MATH 203	(3)	Principles of Statistics 1
MATH 222	(3)	Calculus 3
MATH 223	(3)	Linear Algebra
MATH 314	(3)	Advanced Calculus

Electives (6 credits)

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

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

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

The Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Physics with Minor Biology for Teachers is jointly offered by the Faculty of Science and the Faculty of Education. Separately, the Bachelor of Science degree requires 90 credits (or 120 credits for students who have not completed the basic sciences) and the Bachelor of Education degree requires 120 credits. In the concurrent program, the requirements for the two degrees are combined in such a way that students complete 135 (or 165 credits) to full all the requirements for graduation for both the B.Sc. and the B.Ed.

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

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

To ful l 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 in Physics

- 24 credits of Minor Biology

- 9 credits of Additional Science Courses

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

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 Arts. A list of recommended courses is found at http://www.mcgill.ca/science/sousa/bsc/freshman/appendix. Certain courses offered by other faculties may also be taken, but some restrictions apply.

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

Education Component (60 credits)

60 credits of Education Component consists of:

54 credits of required courses

6 credits of complementary courses

Required Courses

54 credits

*Note: The courses marked with an asterisk are counted for both degrees. They will count as "elective

EDES 335	(3)	Teaching Secondary Science 1
EDES 350	(3)	Classroom Practices (Secondary)
EDES 435	(3)	Teaching Secondary Science 2
EDFE 200	(2)	First Field Experience (K/Elem & Secondary)
EDFE 254	(3)	Second Field Experience (Secondary)
EDFE 351	(8)	Third Field Experience (Secondary)
EDFE 451	(7)	Fourth Field Experience (Secondary)
EDPE 300*	(3)	Educational Psychology
EDPE 304	(3)	Measurement and Evaluation
EDPI 309*	(3)	Exceptional Students
EDPI 341	(3)	Instruction in Inclusive Schools

Complementary Courses

6 credits selected as follows:

*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

3 credits, one of the three follo

Complementary Courses

6 credits selected from:

PHYS 214	(3)	Introductory Astrophysics
PHYS 225	(3)	Musical Acoustics
PHYS 241	(3)	Signal Processing
PHYS 258	(3)	Experimental Methods 2
PHYS 334	(3)	Advanced Materials
PHYS 534	(3)	Nanoscience and Nanotechnology

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

Minor 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 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.

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

The Concurrent Bachelor of Science (B.Sc.) and Bachelor of Education (B.Ed.) - Major Concentration Physics with Minor Chemistry for Teachers is jointly offered by the Faculty of Science and the Faculty of Education. Separately, the Bachelor of Science degree requires 90 credits (or 120 credits for students who have not completed the basic sciences) and the Bachelor of Education degree requires 120 credits. In the concurrent program, the requirements for the two degrees are combined in such a way that students complete 135 (or 165 credits) to fulfill all the requirements for graduation for both the B.Sc. and the B.Ed.

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

The Major Concentration Physics with Minor 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 fulfill the requirements for graduation for the Concurrent Bachelor of Science and Bachelor of Education the 135 credits (or 165 credits for students admitted without basic sciences) include the following:

(30 credits of Science Freshman Program (for students admitted without basic sciences))

60 credits of Education Component

69 credits of Science Component consisting of:

- 36 credits of the Major Concentration Physics
- 18 credits of the Minor Chemistry
- 15 credits of Additional Science Courses

6 credits of Electives, of which at least 3 credits must be Science Electives, depending on how many credits count to

Note:

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

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

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

First calculus course, one of:

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

Second calculus course, one of:

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

First physics course, one of:

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

Second physics course, one of:

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

Electives

Students wishing to take elective courses may choose them from introductory courses offered by departments in the Faculties of Science or Arts. A list of recommended courses is found at http://www.mcgill.ca/science/sousa/bsc/freshman/appendix. Certain courses offered by other faculties may also be taken, but some restrictions apply

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

Education Component (60 credits)

60 credits of Education Component consists of:

54 credits of required courses

6 credits of complementary courses

Required Courses

54 credits

*Note: The courses marked with an asterisk are counted towards both degrees. They will count as "electives" for one degree, although a grade of "C" or better is required.

The English Language Requirement (EDEC 215) must be taken the Fall semester following the Freshman Year.

EDEC 201	(1)	First Year Professional Seminar
EDEC 215	(0)	English Language Requirement
EDEC 247*	(3)	Policy Issues in Quebec Education
EDEC 254	(1)	Second Professional Seminar (Secondary)
EDEC 262*	(3)	Media, Technology and Education
EDEC 351	(2)	Third Professional Seminar (Secondary)
EDEC 404	(3)	Fourth Year Professional Seminar (Sec)
EDES 335	(3)	Teaching Secondary Science 1
EDES 350	(3)	Classroom Practices (Secondary)
EDES 435	(3)	Teaching Secondary Science 2
EDFE 200	(2)	First Field Experience (K/Elem & Secondary)
EDFE 254	(3)	Second Field Experience (Secondary)
EDFE 351	(8)	Third Field Experience (Secondary)
EDFE 451	(7)	Fourth Field Experience (Secondary)
EDPE 300*	(3)	Educational Psychology
EDPE 304	(3)	Measurement and Evaluation
EDPI 309*	(3)	Exceptional Students
EDPI 341	(3)	Instruction in Inclusive Schools

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MATH 222	(3)	Calculus 3
MATH 223	(3)	LinearAlgebra
MA0 1A(3)	(3)	Advanced Calculus

plus 3 credits, one of:

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

plus 3 credits, one additional Physics (PHYS) course approved by the Physics Department.

Electives (6 credits)

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

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

1. Students who have not studied all of Biology, Chemistry and Physics at the grade 12 level or equivalent are strongly advised to include at least one course in the missing discipline in their freshman program.

2. Many students will complete more than 7 courses from the Approved Freshman Science Courses list, particularly those who wish to keep 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.

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

Education Component (60 credits)

60 credits of Education Component consists of:

54 credits of required courses

6 credits of complementary courses

Required Courses

54 credits

*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

The English Language Requirement (EDEC 215) must be taken the Fall semester following the Freshman Year.

EDEC 201	(1)	First Year Professional Seminar
EDEC 215	(0)	English Language Requirement
EDEC 247*	(3)	Policy Issues in Quebec Education
EDEC 254	(1)	Second Professional Seminar (Secondary)
EDEC 262*	(3)	Media, Technology and Education
EDEC 351	(2)	Third Professional Seminar (Secondary)
EDEC 404	(3)	Fourth Year Professional Seminar (Sec)
EDES 350	(3)	Classroom Practices (Secondary)
EDES 353	(3)	Teaching Secondary Mathematics 1
EDES 453	(3)	Teaching Secondary Mathematics 2
EDFE 200	(2)	First Field Experience (K/Elem & Secondary)
EDFE 254	(3)	Second Field Experience (Secondary)
EDFE 351	(8)	Third Field Experience (Secondary)
EDFE 451	(7)	Fourth Field Experience (Secondary)
EDPE 300*	(3)	Educational Psychology
EDPE 304	(3)	Measurement and Evaluation
EDPI 309*	(3)	Exceptional Students
EDPI 341	(3)	Instruction in Inclusive Schools

Complementary Courses

6 credits selected as follows:

*Note: The courses marked with an asterisk are counted toward both degrees. They will count as "electives" for the B.Sc. degree, although a grade of "C" or better is required.

3 credits, one of the three following courses:

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

3 credits, one of the two following courses:

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

Major Mathematics (54 credits)

Program Prerequisites

Students entering the Major program are normally expected to have completed the courses below or their equivalents. Otherwise they will be required to make up any deficiencies in these courses over and above the 54 credits for the program.

MATH 133	(3)	Linear Algebra and Geometry
MATH 140	(3)	Calculus 1
MATH 141	(4)	Calculus 2

Required Courses

27 credits

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

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

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

Complementary Courses

27 credits selected with the following specifications:

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

COMP 202	(3)	Introduction to Computing 1
MATH 324	(3)	Statistics
MATH 338	(3)	History and Philosophy of Mathematics
MATH 348	(3)	Topics in Geometry

at least 3 credits from:

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

12 credits from:

It is highly recommended that students include MATH 318, MATH 328, MATH 339 and MATH 346 in their complementary courses.

MATH 204	(3)	Principles of Statistics 2
MATH 318	(3)	Mathematical Logic
MATH 319	(3)	Introduction to Partial Differential Equations

MATH 320	(3)	Differential Geometry
MATH 326	(3)	Nonlinear Dynamics and Chaos
		Matrix Numerical

70 Music academic credits,

9 music elective credits,

3 non-music elective credits.

Program Prerequisites - Freshman Program

35 credits

Prerequisite Courses

35 credits distributed as follows:

2 credits (1 credit per term) Assigned Small Ensemble

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, and have successfully completed a course in the history of Western music, with a grade of C or better, will be exempted from the first-year Western Musical Traditions requirement (MUHL 186).

Western Musical T

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 Woodwind
MUSP 335	(2)	Musicianship for Brass
MUSP 346	(2)	Post-Tonal Musicianship
MUSP 350	(2)	Musicianship for Pianists
MUSP 353	(2)	Musicianship for Voice
MUSP 354	(2)	Introduction to Improvisation and Ornamentation
MUSP 355	(2)	Musicianship for Percussion
MUSP 381	(2)	Singing Renaissance Notation

Music History

6 credits of courses with a MUHL or a MUPP prefix.

Performance

4 credits from:

MUEN 563	(2)	Jazz Vocal Workshop
MUEN 572	(2)	Cappella Antica
MUEN 573	(2)	Baroque Orchestra
MUEN 587	(2)	Cappella McGill
MUEN 590	(2)	McGill Winds
MUEN 592	(2)	Chamber Jazz Ensemble
MUEN 593	(2)	Choral Ensembles
MUEN 594	(2)	Contemporary Music Ensemble
MUEN 597	(2)	Orchestral Ensembles

Electives (12 credits)

9 credits of free electives

3 credits of non-music electives

Required Education Courses (45 credits)

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

EDEA 206	(1)	1st Year Professional Seminar
EDEA 407	(3)	Final Year Professional Seminar Music
EDEA 442	(3)	Elementary Music Curriculum and Instruction
EDEA 472	(3)	Secondary Music Curriculum and Instruction
EDEC 215	(0)	English Language Requirement
EDEC 247	(3)	Policy Issues in Quebec Education
EDEE 355*	(3)	Classroom-based Evaluation
EDES 350	(3)	Classroom Practices (Secondary)
EDFE 205	(2)	First Field Experience (Music)

Those who have completed a Bachelor of Music degree may apply for advanced standing in the Bachelor of Education in Music program in the Faculty of Education. Application to the Bachelor of Education in Music may be made online at www.mcgill.ca/applying. Information is available on that site or may be obtained from:

Enrolment Services
McGill University
845 Sherbrooke Street West
Montreal, QC H3A 2T5
Telephone: 514-398-3910
Fax: 514-398-4193

RELG 207	(3)	The Study of World Religions 1

Required Courses (75 credits)

EDEC 201	(1)	First Year Professional Seminar
EDEC 203	(3)	Communication in Education
EDEC 215	(0)	English Language Requirement
EDEC 247	(3)	Policy Issues in Quebec Education
EDEC 253	(1)	Second Professional Seminar (Kindergarten/Elementary)
EDEC 405	(3)	Fourth Year Professional Seminar (K/Elem)
EDEE 223	(3)	Language Arts
EDEE 230	(3)	Elementary School Mathematics
EDEE 250	(2)	The Kindergarten Classroom
EDEE 260	(3)	Reading Methods - Early Childhood
EDEE 270	(3)	Elementary School Science
EDEE 275	(2)	Science Teaching
EDEE 280	(3)	Geography, History and Citizenship Education
EDEE 282	(2)	Teaching Social Sciences
EDEE 325	(3)	Children's Literature
EDEE 332	(3)	Teaching Mathematics 1
EDEE 353	(3)	Teaching and Learning in the Elementary Classroom
EDEE 355	(3)	Classroom-based Education
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)
EDPE 300	(3)	Educational Psychology
EDPI 309	(3)	Exceptional Students
EDPI 341	(3)	Instruction in Inclusive Schools

Complementary Courses (18 credits)

18 credits of courses selected as described below

Multicultural Education

3 credits from:

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

Philosophy of Education

3 credits from:

EDEC 260	(3)	Philosophical Foundations

EDEC 261	(3)	Philosophy of Catholic Education

Media, Technology, Computers and Education

3 credits from:

Note: Courses identified with an asterisk ("") are recommended for students with a background in computers or other media applications in education.

EDEC 262	(3)	Media, Technology and Education
EDPT 341*	(3)	Instructional Programming 1
EDPT 420*	(3)	Media Literacy for Education

Ethics, Values, or Religion

3 credits from:

EDER 309	(3)	The Religious Quest
EDER 395	(3)	Moral Values and Human Action
EDER 473	(3)	Living with Insight
EDER 494	(3)	Ethics in Practice
RELG 207	(3)	The Study of World Religions 1

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 for Art, Drama, or Music.

Note: Courses marked with an asterisk ("") have EDSL 350 "Essentials of English Grammar" as a prerequisite.

EDKP 332	(3)	Physical Education Curriculum and Instruction
EDSL 330*	(3)	L2 Literacy Development
EDSL 447*	(3)	Methods in TESL 1

Kindergarten & Elementary Education - Subject Areas (21 credits)

21 credits selected in consultation with the program adviser as follows:

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

And

9 credits, 3 credits from each of 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 Art History (ARTH) courses.

EDEA 204	(3)	Drawing
EDEA 205	(3)	Painting 2

EDEA 241	(3)	BasicArt Media for Classroom
EDEA 296	(3)	Basic Design
EDEA 304	(3)	Painting 3
		Painting 4

ENGL 349	(3)	English Literature and Folklore 1
ENGL 378	(3)	Media and Culture
ENGL 386	(3)	Fans, Celebrities, Audiences
ENGL 388	(3)	Studies in Popular Culture
LING 200	(3)	Introduction to the Study of Language
LING 201	(3)	Introduction to Linguistics

Ethics and Religious Culture

Students may select up to 12 credits from this list. Students may also choose other Religious Studies (RELG) courses with the permission of the program adviser.

Note: Courses marked with an asterisk ("") may be used as Ethics and Religious Culture courses or as Social Studies.

EDER 207	(3)	'Who is Christ?'
EDER 209	(3)	Search for Authenticity
EDER 252	(3)	Understanding and Teaching Jewish Life
EDER 290	(3)	Guide to Reading the Bible
EDER 309	(3)	The Religious Quest
EDER 394	(3)	Philosophy of God
EDER 395	(3)	Moral Values and Human Action
EDER 461	(3)	Society and Change
EDER 473	(3)	Living with Insight
EDER 494	(3)	Ethics in Practice
JWST 211	(3)	Jewish Studies 1: Biblical Period
JWST 240*	(3)	The Holocaust
PHIL 200	(3)	Introduction to Philosophy 1
PHIL 230	(3)	Introduction to Moral Philosophy 1
PHIL 237	(3)	Contemporary Moral Issues
RELG 203	(3)	Bible and Western Culture
RELG 204	(3)	Judaism, Christianity and Islam
RELG 207	(3)	The Study of World Religions 1
RELG 252	(3)	Hinduism and Buddhism
RELG 253	(3)	Religions of East Asia
RELG 256	(3)	Women in Judaism and Islam
RELG 270	(3)	Religious Ethics and the Environment
RELG 271	(3)	Sexual Ethics
WMST 200*	(3)	Introduction to Women's Studies

French

Students may choose up to 12 credits of French as a Second Language (FRSL) courses and/or French (FREN) courses.

Mathematics

Students may choose up to 12 credits of Mathematics (MATH) courses at the 200 level or higher.

Note: Students admitted with CEGEP mathematics (or equivalent) may not take MATH 111 for credit. MATH 111 is a recommended course for freshman students.

MATH 111	(3)	Mathematics for Education Students

Music

Students may choose up to 12 credits from this list. Students may also select a Music course with the MUCT, MUHL, MUIT, or MUCT subject codes. With the permission of the program advisor, students without a formal music background may choose courses with the MUAR subject code.

Note: Courses marked with a single asterisk ("") require permission from the Schulich School of Music to register.

Note: Courses marked with two asterisks ("") require a placement test.

EDEA 314	(3)	Instruments in the Classroom
EDEA 341	(3)	Listening for Learning
EDEA 352	(3)	Music Listening in Education
EDEA 362	(3)	Movement, Music and Communication
MUJZ 160*	(3)	Jazz Materials 1
MUJZ 161*	(3)	Jazz Materials 2
MUTH 110**	(3)	Melody and Counterpoint
MUTH 111**	(3)	Elementary Harmony and Analysis

Natural Sciences

Students may choose up to 12 credits from this list.

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

Physical Education

Students may take 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 205	(3)	Structural Anatomy
EDKP 206	(3)	Biomechanics of Human Movement

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 those 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/edu-dise/students/undergraduate/new/#KE.

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 Language Requirement
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 405	(3)	Fourth Year Professional Seminar (K/Elem)
EDEE 223	(3)	Language Arts
EDEE 230	(3)	Elementary School Mathematics
EDEE 250	(2)	The Kindergarten Classroom
EDEE 270	(3)	Elementary School Science
EDEE 275	(2)	Science Teaching
EDEE 280	(3)	Geography, History and Citizenship Education
EDEE 282	(2)	Teaching Social Sciences
EDEE 291	(3)	Cultural Values and Socialization
EDEE 325	(3)	Children's Literature
EDEE 332	(3)	Teaching Mathematics 1
EDEE 342	(3)	Intermediate Inuktitut/Amerindian Language
EDEE 344	(3)	Advanced Inuktitut/Amerindian Language
EDEE 353	(3)	Teaching and Learning in the Elementary Classroom
EDEE 355	(3)	Classroom-based Education
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
EDPI 309	(3)	Exceptional Students
EDPI 341	(3)	Instruction in Inclusive Schools
EDSL 247	(3)	Second Language Education in Aboriginal Communities
EDSL 305	(3)	L2 Learning: Classroom Settings
EDSL 447	(3)	Methods in TESL 1

RELG 207	(3)	The Study of World Religions 1

Complementary Courses (12 credits)

12 credits of courses selected as described below

Language - Complementary Component

6 credits from the following language courses chosen according to language group and sequence:

Algonquin

EDEC 234	(3)	Algonquin Second Language 2
EDEE 293	(3)	Algonquin Second Language 1
EDEE 294	(3)	Algonquin Language 1
EDEE 295	(3)	Algonquin Language 2

Cree

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

Inuktitut

EDEC 403	(3)	The Dialects of Inuktitut
EDEE 249	(3)	Inuktitut Orthography and Grammar

Mi'kmaq

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

Mohawk

EDEC 236	(3)	Mohawk Second Language 2
EDEE 296	(3)	Mohawk Second Language 1
EDEE 297	(3)	Mohawk Language 1
EDEE 298	(3)	Mohawk Language 2

Media, Technology, Computers and Education - Complementary Component

3 credits from:

EDEC 262	(3)	Media, Technology and Education
EDPT 341	(3)	Instructional Programming 1
EDPT 420	(3)	Media Literacy for Education

Education - Complementary Component

3 credits from:

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

10.22 Bachelor of Education (B.Ed.) - Kindergarten and Elementary Jewish Studies (126 credits)

Bachelor of Education (B.Ed.) - Kindergarten and Elementary Jewish Studies program requires 126 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 126-credit program) for a total of 156 credits.

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

The Jewish Studies option requires an additional 6 credits of courses and is addressed to students enrolled in the Kindergarten and Elementary program who wish to teach Jewish studies as well as general studies. Students are encouraged to acquire a strong background in Bible, the Jewish holidays, and Jewish history prior to registering in the option. Students lacking the ability to teach in Hebrew should consider spending a semester at an Israeli university or seek other avenues to improve their language skills.

Please note that graduates of teacher education programs are recommended by this Faculty 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 those areas that are not normally taken as teachable subject area courses within B.Ed. programs (e.g. Sociology, Psychology, Political Science, etc.). Students should also investigate the possibility of taking one of the First Year Seminar courses offered by the Faculty of Arts or the Faculty of Science.

In addition, in consultation with the program advisor, students may select courses from the recommended course list 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 ANTH (Anthropology), ENGL (English), GEOG (Geography), HIST (History), MUAR (Music - Arts Faculty), POLI (Political Science), PSYC (Psychology); RELG (Religious Studies), and SOCI (Sociology). For 200-level courses, information about any required prerequisites is found in the Minerva Class Schedule by "clicking on" the course CRN for registration. Check prerequisites before registering.

EAPR 250	(3)	Research Essay & Rhetoric
EDEE 325	(3)	Children's Literature
EDEM 220	(3)	Contemporary Issues in Education
EDES 366	(3)	Literature for Young Adults
FRSL 101D1	(3)	Beginners' French
FRSL 101D2	(3)	Beginners' French
FRSL 207D1	(3)	Elementary French 01
FRSL 207D2	(3)	Elementary French 01
FRSL 211D1	(3)	Oral and Written French 1
FRSL 211D2	(3)	Oral and Written French 1
MATH 111	(3)	Mathematics for Education Students
RELG 207	(3)	The Study of World Religions 1

Required Courses (90 credits)

EDEC 201	(1)	First Year Professional Seminar
EDEC 203	(3)	Communication in Education
EDEC 215	(0)	English Language Requirement
EDEC 247	(3)	Policy Issues in Quebec Education

EDEC 253	(1)	Second Professional Seminar (Kindergarten/Elementary)
EDEC 405	(3)	Fourth Year Professional Seminar (K/Elem)
EDEE 223	(3)	Language Arts
EDEE 230	(3)	Elementary School Mathematics
EDEE 250	(2)	The Kindergarten Classroom
EDEE 270	(3)	Elementary School Science
EDEE 275	(2)	Science Teaching
EDEE 280	(3)	Geography, History and Citizenship Education
EDEE 282	(2)	Teaching Social Sciences

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

Kindergarten and Elementary Jewish Studies - Subject Area - Group 1 (12 credits)

In consultation with the Jewish Studies option program advisor, students select 12 credits from the course sets below with no more than one 3-credit course from each set.

One of:

JWST 345	(3)	Introduction to Rabbinic Literature
RELG 306	(3)	Rabbinic Judaism

One of:

JWST 314	(3)	Denominations in North American Judaism
SOCI 327	(3)	Jews in North America

One of:

JWST 365	(3)	Modern Jewish Ideologies
JWST 366	(3)	History of Zionism

One of:

POLI 347	(3)	Arab-Israel Con ict, Crisis, Peace
POLI 437	(3)	Politics in Israel

One of:

HIST 207	(3)	Jewish History: 400 B.C.E. to 1000
JWST 216	(3)	Jewish Studies 2: 400 B.C.E. - 1000

One of:

HIST 219	(3)	Jewish History: 1000 - 2000
JWST 217	(3)	Jewish Studies 3: 1000 - 2000

One of:

JWST 367	(3)	Studies in Hebrew Language and Literature

(3)

Note: Only one of the three courses identified with an asterisk ("") may be selected.

JWST 327	(3)	A Book of the Bible
JWST 328	(3)	A Book of the Bible
JWST 329	(3)	A Book of the Bible
JWST 330	(3)	A Book of the Bible
JWST 331*	(3)	Bible Interpretation/Medieval Ashkenaz
JWST 332*	(3)	Bible Interpretation/Sefardic Tradition
JWST 510*	(3)	Jewish Bible Interpretation 1

Kindergarten & Elementary Education - Subject Areas (6 credits)

6 credits of teachable subject area courses:

3 credits from two of the following elementary school curriculum course lists: Arts, English, Ethics and Religious Culture, French, Mathematics, Music, Natural Sciences, Physical Education, and Social Studies.

Art

EDEA 204	(3)	Drawing
EDEA 205	(3)	Painting 2
EDEA 241	(3)	BasicArt 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 andArt for the Classroom
EDEA 496	(3)	Sculpture 1
EDEA 497	(3)	Sculpture 2

English

*Note: Starting with the 2009-10 academic year, EDEE 325 Children's Literature is a required course for the Kindergarten and Elementary Education program and is included in the "Required Courses" list. Students admitted to the program in prior years may select this course as a teachable subject course for Engl

CLAS 203	(3)	Greek Mythology
COMS 200	(3)	History of Communication
COMS 210	(3)	Introduction to Communication Studies
COMS 300	(3)	Media and Modernity in the 20th Century
COMS 310	(3)	Media and Feminist Studies
COMS 320	(3)	Media and Empire
COMS 330	(3)	Media in Cultural Life
EDEC 308	(3)	Learning toWrite Fiction
EDEC 309	(3)	Learning toWrite Poetry
EDEE 325*	(3)	Children's Literature
EDES 366	(3)	Literature forYoungAdults
EDSL 350	(3)	Essentials of English Grammar
ENGL 200	(3)	Survey of English Literature 1
ENGL 201	(3)	Survey of English Literature 2
ENGL 204	(3)	English Literature and the Bible

ENGL 215	(3)	Introduction to Shakespeare
ENGL 225	(3)	American Literature 1
ENGL 226	(3)	American Literature 2
ENGL 227	(3)	American Literature 3
ENGL 228	(3)	Canadian Literature 1
ENGL 229	(3)	Canadian Literature 2
ENGL 230	(3)	Introduction to Theatre Studies
ENGL 237	(3)	Introduction to Study of a Literary or Film
ENGL 275	(3)	Introduction to Cultural Studies
	is	Methods of Cultural Analysis

RELG 253	(3)	Religions of East Asia
RELG 256	(3)	Women in Judaism and Islam
RELG 270	(3)	Religious Ethics and the Environment
RELG 271	(3)	Sexual Ethics
WMST 200*	(3)	Introduction to Women's Studies

French

Students may choose 3 credits of French as a Second Language (FRSL) courses and/or French (FREN) courses.

Mathematics

Students may choose 3 credits of Mathematics (MATH) courses at the 200-level or higher.

Note: Students admitted with CEGEP mathematics (or equivalent) may not take MATH 111 for credit. MATH 111 is a recommended course for freshman students.

MATH 111	(3)	Mathematics for Education Students

Music

Students may choose 3 credits from this list. Students may also select a Music course with the MUCT, MUHL, MUIT, or MUCT subject codes.

With the permission of the program advisor, students without a formal music background may choose courses with the MUAR subject code.

Note: Courses marked with a single asterisk ("") require permission from the Schulich School of Music to register.

Note: Courses marked with two asterisks ("") require a placement test.

EDEA 314	(3)	Instruments in the Classroom
EDEA 341	(3)	Listening for Learning
EDEA 352	(3)	Music Listening in Education
EDEA 362	(3)	Movement, Music and Communication
MUJZ 160*	(3)	Jazz Materials 1
MUJZ 161*	(3)	Jazz Materials 2
MUTH 110**	(3)	Melody and Counterpoint
MUTH 111**	(3)	Elementary Harmony and Analysis

Natural Sciences

ATOC 181	(3)	Introduction to Atmospheric Science
ATOC 182	(3)	Introduction to Oceanic Sciences
ATOC 184	(3)	Science of Storms
ATOC 185	(3)	Natural Disasters
BIOL 115	(3)	Essential Biology
CHEM 180	(3)	World of Chemistry: Environment
CHEM 181	(3)	World of Chemistry: Food
CHEM 182	(3)	World of Chemistry: Technology
CHEM 183	(3)	World of Chemistry: Drugs
EDEE 473	(3)	Ecological Studies
EDEE 474	(3)	Problems of the Environment
EPSC 180	(3)	The Terrestrial Planets
EPSC 181	(3)	Environmental Geology

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

Physical Education

Students may take 3 credits of Physical Education (EDKP) courses from the list with the permission of the Department of Kinesiology and Physical Education.

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

EDKP 204	(3)	Health Education
EDKP 205	(3)	Structural Anatomy
EDKP 206	(3)	Biomechanics of Human Movement
EDKP 224	(3)	Foundations of Movement Education
EDKP 261	(3)	Motor Development
EDKP 292*	(3)	Nutrition and Wellness
EDKP 391	(3)	Physiology in Sport and Exercise
EDKP 495	(3)	Scientific Principles of Training
EDKP 498	(3)	Sport Psychology

Social Studies

Students may take 3 credits from this list below which represents a balance of History (HIST), Geography (GEOG) and Citizenship courses offered by several departments. Anthropology (ANTH) and Sociology (SOCI) courses not on the list below may not be counted as Social Studies courses in the program requirements. Students may take them as electives only.

Students may select other History courses as follows:

Any 3 credits in European History

Any 3 credits in Asian, African or Latin American History

Any 3 credits in any topic or field of history

Note: Courses marked with an asterisk ("") may be used as Ethics and Religious Culture or Social Studies courses.

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

Electives (3 credits)

3 credits

Bachelor of Education Kindergarten and Elementary Program (Jewish Studies Option)

EDFM 260	(1)	Stage de familiarisation
EDPI 309	(3)	Exceptional Students
EDSL 260	(1)	Séminaire professionnel-2e
EDSL 301	(3)	Étude de la langue
EDSL 444	(3)	Laboratoire d'enseignement en français langue seconde
EDUM 215	(0)	Test de certification en français écrit
EDUM 245	(3)	Français écrit pour futurs enseignants
EDUM 262	(3)	Système éducatif - profession enseignante
EDUM 263	(3)	Apprentissage et développement
EDUM 264	(3)	Phonétique et phonologie
EDUM 265	(3)	Acquisition-apprentissage-langues secondes
EDUM 266	(3)	Mathématiques au primaire
EDUM 267	(3)	Didactique des arts plastiques 1
EDUM 268	(3)	Intégration des TIC
EDUM 269	(3)	École et environnement social
EDUM 270	(3)	Morphologie et syntaxe
EDUM 271	(3)	Lexique et sémantique
EDUM 341	(3)	Littératie et Littérature Jeunesse en FLS
EDUM 392	(3)	Gestion de classe en langues secondes
EDUM 393	(3)	Adolescent et expérience scolaire
EDUM 402	(3)	Évaluation en français langue seconde
EDUM 491	(3)	Didactique des mathématiques en langues secondes
EDUM 492	(3)	Didactique des sciences-technologies
FREN 251	(3)	Littérature française depuis 1800
FREN 252	(3)	Littérature québécoise

9 credits to increase the student's proficiency level in the teaching of French, the following courses (or equivalent courses if not available):

FREN 239	(3)	Stylistique comparée
FREN 245	(3)	Grammaire avancée
FREN 334	(3)	Analyse des textes littéraires

Complementary Courses (40 credits)

40 credits selected as described below

3 credits from:

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

8 credits, one of two sets of courses:

Either set:

EDFE 362	(7)	Stage d'enseignement en Français langue seconde
EDSL 320	(1)	Séminaire 3 professionnel

Or set:

EDFM 361	(7)	Stage d'enseignement 1
EDUM 394	(1)	Séminaire de stage-3e

11 credits, one of two sets of courses:

Either set:

EDFE 461	(9)	Stage d'enseignement - immersion
		Séminaire 4 professionnel

10.25 Bachelor of Education (B.Ed.) - Teaching English as a Second Language - TESL Elementary and Secondary (121 credits)

The Bachelor of Education (B.Ed.) - Teaching English as a Second Language - TESL Elementary and Secondary program requires 121 credits and leads to teacher certification. Students who have not completed Quebec CEGEP, French Baccalaureate, International Baccalaureate, or at least one year of university

EDFE 359	(8)	Third Field Experience (TESL)
EDFE 459	(7)	Fourth Field Experience (TESL)
EDPE 300	(3)	Educational Psychology
EDPI 309	(3)	Exceptional Students
EDSL 210	(1)	First Professional Seminar
EDSL 215	(3)	Effective Communication in French
EDSL 255D1	(1)	Second Professional Seminar
EDSL 255D2	(1)	Second Professional Seminar
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
EDSL 330	(3)	L2 Literacy Development
EDSL 334	(3)	Teaching Oral Skills in ESL
EDSL 350	(3)	Essentials of English Grammar
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 (39 credits)

39 credits selected as described below

3 credits from:

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

3 credits from:

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

3 credits from:

EDEC 262	(3)	Media, Technology and Education
EDPT 200	(3)	Integrating Educational Technology in Classrooms
EDPT 204	(3)	Educational Media 1
EDPT 341	(3)	Instructional Programming 1
EDPT 420	(3)	Media Literacy for Education

3 credits from:

EDEE 325	(3)	Children's Literature
EDES 366	(3)	Literature for Young Adults

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

3 credits from:

Quebec graduates of this program receive Ministère de l'Éducation, du Loisir et du Sport (MELS) certification to teach at the elementary school level in First Nations and Inuit schools.

On completion of the Certificate requirements, trainees may apply for admission to the Bachelor of Education for Teachers program with up to 30 credits advanced standing. Certain non-credit academic upgrading courses may be required of B.Ed. applicants.

Time Limit

The time limit for completion of the 60-credit Certificate in Education for First Nations and Inuit is 12 Years. The University reserves the right to request that a student retake a course or courses after a 5-year period if it is felt that too long a break has occurred in the ongoing nature of the training.

The following program requirements are for all students except those specializing in teaching physical education.

Required Courses (30 credits)

EDEC 203	(3)	Communication in Education
EDEC 260	(3)	Philosophical Foundations
EDEE 325	(3)	Children's Literature
EDEM 202	(3)	Native Family Dynamics & Supporting Institutions
EDPE 300	(3)	Educational Psychology
EDPI 341	(3)	Instruction in Inclusive Schools

12 credits of practicum courses:

EDEC 201	(1)	First Year Professional Seminar
EDEC 253	(1)	Second Professional Seminar (Kindergarten/Elementary)
EDFE 200	(2)	First Field Experience (K/Elem & Secondary)
EDFE 256	(3)	Second Field Experience (Kindergarten/Elementary)
EDFE 300	(5)	Aboriginal Education Field Experience

Complementary Courses

30 credits selected as described below

6 credits from the following language courses according to language group and fluency

Algonquin

EDEC 234	(3)	Algonquin Second Language 2
EDEE 293	(3)	Algonquin Second Language 1
EDEE 294	(3)	Algonquin Language 1
EDEE 295	(3)	Algonquin Language 2

Cree

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

Inuktitut

EDEE 249	(3)	Inuktitut Orthography and Grammar
EDEE 342	(3)	Intermediate Inuktitut/Amerindian Language

Mi'kmaq

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

Mohawk

EDEC 236	(3)	Mohawk Second Language 2
EDEE 296	(3)	Mohawk Second Language 1
EDEE 297	(3)	Mohawk Language 1
EDEE 298	(3)	Mohawk Language 2

Cultural Skills and Language Arts

6 credits:

Cultural Skills ts:

EDEE 261	(3)	Reading Clinic - Early Childhood
EDEE 292	(3)	Using Instructional Resources
EDEE 340	(3)	Special Topics: Cultural Issues
EDEE 342	(3)	Intermediate Inuktitut/Amerindian Language
EDEE 344	(3)	Advanced Inuktitut/Amerindian Language
EDEE 345	(3)	Literature and Creative Writing 1
EDEE 346	(3)	Literature and Creative Writing 2
EDEE 444	(3)	First Nations and Inuit Curriculum
EDKP 204	(3)	Health Education
EDKP 224	(3)	Foundations of Movement Education
EDKP 342	(3)	Physical Education Methods
EDKP 494	(3)	Physical Education Curriculum Development
EDPE 377	(3)	Adolescence and Education
EDSL 247	(3)	Second Language Education in Aboriginal Communities

30 credits selected as described below

6 credits from the following language courses according to language group and fluency

Algonquin

EDEC 234	(3)	Algonquin Second Language 2
EDEE 293	(3)	Algonquin Second Language 1
EDEE 294	(3)	Algonquin Language 1
EDEE 295	(3)	Algonquin Language 2

Cree

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

Inuktitut

EDEE 249	(3)	Inuktitut Orthography and Grammar
EDEE 342	(3)	Intermediate Inuktitut/Amerindian Language

Mi'kmaq

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

Mohawk

EDEC 236	(3)	Mohawk Second Language 2
EDEE 296	(3)	Mohawk Second Language 1
EDEE 297	(3)	Mohawk Language 1
EDEE 298	(3)	Mohawk Language 2

9 credits:

EDKP 241	(3)	Aboriginal Physical Activities
EDKP 342	(3)	Physical Education Methods
EDKP 494	(3)	Physical Education Curriculum Development

6 credits from the following pth)

List A

9 credits from different subject areas from course List A and course List B with priority given to courses from List A.

EDEC 262	(3)	Media, Technology and Education
EDEE 230	(3)	Elementary School Mathematics
EDEE 241	(3)	Teaching Language Arts
EDEE 250	(2)	The Kindergarten Classroom
EDEE 270	(3)	Elementary School Science
EDEE 275	(2)	Science Teaching

11.3 Admission to the Certificate in Education for First Nations and Inuit and to the Certificate in Education for First Nations and Inuit Physical Education

An applicant will normally be employed as a teacher or as a classroom assistant, have a valid teaching authorization from the appropriate teaching authority or a community education committee, be recommended by the school principal and an officer of the education authority, have been 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 College Studies. The right of final decision for acceptance of candidates rests with McGill.

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

11.4 Certificate in Aboriginal Literacy Education (30 credits)

This 30-credit program is designed for Algonquin, Cree, Inuit, Mi'kmaq and Kanienk

EDEE 240	(3)	Use and Adaptation of Curricula
EDEE 243	(3)	Reading Methods in Inuktitut/Cree
EDEE 247	(6)	Individualized Instruction
EDEE 248	(3)	Reading and Writing Inuktitut/Cree
EDEE 345	(3)	Literature and Creative Writing 1
EDEE 346	(3)	Literature and Creative Writing 2
EDES 365	(3)	Experiences in Communications
EDPE 304	(3)	Measurement and Evaluation

Electives (6 credits)

6 credits of suitable courses approved by the Director of Programs in First Nations and Inuit Education.

11.4.1 Admission to the Certificate in Aboriginal Literacy Education

Students admitted to this program will be recommended by their communities. If the program is used for professional development, students will be Indigenous teachers employed in local schools. They must be mature students, or hold a Secondary V diploma or equivalent. The right of final decision for acceptance of candidates rests with McGill.

11.5 Certificate in Middle School Education in Aboriginal Communities (30 credits)

This 30-credit program focuses on developing the particular skills and abilities required of the Indigenous teacher in the middle school of his/her community. It does not lead to provincial certification. Rather, it prepares Indigenous teachers, who are bilingual or have some knowledge of their Indigenous language and who have already established themselves as teachers, to teach students at this level in ways that are developmentally and culturally appropriate. The program focuses on the particular psychological, emotional and social needs of Aboriginal adolescents and the teacher's role in facilitating the transition between elementary and high school.

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

Required Courses (15 credits)

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

3 credits from the list below:

EDEC 302	(3)	Language and Learning - Curriculum
EDSL 305	(3)	L2 Learning: Classroom Settings

Major Subject Area (6 credits)

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

Minor Subject Area (6 credits)

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

Education Courses (3 credits)

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

EDEA 241	(3)	BasicArt Media for Classroom
EDEC 220	(3)	Curriculum Development
EDEC 243	(3)	Teaching: Multigrade Classrooms
EDEE 291	(3)	CulturalValues and Socialization
EDEE 444	(3)	First Nations and Inuit Curriculum
EDKP 241	(3)	Aboriginal PhysicalActivities
EDPT 200	(3)	Integrating EducationalTechnology in Classrooms
		Second Langiecond Langiesel

11.6.1 Admission to the [redacted] First Nations and Inuit Educ[redacted]

Students admitted to th[redacted]e recommended by their co[redacted] mature students (21 years of age), o[redacted]
diploma or equ[redacted]valent. St[redacted]eak, read, and write [redacted]uently [redacted]nstruction as agreed upon between the uni[redacted]chool Boar
or Education Centre.[redacted]F [redacted]ts, students must [redacted]ve experi[redacted]educational or community [redacted]ganization. The right
for acceptance of cand[redacted] McGill.

11.7 Bachelor of Edu[redacted]tified Teachers - E[redacted]ucation - Native and Northern (90 credits)

This 90-credit program [redacted]eachers who are alre[redacted]ion
de[redacted]gree. Normally, a mini[redacted]ts must be tak[redacted]in the p[redacted]
may be transferred fro[redacted]ing to the Certi cates
Literac[redacted]y Education tak[redacted]n[redacted]dit may also be trans[redacted]
completed before the B[redacted]ompleting the Bachel[redacted]or Ce[redacted]tificate[redacted]ers follo[redacted]wing the Certi cate in Education for First Nations
and Inuit will ha[redacted]ve accu[redacted]f 120 credits, 60 for t[redacted] a further 60 for the B.Ed.

The Certi cate in [redacted]Aborigi[redacted]cation, the Certi cate i[redacted]Education [redacted]Aboriginal Communities, or the Certi cate in First Nations
and Inuit Educational L[redacted]e[redacted]tak[redacted]concurrently and [redacted] the Bachelor of Education for Certificate Teachers if the required B.Ed.
pro le is ful lled.

This program does not [redacted]erti cation.

Complementary Cou[redacted]

Candidates enrolled in [redacted]mplete 90 credits within the[redacted]

Academic Concentra[redacted])

30 credits in [redacted]e (5) sub[redacted]to elementary education in a 12-9-3-[redacted]ond subject, and
3 credits in each of thre[redacted]areas), or 30 academic credits in three [redacted]

yanguage

EDEE 291	(3)	CulturalValues and Socialization
EDEE 444	(3)	First Nations and Inuit Curriculum
EDSL 247	(3)	Second Language Education in Aboriginal Communities

Complementary Courses (12 credits)

12 credits selected as described below

Language

3 credits of an introductory language course in the language of the community

Education

9 credits of Education courses selected from the list below or any other suitable course approved by the Director of Programs in First Nations and Inuit Education.

EDEA 242	(3)	Cultural Skills 1
EDEC 200	(3)	Introduction to Inuit Studies
EDEE 247	(6)	Individualized Instruction
		Cooperative 70.52 725.5nn36)

Complementary Courses (9 credits)

9 credits selected from the list below or any other suitable course approved by the Program Coordinator

Registration in EDEM 202, EDKP 204 or any other courses offered by departments other than Educational and Counselling Psychology, or by other programs of this Department is dependent on availability (e.g., through a concurrently offered program) or through an arrangement made with that department or program. The Program Coordinator will attempt to make these contacts where required.

EDEM 202	(3)	Native Family Dynamics & Supporting Institutions
EDKP 204	(3)	Health Education
EDPC 206	(3)	Group Leadership Skills
EDPC 207	(3)	Aboriginal Adolescent Development
EDPC 211	(3)	Special Topics in Student Personnel Services
EDPI 211	(3)	Social and Emotional Development

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

Speak, read, and write fluently the language of instruction as agreed upon between First Nations and Inuit Education and the contracting school board

Hold a student adviser position in an Aboriginal community. This may be a new appointment concurrent with registration in the program. The position must be sufficient to meet the practicum requirements of the program.

Be recommended by the local education authority

Be at least 21 years of age (except for special permission). By this means students will qualify for a 242.689 D.92nMa353)

The Ph

EDKP 391	(3)	Physiology in Sport and Exercise
EDKP 394	(3)	Historical Perspectives
EDKP 396	(3)	Adapted Physical Activity
EDKP 442	(3)	Physical Education Pedagogy
		Research Methods

CHEM 212	(4)	Introductory Organic Chemistry 1
EDKP 206	(3)	Biomechanics of Human Movement
EDKP 215	(0)	Standard First Aid/Cardio-Pulmonary Resuscitation Level C
EDKP 261	(3)	Motor Development
EDKP 292	(3)	Nutrition and Wellness
EDKP 330	(3)	Physical Activity and Health
EDKP 394	(3)	Historical Perspectives
EDKP 395	(3)	Exercise Physiology
EDKP 396	(3)	Adapted Physical Activity
EDKP 405	(3)	Sport in Society
EDKP 443	(3)	Research Methods
EDKP 447	(3)	Motor Control
EDKP 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

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 (67 credits)

In addition to the 58 credits of required courses for the major, honours students complete EDKP 453 "Research Practicum in Kinesiology" and EDKP 499 "Undergraduate Honours Research Project."

ANAT 315	(4)	Anatomy/Limbs and Back
ANAT 316	(2)	Human Visceral Anatomy
BIOL 200	(3)	Molecular Biology
CHEM 212	(4)	Introductory Organic Chemistry 1
EDKP 206	(3)	Biomechanics of Human Movement
EDKP 215	(0)	Standard First Aid/Cardio-Pulmonary Resuscitation Level C
EDKP 261	(3)	Motor Development
EDKP 292	(3)	Nutrition and Wellness
EDKP 330	(3)	Physical Activity and Health
EDKP 394	(3)	Historical Perspectives
EDKP 395	(3)	Exercise Physiology
EDKP 396	(3)	Adapted Physical Activity
EDKP 405	(3)	Sport in Society
EDKP 443	(3)	Research Methods
EDKP 447	(3)	Motor Control
EDKP 453	(3)	Research Practicum in Kinesiology
EDKP 485	(3)	Exercise Pathophysiology 1
EDKP 495	(3)	Scientific Principles of Training
EDKP 498	(3)	Sport Psychology
EDKP 499	(6)	Undergraduate Honours Research Project
PHGY 209	(3)	Mammalian Physiology 1
PHGY 210	(3)	Mammalian Physiology 2

Complementary Courses (15 credits)

15 credits selected as described below

3 credits of statistics from:

BIOL 373	(3)	Biometry
MATH 203	(3)	Principles of Statistics 1

PSYC 204	(3)	Introduction to Psychological Statistics
SOCI 350	(3)	Statistics in Social Research

12 credits from:

EDKP 444	(3)	Ergonomics
EDKP 445	(3)	Exercise Metabolism
EDKP 446	(3)	PhysicalActivity andAgeing
EDKP 448	(3)	Exercise and Health Psychology
		Exercise P

Professors

J. Andrew Large; B.Sc.(Lond.), Ph.D.(Glas.), Dip.Lib.(Lond.) (CN-Pratt-Grinstad Professor of Information Studies)

Peter F. McNally; B.A.(W. Ont.), B.L.S., M.L.S., M.A.(McG.)

Associate Professors

Jamshid Beheshti; B.A.(S. Fraser), M.L.S., Ph.D.(Ont.)

France Bouthillier; B.Ed.(UQAM), M.B.S.I.(Montr.), Ph.D.(Tor.)

Kim Dalkir; B.Sc., M.B.A.(McG.), Ph.D.(C'dia)

Eun Park; B.A.(Pusan), M.L.I.S.(Ill.), M.B.A.(Pitt.), Ph.D.(Calif.-LA)

Assistant Professors

Joan Bartlett; B.Sc., M.L.S., Ph.D.(Tor.)

Catherine Guastavino; B.Sc.(McG.), M.Sc.(Aix-Marseille), Ph.D.(IRCAM-Paris)

Elaine Ménard; B.A., M.A., M.S.I.(Montr.)

Adjunct Professor

Joy Bennett; B.A., M.A.(C'dia), M.L.I.S.(McG.), Ph.D.(C'dia)

Associate Members

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