



477th REPORT OF THE ACADEMIC POLICY COMMITTEE TO SENATE

On the APC meeting held on December 8th 2016

I. TO BE APPROVED BY SENATE

(A) NEW TEACHING PROGRAMS REQUIRING SENATE APPROVAL

School of Continuing Studies

Professional Development Certificate in Parliamentary Governance (13 CEUs) - Appendix A

APC approved electronically, on December 16th, 2016, a proposal from the School of Continuing Studies to create a Professional Development Certificate in Parliamentary Governance. The McGill School of Continuing Studies has been selected by the Commonwealth Parliamentary Association (CPA) to design and deliver this customized program aimed at newly elected members of Parliament, as there are currently no formal university level program for newly elected MPs. Thirty participants per academic year will be sponsored by the CPA to complete this Professional Development Certificate which focuses on the fundamental of Parliamentary governance.

APC therefore recommends that Senate approve the following resolution:

Be it resolved that Senate approve the proposed Professional Development Certificate in Parliamentary Governance.

Faculty of Engineering

B.Eng.; Major in Mining Engineering (144-145 cr.) – Appendix B

APC approved electronically, on December 16th, 2016, a proposal from the Faculty of Engineering to create a new B.Eng.; Major in Mining Engineering. This new major, which does not include the co-op work terms, will give students of the Mining Engineering program more flexibility, allowing them to graduate with less than three work terms. Enrolment in the current program will not change, as there will be no direct entry to this major, only transfers from students who have already been admitted to the Co-op Mining Engineering Program and are not completing the work terms. This restructuring will have to be reported to the MEES for information.

APC therefore recommends that Senate approve the following resolution:

Be it resolved that Senate approve the proposed B.Eng.; Major in Mining Engineering.

(B) **ACADEMIC PERFORMANCE ISSUES / POLICIES / GOVERNANCE/AWARDS** – none

(C) **CREATION OF NEW UNITS / NAME CHANGES / REPORTING CHANGES** – none

(D) **CHANGES IN DEGREE DESIGNATION** – none

(E) **INTER-UNIVERSITY PARTNERSHIPS** – none

(F) **OTHER** – none

II. **TO BE ENDORSED BY SENATE / PRESENTED TO SENATE FOR DISCUSSION** – *none*

III. **APPROVED BY APC IN THE NAME OF SENATE**

(A) **DEFINITIONS** – *none*

(B) **STUDENT EXCHANGE PARTNERSHIPS / CONTRACTS / INTERUNIVERSITY PARTNERSHIPS** - *none*

(C) **OTHER** - *none*

IV. **FOR THE INFORMATION OF SENATE**

A) **ACADEMIC UNIT REVIEWS** – *none*

B) **APPROVAL OF COURSES AND TEACHING PROGRAMS**

1. Programs

a) APC Approvals (new options/concentrations and major revisions to existing programs)

i. New Programs - *none*

ii. Major Revisions of Existing Programs- *none*

b) APC Subcommittee on Courses and Teaching Programs (SCTP) Approvals
(Summary Reports: <http://www.mcgill.ca/sctp/documents/>)

i. Moderate and Minor Program Revisions

Approved by SCTP on 10th November 2016, reported to APC on 8th December 2016

Faculty of Education

B.Ed.; Kindergarten and Elementary Education; First Nations and Inuit Studies (120 cr.)

B.Ed.; Teaching English as a Second Language – TESL Elementary and Secondary (120 cr.)

B.Ed.; Teaching English as a Second Language – TESL Elementary and Secondary; Teaching Greek Language and Culture (120 cr.)

Faculty of Engineering

B.Eng.; Co-op in Mining Engineering (150-151 cr.)

Graduate and Postdoctoral Studies/ Faculty of Agricultural and Environmental Sciences

M.Sc.; Parasitology (45 cr.)

Ph.D.; Parasitology (0 cr.)

Graduate and Postdoctoral Studies/ Faculty of Engineering

M.Eng.; Civil Engineering; Non-Thesis (45 cr.)

ii. Program Retirements - *none*

2. Courses

a) New Courses

Reported as having been approved by SCTP on 20th October 2016: 12

Faculty of Arts: 3

Faculty of Dentistry: 1

Faculty of Engineering: 5

Faculty of Medicine: 3

Reported as having been approved by SCTP on 10th November 2016: 10

Faculty of Agricultural and Environmental Sciences: 1

School of Continuing Studies: 4

Faculty of Engineering: 3

Faculty of Medicine: 2

b) Course Revisions

Reported as having been approved by SCTP on 20th October 2016: 24

Faculty of Engineering: 3

Faculty of Medicine: 21

Reported as having been approved by SCTP on 10th November 2016: 57

Faculty of Agricultural and Environmental Sciences: 3

Faculty of Education: 27

Faculty of Engineering: 27

c) Course Retirements

Reported as having been approved by SCTP on 20th October 2016: 2

Faculty of Engineering: 1

Faculty of Medicine: 1

Reported as having been approved by SCTP on 10th November 2016: 2

Faculty of Agricultural and Environmental Sciences: 2

(B) OTHER - none



McGill

APC APPENDIX A 16-APC-12-23 PROJ. 16.29
**New Program/Major or Minor/Concentration
 Proposal Form**

(07/2004)

<p>1.0 Degree Title Please specify the two degrees for concurrent degree programs</p> <p>Professional Development Certificate</p>	<p>2.0 Administering Faculty/Unit</p> <p>School of Continuing Studies</p>
<p>1.1 Major (Legacy= Subject)(30-char. max.)</p> <p>Parliamentary Governance</p>	<p>Offering Faculty/Department</p> <p>Career and Professional Development</p>
<p>1.2 Concentration (Legacy = Concentration/Option) If applicable to Majors only (30 char. max.)</p>	<p>3.0 Effective Term of Implementation (Ex. Sept. 2004 = 200409) Term</p> <p>201701</p>
<p>1.3 Minor (with Concentration, if Applicable) (30 char. max.)</p>	

As a result of a tender, McGill SCS has been selected by the Commonwealth Parliamentary Association (CPA) to design and deliver a customized Professional Development Certificate in Parliamentary Governance for newly elected Members of Parliament in collaboration with and funded by the CPA. Currently, there are no formal university level programs in the world for newly-elected MPs. Many parliaments and some NGOs hold short post-election induction courses, but these focus mostly on administrative issues rather than on the fundamentals of parliamentary governance. CPA will be sponsoring 30 participants per academic year to attend this program.

Admission Requirements: Applicants must hold a minimum of a Bachelor's degree in any discipline or have a min. 2 years of relevant professional experience and a letter of recommendation from their Parliament.

The CPD Department reviews, revises or retires any existing programs that are obsolete or have low enrolment.

5.0 Program Information

Please check appropriate box(es)

5.1 Program Type

- Bachelor's Program
 Master's
 M.Sc. (Applied) Program
 Dual Degree/Concurrent Program
 Certificate
 Diploma
 Graduate Certificate
 Graduate Diploma
 Ph.D. Program
 Doctorate Program
 (Other than Ph.D.)
 Private Program
 Off-Campus Program
 Distance Education Program
 (By Correspondence)
 Other (Please specify)

**Professional Development
 Certificate**

5.2 Category

- Faculty Program (FP)
 Major
 Joint Major
 Major Concentration (CON)
 Minor
 Minor Concentration (CON)
 Honours (HON)
 Joint Honours Component (HC)
 Internship/Co-op
 Thesis (T)
 Non-Thesis (N)
 Other

Please specify

5.3 Level

- Undergraduate
 Dentistry/Law/Medicine
 Continuing Ed (Non-Credit)
 Collegial
 Masters & Grad Dips & Certs
 Doctorate
 Post-Graduate Medicine/Dentistry
 Graduate Qualifying
 Postdoctoral Fellows

6.0 Total Credits/CEUs

13 CEUs

7.0 Consultation with

Related Units Yes No

Financial Consult Yes No

Attach list of consultations.

8.0 Program Description (Maximum 150 words)

This professional development certificate program is designed for newly elected Members of Parliament. The program focuses on the fundamentals of parliamentary governance, including an overview of the three arms of government, different parliamentary models in the Commonwealth, the core functions of parliament (legislation, oversight and representation), executive-legislative relations, the role of an MP, as well as relationship between parliament and the media. Combining theory and practice, the program uses a blended learning methodology of face-to-face and online courses.

This program is offered in English and must be completed within 2 years.

9.0 List of proposed program for the New Program/Major or Minor/Concentration.

If new concentration (option) of existing Major/Minor (program), please attach a program layout (list of all courses) of existing Major/Minor.





Proposed program (list courses as follows: Subj Code/Crse Num, Title, Credit weight under the headings of: Required Courses, Complementary Courses, Elective Courses)

Professional Development Certificate in Parliamentary Governance (13 CEUs)

Required Courses (13 CEUs)

CBUS 250	Introduction to Commonwealth Parliamentary Governance	(3 CEUs)
CBUS 251	Contemporary Issues in Parliamentary Governance	(4 CEUs)
CBUS 252	Advanced Commonwealth Parliamentary Governance	(3 CEUs)
CBUS 253	Parliamentary Communications	(3 CEUs)

10.0 Approvals

Routing Sequence	Name	Signature	Date
Department	Inna Popova, Director, Non-Credit Programs		05 OCT 2016
Curric/Acad Committee	Carmen Sicilia, Associate Dean		Oct, 11, 2016
Faculty 1	Judith Potter, Dean of Continuing Studies		11/10/2016
Faculty 2	Kamal Salmasi, Area Coord. Mgm. IB. Entrepr.		Oct 6, 2016
Faculty 3			
SCTP	SCTP		Nov. 10, 2016
GS	APPROVED		
APPC		APC approved	Dec 16, 2016
Senate			

Submitted by

Name: Lucia Brunetti

Phone: 514-398-6152

Email: Lucia.brunetti@mcaill.ca

Submission Date: 13 September 2016

To be completed by ARR:

CIP Code



(2013)

<p>1.0 Degree Title Please specify the two degrees for concurrent degree programs</p> <p>B.Eng.</p>	<p>2.0 Administering Faculty/Unit</p> <p>Faculty of Engineering</p>
<p>1.1 Major (Legacy= Subject)(30-char. max.)</p> <p>Mining Engineering</p>	<p>Offering Faculty/Department</p> <p>Engineering / Mining and Materials Engineering</p>
<p>1.2 Concentration (Legacy = Concentration/Option) If applicable to Majors only (30 char. max.)</p>	<p>3.0 Effective Term of Implementation (Ex. Sept. 2004 = 200409) Term</p> <p>201705</p>
<p>1.3 Minor (with Concentration, if Applicable) (30 char. max.)</p>	

4.0 Rationale and Admission Requirements for New Proposal

In order to allow greater flexibility in the mining engineering program by allowing students to graduate with less than 3 work terms, it is proposed to create a major program that does not include the co-op work terms. Note that there will be no direct admission to this program; students will be admitted to the Co-op in Mining Engineering and will transfer to the Major if they are not completing the work terms. Therefore, there will be no difference in enrolment (the enrolment in the existing Co-op program will be divided between the revised Co-op program and the new Major program once the latter comes into effect). Please refer to the B.Eng.; Co-op in Mining Engineering revision, effective 201705, to compare the program listings

5.0 Program Information
Please check appropriate box(es)

<p>5.1 Program Type</p> <p><input checked="" type="checkbox"/> Bachelor's Program</p> <p>Master's</p> <p>M.Sc. (Applied) Program</p> <p>Dual Degree/Concurrent Program</p> <p>Certificate</p> <p>Diploma</p> <p>Graduate Certificate</p> <p>Graduate Diploma</p> <p>Ph.D. Program</p> <p>Doctorate Program (Other than Ph.D.)</p> <p>Private Program</p> <p>Off-Campus Program</p> <p>Distance Education Program (By Correspondence)</p> <p>Other (Please specify)</p>	<p>5.2 Category</p> <p>Faculty Program (FP)</p> <p><input checked="" type="checkbox"/> Major</p> <p>Joint Major</p> <p>Major Concentration (CON)</p> <p>Minor</p> <p>Minor Concentration (CON)</p> <p>Honours (HON)</p> <p>Joint Honours Component (HC)</p> <p>Internship/Co-op</p> <p>Thesis (T)</p> <p>Non-Thesis (N)</p> <p>Other</p> <p>Please specify</p>	<p>5.3 Level</p> <p><input checked="" type="checkbox"/> Undergraduate</p> <p>Dentistry/Law/Medicine</p> <p>Continuing Studies (Non-Credit)</p> <p>Collegial</p> <p>Masters & Grad Dips & Certs</p> <p>Doctorate</p> <p>Post-Graduate Medicine/Dentistry</p> <p>Graduate Qualifying</p> <p>Postdoctoral Fellows</p> <p>5.4 FQRSC (Research) Indicator (for GPS) Yes No</p>
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<p>6.0 Total Credits</p> <p>144-145</p>	<p>7.0 Consultation with Related Units <i>N/A</i> Yes <input type="checkbox"/> No</p> <p>Financial Consult Yes <input type="checkbox"/> No</p> <p>Attach list of consultations.</p>
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8.0 Program Description (Maximum 150 words)

The Department offers a Major in Mining Engineering leading to an accredited B.Eng. degree in Mining Engineering. The program is offered in one of two streams: English Stream for non-CEGEP students and Bilingual Stream (six courses in French) for CEGEP students, in collaboration with the mining engineering program at *École Polytechnique* in Montreal. Students in the Bilingual Stream are required to take six mining courses, designated by subject code MPMC, at *École Polytechnique* in the latter part of the program. In addition to regular courses and laboratories, the curriculum of the Major in Mining Engineering programs include seminars, colloquia, and student projects reinforced by field trips to industrial operations.
[See additional text regarding program entry in Box 9.0.]

9.0 List of proposed program for the New Program/Major or Minor/Concentration.

If new concentration (option) of existing Major/Minor (program), please attach a program layout (list of all courses) of existing Major/Minor.

Proposed program (list courses as follows: Subj Code/Crse Num, Title, Credit weight under the headings of: Required Courses, Complementary Courses, Elective Courses)

B.Eng.; Major in Mining Engineering (144 credits)

Program credit weight: 144-145 credits

Program credit weight for CEGEP students: 115-116 credits

Entry into the Major in Mining Engineering

Students in Mining can be admitted only into the B.Eng.; Co-op in Mining Engineering. There is no direct entry to the Major in Mining Engineering (which does not include the work terms required for the Co-op program).

Students may enter the Major in Mining Engineering if they wish at any point in time during their study.

To transfer into the Major program, students must obtain approval from the department adviser and submit a Request for Course Authorization form to the McGill Engineering Student Centre (Frank Dawson Adams, Room 22).

Required Year 0 (Freshman) Courses

29 credits

Generally, students admitted to Engineering from Quebec CEGEPs are granted transfer credit for these Year 0 (Freshman) courses and enter a 115- to 116-credit program.

CHEM 110 General Chemistry 1 (4)
CHEM 120 General Chemistry 2 (4)
MATH 133 Linear Algebra and Geometry (3)
MATH 140 Calculus 1 (3)
MATH 141 Calculus 2 (4)
PHYS 131 Mechanics and Waves (4)
PHYS 142 Electromagnetism and Optics (4)

AND 3 credits selected from the approved list of courses in Humanities and Social Sciences, Management Studies and Law, listed below under Complementary Studies (Group B).

Note: FACC 100 (Introduction to the Engineering Profession) must be taken during the first year of study.

Required Non-Departmental Courses (37 credits)

CCOM 206 Communication in Engineering (3)
CIVE 205 Statics (3)
CIVE 207 Solid Mechanics (4)
COMP 208 Computers in Engineering (3)
ECSE 461 Electric Machinery (3)
EPSC 221 General Geology (3)
EPSC 225 Properties of Materials (1)
FACC 100 Introduction to the Engineering Profession* (1)
FACC 300 Engineering Economy (3)
FACC 400 Engineering Professional Practice (1)
MATH 262 Intermediate Calculus (3)
MATH 263 Ordinary Differential Equations for Engineers (3)
MATH 264 Advanced Calculus for Engineers (3)
MECH 289 Design Graphics (3)

*Note: FACC 100 (Introduction to the Engineering Profession) must be taken during the first year of study.

9.0 List of proposed program for the New Program/Major or Minor/Concentration (cont.)

Required Mining Engineering Courses (44 credits)

MIME 200 Introduction to the Minerals Industry (3)
MIME 203 Mine Surveying (2)
MIME 209 Mathematical Applications (3)
MIME 260 Materials Science and Engineering (3)
MIME 322 Rock Fragmentation (3)
MIME 323 Rock and Soil Characterization (3)
MIME 325 Mineral Industry Economics (3)
MIME 333 Materials Handling (3)
MIME 340 Applied Fluid Dynamics (3)
MIME 341 Introduction to Mineral Processing (3)
MIME 419 Surface Mining (3)
MIME 422 Mine Ventilation (3)
MIME 426 Mine Design and Feasibility Study Project (6)
MPMC 328 Environnement et gestion des rejets miniers* (3)
*Mining courses taken at École Polytechnique

Complementary Courses (34-35 credits)

14 credits from either Stream A or Stream B

Stream A – CEGEP Students

CEGEP students must take the following courses:
MPMC 321 Mécanique des roches et contrôle des terrains* (3)
MPMC 326 Recherche opérationnelle I* (3)
MPMC 329 Géologie minière* (2)
MPMC 330 Géotechnique minière* (3)
MPMC 421 Exploitation en souterrain* (3)
* Mining courses taken at École Polytechnique

Stream B – Non-CEGEP Students

Non-CEGEP students must take the following courses:
CIVE 208 Civil Engineering System Analysis (3)
MIME 329 Mining Geology (2)
MIME 330 Mining Geotechnics (3)
MIME 421 Rock Mechanics (3)
MIME 424 Underground Mining Methods (3)

Technical Complementaries (14-15 credits)

3-6 credits from the following - these courses are offered in alternate years; students are required to take one of these two courses or they may take both:

MIME 413 Strategic Mine Planning With Uncertainty (3)
MIME 425 Applied Stochastic Orebody Modelling (3)

8-12 credits can be chosen from the following or from any other approved technical courses in Engineering, Management or Science.

Note: Not all courses are given annually; see the "Courses" section of this publication to know if a course is offered.

CFIN 410 Investment and Portfolio Management (3)
CIVE 416 Geotechnical Engineering (3)
CIVE 421 Municipal Systems (3)
CIVE 514 Structural Mechanics (3)
CIVE 584 Groundwater Engineering (3)
EPSC 320 Elementary Earth Physics (3)
EPSC 549 Hydrogeology (3)
FINE 482 International Finance 1 (3)
MIME 290 Industrial Work Period 1 (2)
MIME 320 Extraction of Energy Resources (3)
MIME 442 Analysis, Modelling and Optimization in Mineral Processing (3)
MIME 484 Mining Project (3)
MIME 520 Stability of Rock Slopes (3)
MIME 527 Selected Topics in Mineral Resource Engineering (3)

9.0 List of proposed program for the New Program/Major or Minor/Concentration (cont.)

MIME 544 Analysis: Mineral Processing Systems 1 (3)
MIME 545 Analysis: Mineral Processing Systems 2 (3)
MIME 588 Reliability Analysis of Mining Systems (3)
MPMC 320 CAO et informatique pour les mines* (3)
*Mining courses taken at École Polytechnique.

Complementary Studies

6 credits

Group A – Impact of Technology on Society

3 credits from the following:

ANTH 212 Anthropology of Development (3)
BTEC 502 Biotechnology Ethics and Society (3)
CIVE 469 Infrastructure and Society (3)
ECON 225 Economics of the Environment (3)
ECON 347 Economics of Climate Change (3)
ENVR 201 Society, Environment and Sustainability (3)
GEOG 200 Geographical Perspectives: World Environmental Problems (3)
GEOG 203 Environmental Systems (3)
GEOG 205 Global Change: Past, Present and Future (3)
GEOG 302 Environmental Management 1 (3)
MECH 526 Manufacturing and the Environment (3)
MGPO 440 Strategies for Sustainability* (3)
MIME 308 Social Impact of Technology (3)
PHIL 343 Biomedical Ethics (3)
RELG 270 Religious Ethics and the Environment (3)
SOCI 235 Technology and Society (3)
SOCI 312 Sociology of Work and Industry (3)
URBP 201 Planning the 21st Century City (3)

* Note: Management courses have limited enrolment and registration dates. See Important Dates at <http://www.mcgill.ca/importantdates>.

Group B – Humanities and Social Sciences, Management Studies and Law

3 credits at the 200-level or higher from the following departments:

Anthropology (ANTH)
Economics (any 200- or 300-level course excluding ECON 227 and ECON 337)
History (HIST)
Philosophy (excluding PHIL 210 and PHIL 310)
Political Science (POLI)
Psychology (excluding PSYC 204 and PSYC 305, but including PSYC 100)
Religious Studies (RELG)
School of Social Work (SWRK)
Sociology (excluding SOCI 350)

OR 3 credits from the following:

ARCH 528 History of Housing (3)
BUSA 465 Technological Entrepreneurship* (3)
ENVR 203 Knowledge, Ethics and Environment (3)
ENVR 400 Environmental Thought (3)
FACC 220 Law for Architects and Engineers (3)
FACC 500 Technology Business Plan Design (3)
FACC 501 Technology Business Plan Project (3)
INDR 294 Introduction to Labour-Management Relations* (3)
MATH 338 History and Philosophy of Mathematics (3)
MGCR 222 Introduction to Organizational Behaviour* (3)
MGCR 352 Marketing Management 1* (3)
ORGB 321 Leadership* (3)
ORGB 423 Human Resources Management* (3)

9.0 List of proposed program for the New Program/Major or Minor/Concentration (cont.)

* Note: Management courses have limited enrolment and registration dates. See Important Dates at <http://www.mcgill.ca/importantdates>.

Language Courses

If you are not proficient in a certain language, no more than 3 credits will be given for one 6-credit course at the 100 level or higher in that language. A maximum of 3 credits of language courses will be counted toward the Complementary Studies requirement.

However, 3-6 credits may be given for language courses at the 200 level or higher that have a sufficient cultural component. These courses must be approved by the Engineering Student Centre (Frank Dawson Adams Building, Room 22).

EXISTING B.Eng.; Mining Engineering CO-OP (150-151 credits)

Program credit weight for Quebec CEGEP students: 121-122 credits

Required Year 0 (Freshman) Courses (29 credits)

Generally, students admitted to Engineering from Quebec CEGEPs are granted transfer credit for these Year 0 (Freshman) courses and enter a 121- to 122-credit program.

For information on transfer credit for French Baccalaureate, International Baccalaureate exams, Advanced Placement exams, Advanced Levels, and Science Placement Exams, see <http://www.mcgill.ca/engineering/current-students/undergraduate/new-stud...> and select your term of admission.

CHEM 110 General Chemistry 1 (4 credits)
CHEM 120 General Chemistry 2 (4 credits)
MATH 133 Linear Algebra and Geometry (3 credits)
MATH 140 Calculus 1 (3 credits)
MATH 141 Calculus 2 (4 credits)
PHYS 131 Mechanics and Waves (4 credits)
PHYS 142 Electromagnetism and Optics (4 credits)

AND 3 credits selected from the approved list of courses in Humanities and Social Sciences, Management Studies, and Law, listed below under Complementary Studies (Group B)

Note: FACC 100 (Introduction to the Engineering Profession) must be taken during the first year of study.

Required Non-Departmental Courses (34 credits)

CCOM 206 Communication in Engineering (3 credits)
CIVE 205 Statics (3 credits)
CIVE 207 Solid Mechanics (4 credits)
COMP 208 Computers in Engineering (3 credits)
EPSC 221 General Geology (3 credits)
EPSC 225 Properties of Minerals (1 credit)
FACC 100 Introduction to the Engineering Profession (1 credit) *
FACC 300 Engineering Economy (3 credits)
FACC 400 Engineering Professional Practice (1 credit)
MATH 262 Intermediate Calculus (3 credits)
MATH 263 Ordinary Differential Equations for Engineers (3 credits)
MATH 264 Advanced Calculus for Engineers (3 credits)
MECH 289 Design Graphics (3 credits)

* Note: FACC 100 (Introduction to the Engineering Profession) must be taken during the first year of study.

Required Mining Engineering Courses (53 credits)

ECSE 461 Electric Machinery (3 credits)
MIME 200 Introduction to the Minerals Industry (3 credits)
MIME 203 Mine Surveying (2 credits)
MIME 209 Mathematical Applications (3 credits)
MIME 260 Materials Science and Engineering (3 credits)
MIME 290 Industrial Work Period 1 (2 credits)
MIME 291 Industrial Work Period 2 (2 credits)
MIME 322 Rock Fragmentation (3 credits)
MIME 323 Rock and Soil Mass Characterization (3 credits)
MIME 325 Mineral Industry Economics (3 credits)
MIME 333 Materials Handling (3 credits)
MIME 340 Applied Fluid Dynamics (3 credits)
MIME 341 Introduction to Mineral Processing (3 credits)
MIME 392 Industrial Work Period 3 (2 credits)
MIME 419 Surface Mining (3 credits)

EXISTING B.Eng.; Mining Engineering CO-OP (150-151 credits)

Required Mining Engineering Courses (53 credits) [continued]

MIME 422 Mine Ventilation (3 credits)

MIME 426 Mine Design and Prefeasibility Study (6 credits)

MPMC 328 Environnement et gestion des rejets miniers (3 credits) *

* Mining courses taken at École Polytechnique

Complementary Courses (34-35 credits)

14 credits from either Stream A or Stream B

Stream A - CEGEP Students

CEGEP students must take the following courses:

MPMC 321 Mécanique des roches et contrôle des terrains (3 credits) *

MPMC 326 Recherche opérationnelle I (3 credits) *

MPMC 329 Géologie minière (2 credits) *

MPMC 330 Géotechnique minière (3 credits) *

MPMC 421 Exploitation en souterrain (3 credits) *

* Mining courses taken at École Polytechnique

Stream B - Non-CEGEP Students

Non-CEGEP students must take the following courses:

CIVE 208 Civil Engineering System Analysis (3 credits)

MIME 329 Mining Geology (2 credits)

MIME 330 Mining Geotechnics (3 credits)

MIME 421 Rock Mechanics (3 credits)

MIME 424 Underground Mining Methods (3 credits)

Technical Complementaries (14-15 credits)

3-6 credits from the following - these courses are offered in alternate years; students are required to take one of these two courses or they may take both:

MIME 413 Strategic Mine Planning With Uncertainty (3 credits)

MIME 425 Applied Stochastic Orebody Modelling (3 credits)

8-12 credits can be chosen from the following or from any other approved technical courses in Engineering, Management, or Science (including mathematics courses).

Note: Not all courses are given annually; see the "Courses" section of this eCalendar to know if a course is offered.

CFIN 410 Investment and Portfolio Management (3 credits)

CIVE 416 Geotechnical Engineering (3 credits)

CIVE 421 Municipal Systems (3 credits)

CIVE 514 Structural Mechanics (3 credits)

CIVE 584 Groundwater Engineering (3 credits)

EPSC 320 Elementary Earth Physics (3 credits)

EPSC 549 Hydrogeology (3 credits)

FINE 482 International Finance 1 (3 credits)

MIME 320 Extraction of Energy Resources (3 credits)

MIME 442 Analysis, Modelling and Optimization in Mineral Processing (3 credits)

MIME 484 Mining Project (3 credits)

MIME 494 Industrial Work Period 4 (2 credits)

MIME 520 Stability of Rock Slopes (3 credits)

MIME 527 Selected Topics in Mineral Resource Engineering (3 credits)

MIME 544 Analysis: Mineral Processing Systems 1 (3 credits)

MIME 545 Analysis: Mineral Processing Systems 2 (3 credits)

MIME 588 Reliability Analysis of Mining Systems (3 credits)

MPMC 320 CAO et informatique pour les mines (3 credits) *

* Mining course taken at École Polytechnique

EXISTING B.Eng.; Mining Engineering CO-OP (150-151 credits) [continued]

Complementary Studies (6 credits)

Group A - Impact of Technology on Society

3 credits from the following:

- ANTH 212 Anthropology of Development (3 credits)
- BTEC 502 Biotechnology Ethics and Society (3 credits)
- CIVE 469 Infrastructure and Society (3 credits)
- ECON 225 Economics of the Environment (3 credits)
- ECON 347 Economics of Climate Change (3 credits)
- ENVR 201 Society, Environment and Sustainability (3 credits)
- GEOG 200 Geographical Perspectives: World Environmental Problems (3 credits)
- GEOG 203 Environmental Systems (3 credits)
- GEOG 205 Global Change: Past, Present and Future (3 credits)
- GEOG 302 Environmental Management 1 (3 credits)
- MECH 526 Manufacturing and the Environment (3 credits)
- MGPO 440 Strategies for Sustainability (3 credits) *
- MIME 308 Social Impact of Technology (3 credits)
- PHIL 343 Biomedical Ethics (3 credits)
- RELG 270 Religious Ethics and the Environment (3 credits)
- SOCI 235 Technology and Society (3 credits)
- SOCI 312 Sociology of Work and Industry (3 credits)
- URBP 201 Planning the 21st Century City (3 credits)

* Note: Management courses have limited enrolment and registration dates. See Important Dates at <http://www.mcgill.ca/importantdates>.

Group B - Humanities and Social Sciences, Management Studies, and Law

3 credits at the 200 level or higher from the following departments:

- Anthropology (ANTH)
- Economics (any 200- or 300-level course excluding ECON 227 and ECON 337)
- History (HIST)
- Philosophy (excluding PHIL 210 and PHIL 310)
- Political Science (POLI)
- Psychology (excluding PSYC 204 and PSYC 305, but including PSYC 100)
- Religious Studies (RELG)
- School of Social Work (SWRK)
- Sociology (excluding SOCI 350)

OR 3 credits from the following:

- ARCH 528 History of Housing (3 credits)
- BUSA 465 Technological Entrepreneurship (3 credits) *
- ENVR 203 Knowledge, Ethics and Environment (3 credits)
- ENVR 400 Environmental Thought (3 credits)
- FACC 220 Law for Architects and Engineers (3 credits)
- FACC 500 Technology Business Plan Design (3 credits)
- FACC 501 Technology Business Plan Project (3 credits)
- INDR 294 Introduction to Labour-Management Relations (3 credits) *
- MATH 338 History and Philosophy of Mathematics (3 credits)
- MGCR 222 Introduction to Organizational Behaviour (3 credits) *
- MGCR 352 Principles of Marketing (3 credits) *
- ORGB 321 Leadership (3 credits) *
- ORGB 423 Human Resources Management (3 credits) *

* Note: Management courses have limited enrolment and registration dates. See Important Dates at <http://www.mcgill.ca/importantdates>




EXISTING B.Eng.; Mining Engineering CO-OP (150-151 credits) [continued]

Language Courses

If you are not proficient in a certain language, no more than 3 credits will be given for 6 credits of courses at the 100 level or higher in that language. A maximum of 3 credits of language courses will be counted toward the Complementary Studies requirement.

However, 3-6 credits may be given for language courses at the 200 level or higher that have a sufficient cultural component. These courses must be approved by the McGill Engineering Student Centre (Student Affairs Office) (Frank Dawson Adams Building, Room 22).

10.0 Approvals

Routing Sequence	Name	Signature	Date
Department	George Demopoulos		Oct 25, 2016
Curric/Acad Committee	Laurent Mvdarski		Oct 26, 2016
Faculty 1	Laurent Mvdarski		Oct 26, 2016
Faculty 2			
Faculty 3			
CGPS			
SCTP	SCTP APPROVED		Nov. 10, 2016
APC			Dec 16, 2016
Senate			

Submitted by

Name: Mustafa Kumral

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Email: Mustafa.kumral@mcaill.ca

Submission Date: September 28, 2016

To be completed by ARR:

CIP Code