## Mining Engineering Co-op Curriculum - Fall 2017

### 1st Term (Fall)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Prerequisites/Co-requisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCOM 206</td>
<td>Communication in Engineering</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>EPSC 221</td>
<td>General Geology</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>MATH 262</td>
<td>Intermediate Calculus</td>
<td>3</td>
<td>P - MATH 133 or equivalent, MATH 141 or equivalent</td>
</tr>
<tr>
<td>MATH 263</td>
<td>Ordinary Differential Equations for Engineers</td>
<td>3</td>
<td>C - MATH 262</td>
</tr>
<tr>
<td>MECH 289</td>
<td>Design Graphics</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>MIME 200</td>
<td>Introduction to the Minerals Industry</td>
<td>3</td>
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### 2nd Term (Winter)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Prerequisites/Co-requisites</th>
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</thead>
<tbody>
<tr>
<td>CIVE 205</td>
<td>Statics</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>COMP 208</td>
<td>Computers in Engineering</td>
<td>3</td>
<td>P - differential and integral calculus [MATH 140 and MATH 141] / C - linear algebra [MATH 133]</td>
</tr>
<tr>
<td>EPSC 225</td>
<td>Properties of Minerals</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>FACC 100</td>
<td>Introduction to the Engineering Profession</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>FACC 300</td>
<td>Engineering Economy</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>MATH 264</td>
<td>Advanced Calculus for Engineers</td>
<td>3</td>
<td>P - MATH 262 / C - MATH 263</td>
</tr>
<tr>
<td>MIME 209</td>
<td>Mathematical Applications</td>
<td>3</td>
<td>-</td>
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### 3rd Term (Summer)

<table>
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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Prerequisites/Co-requisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIME 203</td>
<td>Mine Surveying</td>
<td>2</td>
<td>P - MECH 289</td>
</tr>
<tr>
<td>MIME 290</td>
<td>Industrial Work Period 1</td>
<td>2</td>
<td>P - MIME 200 and MIME 203</td>
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### 4th Term (Fall)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Prerequisites/Co-requisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIVE 207</td>
<td>Solid Mechanics</td>
<td>4</td>
<td>P - CIVE 205 or MECH 210</td>
</tr>
<tr>
<td>FACC 250</td>
<td>Responsibilities of the Professional Engineer</td>
<td>0</td>
<td>P - FACC 100 or BREE 250</td>
</tr>
<tr>
<td>MIME 260</td>
<td>Materials Science and Engineering</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>MIME 340</td>
<td>Applied Fluid Dynamics</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>MIME xxx</td>
<td>Technical Complementary</td>
<td>3</td>
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### 5th Term (Winter)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Prerequisites/Co-requisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIME 322</td>
<td>Rock Fragmentation</td>
<td>3</td>
<td>P - MIME 200</td>
</tr>
<tr>
<td>MIME 323</td>
<td>Rock and Soil Mass Characterization</td>
<td>3</td>
<td>P - EPSC 221, MIME 200</td>
</tr>
<tr>
<td>MIME 325</td>
<td>Mineral Industry Economics</td>
<td>3</td>
<td>P - FACC 300</td>
</tr>
<tr>
<td>MIME 333</td>
<td>Materials Handling</td>
<td>3</td>
<td>P - MIME 200</td>
</tr>
<tr>
<td>MIME 341</td>
<td>Introduction to Mineral Processing</td>
<td>3</td>
<td>P - MIME 200 or MIME 250</td>
</tr>
<tr>
<td>CS</td>
<td>Complementary Studies Group A (Impact)*</td>
<td>3</td>
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### 6th Term (Summer)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Prerequisites/Co-requisites</th>
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<tbody>
<tr>
<td>MIME 291</td>
<td>Industrial Work Period 2</td>
<td>2</td>
<td>P - MIME 290</td>
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### 7th Term (Fall)

<table>
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<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Prerequisites/Co-requisites</th>
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</thead>
<tbody>
<tr>
<td>MIME 413</td>
<td>Strategic Mine Planning with Uncertainty (or Technical Complementary)**</td>
<td>3</td>
<td>P - MIME 325, MIME 419, MPMC 326, and MPMC 329</td>
</tr>
<tr>
<td>MPMC 321</td>
<td>Mécanique des roches et contrôle des terrains</td>
<td>3</td>
<td>P - MIME 323</td>
</tr>
<tr>
<td>MPMC 326</td>
<td>Recherche opérationnelle I</td>
<td>3</td>
<td>P - MATH 262</td>
</tr>
<tr>
<td>MPMC 329</td>
<td>Géologie minière</td>
<td>2</td>
<td>P - EPSC 221, MIME 200, MIME 209</td>
</tr>
<tr>
<td>MPMC 330</td>
<td>Géotechnique minière</td>
<td>3</td>
<td>P - MIME 323</td>
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### 8th Term (Winter)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Prerequisites/Co-requisites</th>
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<tbody>
<tr>
<td>MIME 392</td>
<td>Industrial Work Period 3</td>
<td>2</td>
<td>P - MIME 291, 75 program credits</td>
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</table>

### 9th Term (Summer)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Prerequisites/Co-requisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIME 419</td>
<td>Surface Mining</td>
<td>3</td>
<td>P - MIME 322, MIME 325, MIME 333</td>
</tr>
<tr>
<td>MIME 422</td>
<td>Mine Ventilation</td>
<td>3</td>
<td>P - MIME 340</td>
</tr>
<tr>
<td>MPMC 328</td>
<td>Environnement et gestion des rejets miniers</td>
<td>3</td>
<td>P - MIME 200, MIME 291</td>
</tr>
<tr>
<td>MPMC 421</td>
<td>Exploitation en souterrain</td>
<td>3</td>
<td>P - MIME 322, MIME 325, MIME 333</td>
</tr>
<tr>
<td>MIME xxx</td>
<td>Technical Complementary</td>
<td>3</td>
<td>-</td>
</tr>
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### 10th Term (Fall)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Prerequisites/Co-requisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECSE 461</td>
<td>Electric Machinery</td>
<td>3</td>
<td>-</td>
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<tr>
<td>FACC 400</td>
<td>Engineering Professional Practice</td>
<td>1</td>
<td>P - FACC 100, FACC 250***, and 60 program credits</td>
</tr>
<tr>
<td>MPMC 425</td>
<td>Applied Stochastic Orebody Modelling (or Technical Complementary)**</td>
<td>3</td>
<td>P - MPMC 326, MPMC 329</td>
</tr>
<tr>
<td>MIME 426</td>
<td>Mine Design and Prefeasibility Study</td>
<td>6</td>
<td>P - MIME 333, MIME 325, MIME 421 or MPMC 321</td>
</tr>
<tr>
<td>MIME xxx</td>
<td>Technical Complementary</td>
<td>3</td>
<td>-</td>
</tr>
</tbody>
</table>

Technical Complementary courses are selected from an approved list given on the next page.

*The Complementary Studies (CS) courses are Impact of Technology courses (Group A) and Humanities & Social Sciences, Management Studies and Law courses (Group B). Students must take one course (3 credits) from Group A and one course (3 credits) from Group B. The curriculum above includes suggested terms during which these courses can be taken. These must be chosen from an approved list of courses/departments, found in the program list under "Complementary Studies" in the Faculty of Engineering Undergraduate section of the Programs, Courses and University Regulations publication (www.mcgill.ca/study) (see your program listing in the "Browse Academic Units & Programs" section).

**Students must take at least one of MIME 413 or MIME 425 (offered in alternate years) or they may take both courses. Either course (or a technical complementary course) can be taken in the 7th and 10th term.

***FACC 250 is not yet indicated as a prerequisite in the eCalendar course information (www.mcgill.ca/study) but it will be before FACC 400 is taken.

Students are responsible for satisfying pre-/co-requisites and verifying with their department that they are meeting the requirements of their program.
Courses selected from those listed below or any other approved technical course(s) in Engineering, Management or Science.
Note: not all courses are given annually; verification with course instructor is advised.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites/Co-requisites</th>
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<tbody>
<tr>
<td>CFIN 410</td>
<td>Investment and Portfolio Management</td>
<td>3</td>
<td>P - MGCR 211, MGCR 341</td>
</tr>
<tr>
<td>CIVE 416</td>
<td>Geotechnical Engineering</td>
<td>3</td>
<td>P - CIVE 311 or instructor permission</td>
</tr>
<tr>
<td>CIVE 421</td>
<td>Municipal Systems</td>
<td>3</td>
<td>P - CIVE 327</td>
</tr>
<tr>
<td>CIVE 514</td>
<td>Structural Mechanics</td>
<td>3</td>
<td>P - CIVE 207 and instructor permission</td>
</tr>
<tr>
<td>CIVE 584</td>
<td>Groundwater Engineering</td>
<td>3</td>
<td>P - CIVE 311 or instructor permission</td>
</tr>
<tr>
<td>EPSC 320</td>
<td>Elementary Earth Physics</td>
<td>3</td>
<td>P - MATH 133, MATH 222/262, or equivalent courses</td>
</tr>
<tr>
<td>EPSC 549</td>
<td>Hydrogeology</td>
<td>3</td>
<td>P - Permission of instructor</td>
</tr>
<tr>
<td>FINE 482</td>
<td>International Finance 1</td>
<td>3</td>
<td>P - MGCR 341</td>
</tr>
<tr>
<td>MIME 320</td>
<td>Extraction of Energy Resources</td>
<td>3</td>
<td>P - CIVE 327</td>
</tr>
<tr>
<td>MIME 442</td>
<td>Analysis, Modelling and Optimization in Mineral Processing</td>
<td>3</td>
<td>P - MIME 341</td>
</tr>
<tr>
<td>MIME 484</td>
<td>Mining Project</td>
<td>3</td>
<td>P - 85 credits completed</td>
</tr>
<tr>
<td>MIME 494</td>
<td>Industrial Work Period 4</td>
<td>3</td>
<td>P - MIME 419, MPMC 328, MPMC 421</td>
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<tr>
<td>MIME 520</td>
<td>Stability of Rock Slopes</td>
<td>3</td>
<td>P - Permission of instructor</td>
</tr>
<tr>
<td>MIME 527</td>
<td>Selected Topics in Mineral Resource Engineering</td>
<td>3</td>
<td>P - 85 credits</td>
</tr>
<tr>
<td>MIME 544</td>
<td>Analysis: Mineral Processing Systems 1</td>
<td>3</td>
<td>P - MIME 341</td>
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<tr>
<td>MIME 545</td>
<td>Analysis: Mineral Processing Systems 2</td>
<td>3</td>
<td>P - MIME 341</td>
</tr>
<tr>
<td>MIME 588</td>
<td>Reliability Analysis of Mining Systems</td>
<td>3</td>
<td>P - Permission of instructor</td>
</tr>
<tr>
<td>MPMC 320</td>
<td>CAO et informatique pour les mines</td>
<td>3</td>
<td></td>
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</table>

Last update: August 10, 2017
For the official program listing, see the Programs, Courses and University Regulations publication (www.mcgill.ca/study).