

Civil Engineering Curriculum - Fall 2015

Non-CEGEP Entry

| 1st Term (Fall) | | 15 credits | Prerequisites/Co-requisites |
|-------------------|---|------------|---------------------------------------|
| CHEM 110 | General Chemistry 1 | 4 | - |
| FACC 100 | Introduction to the Engineering Profession | 1 | - |
| MATH 133 | Linear Algebra and Geometry | 3 | - |
| MATH 140 | Calculus 1 | 3 | - |
| PHYS 131 | Mechanics and Waves | 4 | C - MATH 140 |
| 2nd Term (Winter) | | 18 credits | Prerequisites/Co-requisites |
| CHEM 120 | General Chemistry 2 | 4 | - |
| MATH 141 | Calculus 2 | 4 | P - MATH 140 |
| PHYS 142 | Electromagnetism and Optics | 4 | P - PHYS 131 / C - MATH 141 |
| CS | Complementary Studies Group A (Impact) | 3 | - |
| CS | Complementary Studies Group B (HSSML) - 1 | 3 | - |
| 3rd Term (Fall) | | 18 credits | Prerequisites/Co-requisites |
| CCOM 206 | Communication in Engineering | 3 | - |
| CIVE 205 | Statics | 3 | - |
| CIVE 290 | Thermodynamics and Heat Transfer | 3 | - |
| EPSC 221 | General Geology | 3 | - |
| MATH 262 | Intermediate Calculus | 3 | P - MATH 141, MATH 133 |
| MECH 289 | Design Graphics | 3 | - |
| 4th Term (Winter) | | 17 credits | Prerequisites/Co-requisites |
| CIVE 202 | Construction Materials | 4 | P - CIVE 290 |
| CIVE 206 | Dynamics | 3 | P - CIVE 205 / C - MATH 262, MATH 263 |
| CIVE 207 | Solid Mechanics | 4 | P - CIVE 205 |
| COMP 208 | Computers in Engineering | 3 | P - MATH 140, MATH 141 |
| MATH 263 | Ordinary Differential Equations for Engineers | 3 | C - MATH 262 |
| Summer Term | | 2 credits | Prerequisites/Co-requisites |
| CIVE 210 | Surveying | 2 | P - MECH 289 |
| 5th Term (Fall) | | 18 credits | Prerequisites/Co-requisites |
| CIVE 208 | Civil Engineering System Analysis | 3 | P - COMP 208 / C - MATH 264 |
| CIVE 311 | Geotechnical Mechanics | 4 | P - CIVE 207 |
| CIVE 317 | Structural Engineering 1 | 3 | P - CIVE 202, CIVE 207, MECH 289 |
| FACC 300 | Engineering Economy | 3 | - |
| MATH 264 | Advanced Calculus for Engineers | 3 | P - MATH 262 / C - MATH 263 |
| MECH 261 | Measurement Laboratory | 2 | - |
| 6th Term (Winter) | | 17 credits | Prerequisites/Co-requisites |
| CIVE 225 | Environmental Engineering | 4 | P - CIVE 290 / C - MATH 263 |
| CIVE 302 | Probabilistic Systems | 3 | P - MATH 262, COMP 208 |
| CIVE 318 | Structural Engineering 2 | 3 | P - CIVE 317 |
| CIVE 319 | Transportation Engineering | 3 | P - CIVE 208, COMP 208 / C - CIVE 302 |
| CIVE 327 | Fluid Mechanics and Hydraulics | 4 | P - CIVE 206, MATH 264 |
| 7th Term (Fall) | | 17 credits | Prerequisites/Co-requisites |
| CIVE 320 | Numerical Methods | 4 | P - COMP 208, MATH 264 |
| CIVE 323 | Hydrology and Water Resources | 3 | P - CIVE 302 |
| CIVE 432 | Technical Paper | 1 | P - CCOM 206 or EDEC 206 |
| CIVE xxx | Technical Complementary | 3 | - |
| CIVE xxx | Technical Complementary | 3 | - |
| CS | Complementary Studies Group B (HSSML) - 2 | 3 | - |
| 8th Term (Winter) | | 17 credits | Prerequisites/Co-requisites |
| CIVE 324 | Construction Project Management | 3 | P - FACC 300/MIME 310, CIVE 208 |
| CIVE 418 | Design Project | 4 | - |
| FACC 400 | Engineering Professional Practice | 1 | P - FACC 100, 60 program credits |
| CIVE xxx | Technical Complementary | 3 | - |
| CIVE xxx | Technical Complementary | 3 | - |
| CIVE xxx | Technical Complementary | 3 | - |

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). 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 the Academic Programs section).

Students are responsible for satisfying pre-/co-requisites and verifying with their department that they are meeting the requirements of their program.

| | | Credits | Prerequisites/Co-requisites |
|----------|---|---------|-----------------------------|
| CIVE 416 | Geotechnical Engineering | 3 | P - CIVE 311 |
| CIVE 421 | Municipal Systems | 3 | P - CIVE 327 |
| CIVE 428 | Water Resources and Hydraulic Engineering | 3 | P - CIVE 327 |
| CIVE 430 | Water Treatment and Pollution Control | 3 | P - CIVE 225, CIVE 327 |
| CIVE 440 | Traffic Engineering and Simulation | 3 | P - CIVE 319 |
| CIVE 462 | Design of Steel Structures | 3 | P - CIVE 318 |
| CIVE 463 | Design of Concrete Structures | 3 | P - CIVE 318 |

| | | Credits | Prerequisites/Co-requisites |
|-------------|---|---------|--|
| CIVE 433 | Urban Planning | 3 | - |
| CIVE 446 | Construction Engineering | 3 | P - CIVE 208, FACC 300/MIME 310 |
| CIVE 451 | Geoenvironmental Engineering | 3 | P - CIVE 225, CIVE 311 |
| CIVE 460 | Matrix Structural Analysis | 3 | P - CIVE 206, CIVE 317 |
| CIVE 470 | Undergraduate Research Project | 3 | P - 60 program credits |
| CIVE 512 | Advanced Civil Engineering Materials | 3 | P - CIVE 202 |
| CIVE 514 | Structural Mechanics | 3 | P - CIVE 207 |
| CIVE 520 | Groundwater Hydrology | 3 | P - CIVE 311, CIVE 323 |
| CIVE 521 | Nanomaterials and the Aquatic Environment | 3 | |
| or CHEE 521 | Nanomaterials and the Aquatic Environment | 3 | |
| CIVE 527 | Renovation and Preservation: Infrastructure | 3 | P - CIVE 202, CIVE 318 |
| CIVE 540 | Urban Transportation Planning | 3 | P - CIVE 319 |
| CIVE 542 | Transportation Network Analysis | 3 | P - CIVE 208 |
| CIVE 546 | Selected Topics in Civil Engineering 1 | 3 | P - Permission of instructor |
| CIVE 550 | Water Resources Management | 3 | P - CIVE 323 |
| CIVE 551 | Environmental Transport Processes | 3 | P - CIVE 225 |
| CIVE 555 | Environmental Data Analysis | 3 | P - CIVE 302 |
| CIVE 557 | Microbiology for Environmental Engineering | 3 | P - CIVE 225 or permission of instructor |
| CIVE 558 | Biomolecular Techniques for Environmental Engineering | 3 | P - Permission of instructor |
| CIVE 560 | Transportation Safety and Design | 3 | P - CIVE 319 |

CIVE