

Bachelor of Engineering

MINING

B.ENG.(MINIING)

What is mining engineering?

Mining is the business, science and engineering of creating a profitable mining operation. Mining engineers design, develop and implement the processes and technologies for the economic extraction of minerals from the earth crust in a safe way while minimizing the impact on the environment.

Is this the program for me?

Mining engineers study math, physics, geology, economics, environment and a mix of applied engineering subjects such as materials handling, rock fragmentation, ventilation, mining methods and mineral processing. Through work term employments, and project-oriented courses, mining students develop excellent communication skills by the time they graduate. By working in remote areas, they also develop a great appreciation for the outdoors activities such as fishing and hunting. Mining engineers are creative and problem-solvers since they are often involved in the design of various processes, while adapting to the constraints of the project location.

What kinds of courses do students take?

The first year includes general sciences courses in math, chemistry and physics. Quebec CEGEP students typically receive one-year advanced standing. Students then take required courses in math, geology and mining courses, including mineral economics and a major project. The mandatory co-op program includes three paid work-term sessions with mining/service/mining supplier companies. Two curriculum streams are offered: one for CEGEP

students which is offered jointly with École Polytechnique (6 courses) and another for non-CEGEP students which is offered entirely at McGill.

Why McGill?

The program was established in 1871, making it the oldest mining engineering program in Canada and the second oldest in North America. Students benefit from smaller class sizes as well as peer and global industrial networks. Up to four paid work terms give students an opportunity to gain diverse, practical work experience in the mining sector before graduation.

For further information

Faculty of Engineering
www.mcgill.ca/engineering/

Department of Mining and Materials Engineering
www.mcgill.ca/minmatoperational testing.

Mining Program www.mcgill.ca/mining

How do I apply?

Admissions information:
www.mcgill.ca/mining/undergraduate/prospective



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What can I do when I graduate?

McGill Mining Engineering graduates have always gone to exciting careers in mining operations, mining investment firms, consulting companies, and mining equipment manufacturers. Starting as junior mining/project engineers, graduates have quickly moved up in their careers securing high positions such as chief engineer and mining analyst within a few years from graduation. Recent graduates have found excellent employment opportunities in the oil sands sector (with companies like Suncor and Shell), iron ore mining (Arcelor Mittal and IOC), coal (Teck), gold (Iamgold and GoldCorp) and mining equipment suppliers (Caterpillar and SMS).

- **Caterpillar**, Technical Sales Representative
- **IAMGOLD**, Jr. Mining Engineer
- **Osisko**, Mining Engineer
- **Suncor**, Field Engineer
- **Xstrata**, Process Engineer

Industries

Students gain invaluable experience and industry contacts through the co-op program and are often able to find a job with one of their work-study companies. Most graduates work in the mining industry, but their capacity for responsibility and their management skills mean they often move into larger project management roles. Some graduates eventually become consultants, bringing their expertise to mining operations around the world.

These are some common industries that require mining engineers:

- Mining
- Construction, Building & Design

- Transportation
- Energy and Utilities: Alternative Energy, Hydro, Oil & Gas, Water
- Engineering & Management Consulting
- Financial & Insurance
- Scientific & Technical Services

Useful Resources

- **McGill Engineering Student Affairs Office (SAO)**
Housed in the Engineering Student Centre; Academic Advisors provide assistance and information on program planning and academic success
- **McGill Engineering Career Centre (ECC)**
Resources, information, job postings and links for engineering students
- **myFuture**
Job postings McGill students
- **The Engineering Institute of Canada**
Engineering Career Network
- **Mining Engineering Co-op Program**
Mining Engineering features four co-op work terms. Each four-month work term is a 2-credit course.

Professional Organizations

- **Engineers Canada**
The national organization of the 12 licensing bodies that regulate the practice of engineering in Canada
- **Ordre des ingénieurs du Québec**
The regulating body for Engineers in Quebec
- **Canadian Institute of Mining, Metallurgy and Petroleum (CIM)**
- **Society for Mining, Metallurgy & Exploration**

Student Life

You will have the opportunity to participate in a variety of clubs, activities and student government. Getting involved in a club or other group is a great way to meet people and build your résumé.

- **Engineering Undergraduate Society (EUS)**
www.mcgilleus.ca/
- **Engineers Without Borders – McGill Chapter**
mcgill.ewb.ca/
- **The Canadian Mining Games**
Annual academic and hands-on competition between students from major Mining Engineering programs across Canada
- **Promoting Opportunities for Women in Engineering (POWE)** www.mcgill.ca/engineering/current-students/undergraduate/student-life/powe



Contact Us

McGill Engineering Student Centre (MESC)
Student Affairs Office, Career Centre, Peer Tutoring Services
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Student Affairs Office (SAO):
Telephone: 514-398-7257
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www.mcgill.ca/engineering/current-students/undergraduate/mesc

Engineering Career Centre (ECC):
Telephone: 514-398-8100
Email: careers4engineers@mcgill.ca
www.mcgill.ca/careers4engineers



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