MINING AND MATERIALS ENGINEERING

About Mining and Materials Engineering

Mining Engineering

- Geomechanics
- Mining Environments
- Strategic Mine Planning and Optimization
- Stochastic Modelling
- Operations Research
- Rock Mechanics
- Mine Safety
- Mine Ventilation
- Renewable Energy
- Mineral Economics
- Materials Handling
- Environmental Engineering

Materials Engineering

- Process Metallurgy
- Computational Thermodynamics
- Effluent and Waste Treatment
- Mineral Processing
- Metal Casting and CFD Modelling
- Surface Engineering and Coatings
- Additive Manufacturing and Powder Metallurgy
- Ceramics
- Electron Microscopy
- Automotive and Aerospace Materials
- Biomaterials
- Nanomaterials and Nanoelectronic Materials
- Multiscale Modelling of Materials
- Electronic and Solar Cell Materials
- Environmental Engineering

Research Degrees

Master of Science (M.Sc.) Materials Engineering (Thesis) (45 credits)

Please consult the Department for more information about the M.Sc. Materials Engineering (Thesis) program.

Master of Science (M.Sc.) Mining Engineering (Thesis) (45 credits)

Please consult the Department for more information about the M.Sc. Mining Engineering (Thesis) program.

Direct Transfer from a Master's to a Ph.D.

Students enrolled in a master's program (thesis) may transfer into the Ph.D. program without obtaining a master's degree if they have:

1. an excellent academic standing for their undergraduate degree;
2. been in the master's program for less than 12 months;
3. passed with the minimum CGPA of 3.6 at least three of the required master's courses, and given one seminar with a minimum grade of A-;
4. made good progress with their research;
5. obtained a strong letter of recommendation from their supervisor.

Direct Entry from B.Eng. to Ph.D.

Exceptional B.Eng. and B.Sc. graduates may be admitted directly to the Ph.D. program. The Ph.D. 1 students admitted through this process are required to complete at least four graduate-level courses.

M.Eng. (Project) Degrees

Master of Engineering (M.Eng.) Materials Engineering (Non-Thesis) (45 credits)

Please consult the Department for more information about the M.Eng. Materials Engineering (Project) program.

Master of Engineering (M.Eng.) Materials Engineering (Non-Thesis): Environmental Engineering (45 credits)

Please consult the Department for more information about the M.Eng. Materials Engineering (Non-Thesis) program.

Master of Engineering (M.Eng.) Mining Engineering (Non-Thesis) (45 credits)

Please consult the Department for more information about the M.Eng. Mining Engineering (Project) program.

Master of Engineering (M.Eng.) Mining Engineering (Non-Thesis): Environmental Engineering (45 credits)

Please consult the Department for more information about the M.Eng. Mining Engineering (Non-Thesis) program.

Doctor of Philosophy (Ph.D.) Materials Engineering

Please consult the Department for more information about the Ph.D.

Doctor of Philosophy (Ph.D.) Mining Engineering

Please consult the Department for more information about the Ph.D.

Graduate Diploma (Gr. Dip.) Mining Engineering (30 credits)

This program normally requires one academic year of full-time study to complete. Candidates are required to take an integrated group of courses based on their academic background.

Mining and Materials Engineering Admission Requirements and Application Procedures

Admission Requirements

The **Graduate Diploma in Mining Engineering** is open to graduates with suitable academic standing in any branch of engineering or science. It is designed to provide a sound technical mining engineering background to candidates intending to work in the minerals industry.

The **M.Sc. (Thesis)** degree is open to graduates holding the B.Eng. degree or its equivalent in Materials Engineering, Mining Engineering or other related engineering fields, or B.Sc. degree in Chemistry, Materials Science, Physics, Geology, or related fields.

The **Master of Engineering (Project) (Materials option)** is primarily designed to train people with appropriate engineering or scientific backgrounds to allow them to work effectively in the metals and materials industries. Industrial experience is favourably viewed for entrance into the program, but is not considered a necessity.

The **Master of Engineering (Project) (Mining option)** is primarily designed for graduates from mining engineering programs who have received adequate academic training in modern mining technology, mineral economics, computer programming, and probabilities and statistics. Students without this academic training must complete a Qualifying term. Industrial experience is favourably viewed for entrance into the program, but is not considered a necessity.

The Master of Engineering (Project) (Environmental Engineering option) is also offered.

Ph.D. degree applicants may either be "directly transferred" from the M.Eng. or M.Sc. program (see below) or hold an acceptable master's degree in Materials Engineering, Mining Engineering, or other related fields, or under exceptional circumstances may be admitted directly from the bachelor's degree. In the latter case they are admitted to Ph.D. 1 as opposed to those holding a master's degree, who are admitted to Ph.D. 2.

Application Procedures

McGill's online application form for graduate program candidates is available at mcgill.ca/gradapplicants/apply.

See University Regulations & Resources > *Graduate* > *Graduate Admissions and Application Procedures* > Application Procedures for detailed application procedures.

Application Dates and Deadlines

Application opening dates are set by Enrolment Services in consultation with Graduate and Postdoctoral Studies (GPS), while application deadlines are set by the Department of Mining and Materials Engineering and may be revised at any time. Applicants must verify all deadlines and documentation requirements well in advance on the appropriate McGill departmental website; please consult the list at mcgill.ca/gps/contact/graduate-program.

Information on application deadlines is available at mcgill.ca/gradapplicants/how-apply/application-steps/application-deadlines.

Admission to graduate studies is competitive; accordingly, late and/or incomplete applications are considered only as time and space permit.

Available Programs

- Materials Engineering (Non-Thesis) (M.Eng.) (45 credits)
- Materials Engineering (Non-Thesis): Environmental Engineering (M.Eng.) (45 credits)
- Materials Engineering (Ph.D.)
- Materials Engineering (Thesis) (M.Sc.) (45 credits)
- Mining Engineering (Gr. Dip.) (30 credits)
- Mining Engineering (Non-Thesis) (M.Eng.) (45 credits)
- Mining Engineering (Non-Thesis): Environmental Engineering (M.Eng.) (45 credits)
- Mining Engineering (Ph.D.)
- Mining Engineering (Thesis) (M.Sc.) (45 credits)

Location

Department of Mining and Materials Engineering
M.H. Wong Building
3610 University Street
Montreal QC H3A 0C5
Canada
Email: barbara.hanley@mcgill.ca
Website: mcgill.ca/minmat

Mining Engineering
Telephone: 514-398-2215
Fax: 514-398-7099

Materials Engineering
Telephone: 514-398-4383
Fax: 514-398-4492