Why GRADUATE STUDIES in MINING ENGINEERING?

Mining is the foundation of industrial civilization. It is the process of extracting minerals like gold, silver, copper, nickel and uranium (metallic) and salt, potash, coal, limestone aggregate and oil (non-metallic) formations that concentrate naturally in the earth. It may surprise you, but other than agricultural products, the raw ingredients for everything else in our modern lives comes from mining.

Mining Engineering is one part technical design and one part business management. Mining engineers are responsible for deciding how valuable a mineral deposit is and how best to mine it, for planning the day-to-day schedule and path of mining to maximize extraction and profit, and for ensuring the safety of people and equipment through applications in areas such as mine ventilation and rock mechanics.

Check out whygradstudies.ca for more reasons to choose graduate studies in engineering.

Why QUEEN’S?

As a Master’s student in Mining Engineering at Queen’s you are part of one of the most research intensive universities in Canada. Our academic program is internationally renowned with a wide range of teaching in all of the major specialization areas of mining engineering.

Queen’s Mining Engineers work in metals and industrial minerals, with consulting companies, geotechnical groups, environmental groups, heavy and light equipment manufacturing companies, computer software and hardware development organizations, banks, government institutions and university organizations. We are at the forefront in developing computer applications for engineering design in mineral extraction and work in close contact with the mineral industry.

Program STRUCTURE

MEng (1 year): Complete course work.

STUDY Areas

- Mine Design and Planning
- Drilling and Blasting
- Chemical Extraction of Metals
- Mining and Sustainability
- Equipment Reliability and Maintenance

Areas of SPECIALIZATION

- Management of Social Risk & Community Relations
- Mineral Planning & Design of Mechanical Systems
- Mineral Processing
- Geotechnical, Environmental, Sustainability, & Mineral Economics
- Geostatistics & Geometallurgy
- Occupational Health and Safety & Rock Mechanics
- Reliability, Maintenance, & Risk Assessment

School of Graduate Studies
Create an impact
www.queensu.ca/sgs
Mining Engineering  MEng MAP *

GETTING STARTED

ACHIEVE YOUR ACADEMIC GOALS

• Start with key priorities like developing relationships with your faculty members and doing your initial coursework. 
• Consider how your course choices can contribute to your MEng study goals. 
• Find your way through the academic process with help from departmental and Expanding Horizons professional development workshops, the Department Grad Chair, and the SGS Habitat.

MAXIMIZE LEARNING IMPACT

• Start to think about what you want to get out of your degree such as specific industry experience or potential career opportunities by exploring your interests through classes.

BUILD SKILLS AND EXPERIENCE

• Consider positions in student services, the SGS, or media outlets like the Queen’s Journal, CFRC, and the SGS Blog. Look in the AMS Clubs Directory for more ideas.
• Serve on departmental, faculty or university committees. Talk to the Society of Graduate and Professional Students (SGPS) for tips on getting involved.
• See professional development workshops from Expanding Horizons.

ENGAGE WITH YOUR COMMUNITY

• Explore how you can connect with your community through experiential opportunities on- and off-campus.
• Consider volunteering with different community organizations.

LAUNCH YOUR CAREER

• Finding a career that fits starts with knowing yourself. Get help by taking a Career Services career planning workshop or meeting with a career counselor. Check out books like So What Are You Going to Do With That? for advice on various career options.
• Start reading publications like University Affairs and the Chronicle of Higher Education. Browse non-academic labour market websites. Stay on the lookout for special events like Graduate Student Career Week to explore your career pathways.
• Check admission test deadlines if needed for further studies.

INTERMEDIATE STAGE

• Complete your coursework.
• Complete the ADDA 880 non-credit course in Accessible Customer Service.
• Become a Teaching Assistant.
• Take the non-credit course on laboratory safety (CHEM 801) or (MINE 862).

• Learn about the latest developments in the mining industry by following publications such as the Canadian Mining Journal.
• Collaborate with other departments, such as Geological, Mechanical, Chemical, and Civil Engineering.

• Start keeping an eportfolio of your skills, experiences and competencies.
• For help with teaching, get support from the Centre for Teaching and Learning. Enroll in SGS901 or the PUTL certificate.
• Use a Research or Teaching Assistantship to develop your skills.

WRAPPING UP

• Participate in and observe research work submitted to Mining Engineering graduate students and faculty in the graduate seminar (MNE 897).
• Attend a major conference in your field, such as the Oil Sands Innovation Summit, the Canadian Mining Expo, the Canadian Institute of Mining (CIM) Annual Meeting, or the Quebec Mining Exploration Convention.

• Practice articulating the skills you have been developing in settings outside the university, such as casual conversation, networking, and interviews. Get help from a Career Services workshop.
• Do some targeted networking with people working in careers of interest through QueenConnects on LinkedIn, the Queen’s Alumni Association, professional associations, and at conferences. Get help from a Career Services workshop.
• Consider joining professional associations like the Mining Association of Canada (MAC), the Canadian Institute of Mining (CIM) and the International Society of Mining Engineers (SME).

• Participate in hiring committees and attend job talks. Start focusing on areas of interest. Research organizations of interest and start putting together your CV or resume for potential positions of interest. Get help from Career Services with job searching, resumes, or interviews.

WHAT WILL I LEARN?

A graduate degree in Mining Engineering can equip you with valuable and versatile skills, such as:

• Knowledge and technical skills
• Effective communication skills in multiple forms for diverse audiences
• Information management: prioritize, organize and synthesize large amounts of information
• Time management: meet deadlines and manage responsibilities despite competing demands
• Project management: develop ideas, gather information, analyze, critically appraise findings, draw and act on conclusions
• Creativity and innovation
• Perseverance
• Independence and experience as a collaborative worker
• Awareness, an understanding of sound ethical practices, social responsibility, responsible research and cultural sensitivity
• Professionalism: in all aspects of work, research, and interactions
• Leadership, initiative and vision leading people and discussion

WHERE CAN I GO?

A Master’s degree in Mining Engineering can take your career in many directions. Some of our MEng students choose to continue their academic career as M.A.Sc. or as Ph.D. students within our department. Graduates have also found job opportunities in diverse settings including:

• Consulting Firms
• Mining Companies
• Mining Equipment and Technology Providers
• Non-Governmental Organizations
• Financial Institutions

Taking time to explore career options, build experience, and network can help you have a smooth transition to the world of work after graduation.

Visit careers.queensu.ca/gradmaps for the online version with links!

* This map is intended to provide suggestions for activities and careers, but everyone’s abilities, experiences, and constraints are different. Build your own Grad Map using our online My Grad Map tool.
Application FAQs

What do I need to know to APPLY?

ACADEMIC REQUIREMENTS
- A Bachelor's degree in Mining, Mechanical Engineering, Chemical Engineering or other related engineering fields. Many of our students come from industrial backgrounds. Anyone without academic prerequisites will be placed on probation and required to take additional courses before initiating a M.Eng program of study.
- Grade requirements: B- (70%) average.

ADDITIONAL REQUIREMENTS
- If English is not a native language, prospective students must meet the English language proficiency requirements in writing, speaking, reading, and listening. The School of Graduate Studies requires the following minimum scores: TOEFL (paper-based): 550, (2) TOEFL iBT: Writing (24/30); Speaking (22/30); Reading (22/30); Listening (20/30), for a total of 88/120 (applicants must have the minimum score in each test as well as the minimum overall score), or (3) IELTS: 7.0 (academic module overall band score), or (4) PTE Academics: 65.

KEY DATES & DEADLINES
- Application deadline: March 1st.
- Notification of acceptance: April 30th.

Before you start your application, please review the Graduate studies application process.

What about FUNDING?
Mining Engineering M.Eng. students are self-funded.

DEPARTMENT OF MINING

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