

Mining Engineering MEng Map

Applying to and Navigating Graduate Studies

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.



GRAD MAP FOR MEng STUDENTS →

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.

As technology evolves and the global economy changes, our students and researchers play a key role in defining the state of the art in mining. In close collaboration with industry partners, our faculty and students work to make mining operations safer, more efficient, more productive, less impactful on the natural environment, and more cost effective.

STUDY Areas

- Chemical Extraction of Metals
- Management of Social Risk & Community Relations
- Drilling and Blasting
- Equipment Reliability and Maintenance
- Geotechnical, Environmental, Sustainability, & Mineral Economics
- Geostatistics & Geometallurgy
- Mineral Planning & Design of Mechanical Systems
- Mineral Processing
- Mine Design and Planning
- Sustainability standards
- Occupational Health and Safety
- Reliability, Maintenance, & Risk Assessment

Program STRUCTURE

MEng (1 year): Complete course work.



**GRADUATE STUDIES AND
POSTDOCTORAL AFFAIRS**

queensu.ca/grad-postdoc

Mining Engineering MEng Map

MASTER OF ENGINEERING (MEng)



GETTING STARTED

INTERMEDIATE STAGE

WRAPPING UP

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 School of Graduate Studies and Postdoctoral Affairs (SGSPA) professional development workshops, the MEng Coordinator, and the SGSPA website.

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 both credit and non-credit classes.

BUILD SKILLS AND EXPERIENCE

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

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.
- Establish yourself as a professional by joining Canadian Institute of Mining, Metallurgy and Petroleum (CIM) as a student member.

LAUNCH YOUR CAREER

- Finding a career that fits starts with knowing yourself. Get help by taking a Career Services workshop or meeting with a career educator and coach.
- Attend the Mining Pathways Conference in department.

- Complete your coursework.
- Complete the AODA 800 non-credit course in Accessible Customer Service.
- Complete the non-credit course APSC 801
- Attend the graduate seminar (MINE897) to learn what research students are doing.
- Take the non-credit course on laboratory safety (CHEM 801) if doing laboratory research on campus.

- Learn about the latest developments in the mining industry by following publications such as the Canadian Mining Journal and the CIM Journal.
- Consider attending seminars or guest lectures in other departments, such as Geological, Mechanical, and Civil Engineering.

- Start keeping an ePortfolio of your skills, experiences, and competencies.
- Build your LinkedIn profile.

- Participate in your graduate and professional community through activities such as graduate student outreach programs.
- Prepare for work or studies in a multi-cultural environment by taking the Intercultural Awareness Training Certificate hosted by QUIC, the Four Directions Indigenous Student Centre and the Mining Industry Human Resources Council (MIHR).
- If you are an international student interested in staying in Canada, consider speaking with an International Student Advisor.

- Explore different careers by using Queens Connects on LinkedIn to connect with Queen's alumni. Check out Career Cruising for more information.
- Attend Fall Engineering Careers Fair.

- Investigate opportunities to further your education.

- Consider attending a major conference in your field, such as the CIM Annual Toronto Branch Rocks and Stocks event and Prospectors & Developers Association of Canada (PDAC) annual convention in March in Toronto and the annual CIM Connect conference which alternates between Montreal and Vancouver.

- Practice articulating the skills you have been developing in settings outside the university, such as casual conversation, networking, and interviews.
- Attend a Career Services workshop.
- Attend an IRCC Workshop from QUIC to learn how to obtain your PGWP.

- Do some targeted networking with people working in careers of interest, through Queens Connects on LinkedIn, the Queen's Alumni Association, professional associations, and at conferences. Get help from a Career Services workshop.
- Attend Guest Lectures in department.

- Start focusing on areas of interest. Research organizations of interest and start putting together your CV or resume for potential positions of interest. Meet with Career Service to review your resume and cover letter.
- Attend the Winter Engineering Careers Fair.
- If you plan to stay and work in Canada, apply for your post-graduate work permit as soon as you receive your final transcript.

Knowledge & Workplace Skills

A graduate degree in Mining Engineering can equip you with:

- **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, and cultural sensitivity**
- **Professionalism** in all aspects of work, research, and interactions
- **Leadership:** initiative and vision leading people and discussion

Career Possibilities

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 MASc or as PhD students within our department. Graduates have also found job opportunities in diverse settings including:

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

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

How to use this map

Use the 5 rows of the map to explore possibilities and plan for success in the five overlapping areas of career and academics. To make your own custom map, use the My Grad Map tool: careers.queensu.ca/gradmaps.

Graduate Studies FAQs

How do I make the most of my time at Queen's?

Use the Grad Map to plan for success in five overlapping areas of your career and academic life. Everyone's journey is different - the ideas on the maps are just suggestions to help you explore possibilities. For more support with your professional development, take advantage of the SGSPA professional development framework and the new Professional Development Plan (PDP) process to set customized goals to help you get career ready when you graduate.

Where can I get help?

Queen's provides you with a broad range of support services from your first point of contact with the university through to graduation. Ranging from help with academics and careers, to physical, emotional, or spiritual resources – our welcoming environment offers the programs and services you need to be successful, both academically and personally. Check out the SGSPA website for available resources.

What is the community like?

At Queen's, graduate students from all disciplines learn and discover in a close-knit intellectual community. You will find friends, peers and support among the graduate students enrolled in Queen's more than 130 graduate programs within 50+ departments & research centres. With the world's best scholars, prize-winning professional development opportunities, excellent funding packages and life in the affordable, historic waterfront city of Kingston, Queen's offers a wonderful environment for graduate studies. Queen's is an integral part of the Kingston community, with the campus nestled in the core of the city, only a 10-minute walk to downtown with its shopping, dining and waterfront. For more about Kingston's history and culture, see Queen's University's Discover Kingston page.

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 MEng 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 following minimum scores are required: (1) TOEFL iBT: Writing (24/30); Speaking (22/30); Reading (22/30); Listening (20/30). Applicants must have the minimum score in each test as well as the minimum overall score, or (2) IELTS: 7.0 (academic module overall band score and a 7.0 for each test band), or (3) PTE Academics: 65, or (4) CAEL CE -70 (minimum overall score).

KEY DATES & DEADLINES

- **Application deadline:** January 31st.
- **Notification of acceptance:** March 31st.

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

What about FUNDING?

Mining Engineering MEng students are self-funded.

