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, uranium (metallic), 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.

RESEARCH Areas
• Blasting, Mine to Downstream Operations
• Data analytics
• Geomechanics, Seismicity, Geodynamics
• Geostatistics, Geometallurgy
• Hydrometallurgy, Biohydrometallurgy, Environmental
• Health and Safety
• Mining Engineering
• Mine-Mechanical
• Mineral Processing
• Pyrometallurgy, Microwaves in metal extraction
• Reliability, Maintenance and Risk Assessment
• Social Risk and Community Relations
• Ventilation

We encourage you to identify an area of research interest and contact a potential supervisor before applying.

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 research program is internationally renowned with a wide range of research activities 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.

Program STRUCTURE

MASc (2 years): Course work, seminar, and research thesis.
**GETTING STARTED**

**ACHIEVE YOUR ACADEMIC GOALS**
- Start with key priorities like developing your relationship with your supervisor, forming your committee, and doing your coursework.
- Consider how your course choices can contribute to your research thesis.
- Find your way through the academic process with help from departmental and School of Graduate Studies and Postdoctoral Affairs professional development workshops, the departmental Grad chair, and the SGSPA website.

**MAXIMIZE RESEARCH IMPACT**
- Start to think about the audiences for your research.
- If you will be continuing graduate studies, apply for NSERC and OGS funding.

**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, CFCR, and the SGSPA Blog. Look in the AMCS Clubs Directory for more ideas.
- Explore how you can connect with your community through experiential opportunities on- and off-campus.
- Consider volunteering with different community organizations, such as the Engineering Society Design Teams.

**ENGAGE WITH YOUR COMMUNITY**
- Participate in your graduate and professional community through activities such as graduate student outreach programs, organizing conferences, and research groups.
- Prepare for work or studies in a multi-cultural environment by taking the Intercultural Awareness Training Certificate hosted by QUIC and Four Directions Indigenous Student Centre.
- If you are an international student interested in staying in Canada, consider speaking with an International Student Advisor.

**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.
- 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 School of Graduate Studies and Postdoctoral Affairs Career Week to explore your career pathways.
- Check admission test deadlines if needed for further studies.
- Explore different careers of interest by Queen's Connects on LinkedIn to connect with Queen's alumni. Check out Career Cruising for more information.
- If you are considering a PhD, explore programs of interest reach out to faculty, and apply to PhD programs and external scholarships.

**INTERMEDIATE STAGE**

**WRAPPING UP**

**WHAT WILL I LEARN?**
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, and present or defend your work
- Creativity and innovation
- Perseverance
- Independence and experience as a collaborative worker
- Awareness, an understanding of social and ethical practices, social responsibility, responsible research, and cultural sensitivity
- Professionalism in all aspects of your life, 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. Many of our MASc students choose to continue their academic inquiry with a PhD. Our Master's students are equipped with a strong foundation for careers in:
- Academia and Research
- Consulting
- 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.

Use the 5 rows of the map to explore possibilities and plan for success in the five overlapping areas of career and academics. The map just offers suggestions – you don't have to do it all! To make your own custom map, use the My Grad Map tool.
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 Individual Development Plan (IDP) 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.

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 MASc 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: March 1st.
- Notification of acceptance: April 30th.

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

What about FUNDING?

Mining Engineering Master’s students have a minimum funding level of $25,000. In addition to the minimum funding package, you may serve as a Teaching Assistant for at least one term per year and gain additional pay for this service. When necessary, serving as a Teaching Assistant for a second term will result in an increase in your funding package equivalent to half the value of the second TAship.

Apply for external funding from OGS, NSERC, and other sources. Queen’s will automatically issue a one time $5,000 top-up to Masters winners of federal government Tri-Council awards. For more information, see the School of Graduate Studies and Postdoctoral Affairs’ information on awards and scholarships.