

Mining Engineering MAsc Map

Applying to and Navigating Graduate Studies



GRAD MAP FOR MAsc STUDENTS →

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.



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.

Visit the Mining Engineering website to read faculty profiles and learn more about faculty members' research areas. When you find a faculty member with similar research interests to yours, contact him/her and tell them about your interest in graduate work and related experience.

Why QUEEN'S?

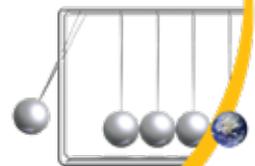
As a Master's student in Mining Engineering at Queen's you are part of one of the most research intensive universities in Canada. Our research program is internationally renowned with a wide range of research activities in all of the major specialization areas of mining engineering.

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.

School of Graduate Studies
Create an impact
www.queensu.ca/sgs



Mining Engineering MASc Map*

MASTER OF APPLIED SCIENCE (MASc)

The coronavirus pandemic may impact how some activities are delivered in 2020-2021. Please check directly with the host of any activity on the map for the latest information.



GETTING STARTED

INTERMEDIATE STAGE

WRAPPING UP

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 [Expanding Horizons](#) professional development workshops, the department Grad Chair and the [SGS Habitat](#).

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, CFRC, and the SGS Blog. Look in the [AMS Clubs Directory](#) for more ideas.
- 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, such as the [Engineering Society Design Teams](#).

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 counsellor. 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 School of Graduate Studies Career Week to explore your career pathways.
- Check admission test deadlines if needed for further studies.

- Complete your coursework; begin to research and write your thesis.
- Complete the AODA 800 non-credit course in Accessible Customer Service.
- Become a Teaching Assistant.
- Attend the graduate seminar series (MINE 897).
- Take the non-credit course on laboratory safety (CHEM 801) or (MINE 862).

- Attend or present at a graduate conference such as the [Canadian Institute of Mining \(CIM\)](#) Annual Meeting.
- Consider participating in the [3 Minute Thesis \(3MT\)](#) competition.
- Expand your research audience through social media such as Twitter or a blog.

- 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 SGS902 or the PUTL Certificate.
- Collaborate with other departments, such as Geological, Mechanical, Chemical, and Civil Engineering.

- 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](#).

- Explore different careers of interest by [Queens 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.

- Present your research to Mining Engineering graduate students and faculty in the graduate seminar (MINE 897).
- Complete and defend your Master's research thesis (MINE 899).

- Consider publication options for your research.
- Attend a major conference in your field, such as [Canadian Institute of Mining \(CIM\)](#) conferences or Annual General Meeting.
- Set up a meeting with the School of Graduate Studies for a Grad Chat to discuss your research interests.
- Consider putting an article in [The Conversation](#).

- 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.
- Investigate internships from [MITACS](#) and other sources.
- Check out opportunities for extra training through CTL, Expanding Horizons, MITACS, or other sources to boost your skills.

- Do some targeted networking with people working in careers of interest, through Queen's Connects 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, and interviews.

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, 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. 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
- 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.

Graduate Studies FAQs

How do I use this map?

Whether you are considering or have embarked on graduate studies at Queen's, use this map to plan for success in five overlapping areas of your career and academic life. The map helps you explore possibilities, set goals and track your individual accomplishments. Everyone's journey is different – the guide offers options for finding your way at Queen's and setting the foundation for your future. To make your own customized map, use the online [My Grad Map](#) tool.

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 [SGS Habitat](#) 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 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 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 Master's students have a minimum funding level of \$16,800. 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' information on [awards and scholarships](#).



Queen's
UNIVERSITY

DEPARTMENT OF
MINING

Kate Cowperthwaite, Graduate Assistant
(613) 533-2230
mine.office@queensu.ca
mine.queensu.ca