

Mining Engineering PhD 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, 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.

Why Queen's?

As a PhD 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.



Our students come from all over the world. At Queen's, graduate students from all disciplines learn and discover in a close-knit intellectual community.

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
- Mining Policy

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 them and tell them about your interest in graduate work and related experience.

You can also find out if the faculty member is accepting new graduate students to supervise by meeting your potential supervisor at departmental events for prospective students.



Mining Engineering PhD MAP

DOCTOR OF PHILOSOPHY (PhD)



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

Career Possibilities

A PhD in Mining Engineering can take your career in many directions. In Canada, less than 40% of all PhDs will work in post-secondary education – the majority will work in industry, government, or non-government organizations.

Graduates from the Mining Engineering PhD program have found careers within:

- 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.

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?

Queen's offers graduate students from every discipline a close-knit intellectual community where they can learn, discover, and build lasting connections. With more than 130 graduate programs across 50+ departments and research centres, students benefit from world-class scholars, prize-winning professional development, generous funding packages, and life in the historic waterfront city of Kingston. The campus sits at the heart of Kingston, just a 10-minute walk from downtown's shops, restaurants, and waterfront, and is deeply integrated with the local community. For more on 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 Master's degree in Mining Engineering. Applicants with a Master's degree in a cognate science may be admitted.

ADDITIONAL REQUIREMENTS

- If English is not a first language, nor was the language of instruction in undergraduate studies, prospective students must meet English language proficiency requirements in writing, speaking, reading, and listening as part of the application process, and before final acceptance is granted, as per School of Graduate Studies and Postdoctoral Affairs' regulations.

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?

The current level of financial is at a guaranteed minimum level of \$25,000 for PhD students. As part of the minimum funding package, you may also serve as a Teaching Assistant and gain additional pay for this service.

You are encouraged to apply for external funding from OGS, NSERC, and other sources. For more information on awards and scholarships, consult the School of Graduate Studies and Postdoctoral Affairs' website.

