Get the help you need

Queen’s provides you with a broad range of support services from your first point of contact with the university through to graduation. At Queen’s, you are never alone. We have many offices dedicated to helping you learn, think and do. Ranging from help with academics and careers, to physical, emotional, or spiritual matters—our welcoming living and learning environment offers the programs and services you need to be successful, both academically and personally, and Queen’s wants you to succeed! Check out the Student Affairs website for available resources.

How to use this map

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 Major Map tool.

Succeed in the workplace

What employers want

The Canadian Council of Chief Executives list the top 6 skills sought by employers as:

1. People skills
2. Communication skills
3. Problem-solving skills
4. Analytical abilities
5. Leadership skills
6. Industry-specific knowledge

Take the time to think about the unique skills you have developed at Queen’s, starting with the skills list here for ideas. Explaining your strengths with compelling examples will be important for applications to employers and further education.

What will I learn studying MINING ENGINEERING TECHNOLOGY (BTech)?

• Identify, formulate, analyze, and solve typical mining engineering problems using a balance of mathematics, physics, chemistry, and Earth sciences.
• Conduct experiments, analyze and interpret data.
• Choose and implement sustainable methods for the safe extraction, handling, and processing of mineral resources to meet the technical, economic, and environmental needs of society.
• Employ modern engineering tools effectively for the purpose of mine planning and design, as well as for data visualization, analysis and interpretation.
• Value the mining industry’s unique characteristics in terms of its economic, legal, environmental and societal elements.
• Work professionally and communicate effectively in a team-based multi-disciplinary environment. Articulate and justify technical solutions to diverse audiences.

Get to know MINING ENGINEERING TECHNOLOGY (BTech)

The Bachelor of Mining Engineering Technology (BTech) is a new degree program designed to meet the needs of the modern mining industry and of college-educated professionals looking to advance their career through education. Designed for engineering technicians and technicians, the program features customized bridge courses and two years of online university study, including on-site field placements in Kingston and Timmins, ON. The BTech program combines the history, expertise, reputation and connections of two prestigious mining institutions—Queen’s University’s Robert M. Buchan Department of Mining and Northern College’s Haileybury School of Mines. The program combines asynchronous online lectures, tutorials and webinars with team assignments, group projects, and collaborative discussions. With a focus on Active Learning, Cooperative Learning, and Student-to-Professor Interactions, the BTech program is fully adaptable to your needs. Choose to study full-time, or work full-time and study part-time. This flexibility allows you to adjust your course load at any time during the program, in order to maintain a healthy balance between your personal and professional commitments.

That is a degree from Queen's.
btech.engineering.queensu.ca

Queen's ADMISSIONS

Graduates of any Engineering Technology or Mining Engineering Technician program from college, or students who have completed a minimum of two years of study in a science program at a recognized university, and have completed their studies with a minimum 75% passing grade, are eligible to apply to the BTech program. Applications can be submitted using the webapp (webapp.queensu.ca/admissions/apply/index.php).

Course HIGHLIGHTS

BTech students will take a wide range of technical courses to help prepare them for the many possible career destinations available. Such courses include:

• Mine Supervision and Project Management
• Surface and Underground Mine Design
• Applied Metallurgy and Data Analysis
• Geomechanics and Ground Control
• Business Law and Ethics
• Engineering Economics
• Ore Body Modelling and Resource Estimation

Field SCHOOL

Years 3 and 4 of the BTech program each include an intensive, two-week field placement at Queen’s University in Kingston and at Northern College’s Haileybury School of Mines in Timmins, ON. You will learn practical, hands-on skills in the use of modern tools and equipment, data acquisition and interpretation, group work and report writing. A focus on occupational health and safety is emphasized throughout. Field School I includes an introduction to laboratory techniques and data analysis, rock mechanics, blasting technology, and mineral processing. Field School II includes a study of geology and rocks, mine ventilation, an introduction to metallurgical techniques, as well as surveying technologies.
### 2017 - 2018

#### Mining Engineering Technology (B Tech)

**MAJOR MAP**

**BACHELOR OF MINING ENGINEERING TECHNOLOGY (B Tech)**

**GET THE COURSES YOU NEED**

The program includes a customized curriculum designed to bridge the knowledge gap between your college diploma and university courses. It consists of 3-5 courses that could include:

- Foundational Mathematics
- Calculus
- Foundational Chemistry
- Foundational Physics
- Mining Geology
- Engineering Mathematics
- Surveying Principles

Courses vary depending on your selected stream.

**GET CONNECTED WITH THE COMMUNITY**

Look into membership in the following organizations within the mining community:

- Prospectors & Developers Association of Canada (PDAC), Canadian Institute in Mining (CIM), and the Society for Mining Metallurgy and Exploration (SME).
- Visit the program’s social media pages on Facebook & LinkedIn to connect with peers, networks, and the community.

**GET THINKING GLOBALLY**

Speak to a QUIC advisor or get involved in their programs, events, and training opportunities.

**ACCELERATE YOUR CAREER**

Explore different careers of interest by reading books in the Career Services Career Advising and Resource Area, such as Career Success in Engineering. For more information check out Career Cruising or by finding and connecting with alumni on LinkedIn.

Need career advice? You can book a phone appointment with a career counsellor through MyCareer or call the Career Services reception at 613.533.2892.

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### YEAR 3

Courses include:

- Introduction to Mining
- Technical Writing & Communication
- Engineering Physics, Engineering Chemistry
- Applied Metrology and Data Analysis
- Geomechanics and

Ground Control
- Mining and Society
- Ore Body Modelling
- Mineral Processing Unit Operations
- Drilling and Blasting
- Introduction to Programming

At the end of Year 3 there is a two-week Field School.

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### YEAR 4

Courses include:

- Surface Mine Design
- Underground Mine design
- Metal Extraction Processes
- Ventilation and Hydraulics
- Sustainability and the Environment
- Mine Supervision and Project Management
- Capstone Project

At the end of Year 4 there is a two-week Field School.

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**Where could I go after graduation?**

Academia (college, university, research)

Business management (mine manager, director, VP, COO, CEO, president)

Control and process operators, mineral and metal processing

Chief metallurgist

Chief mine engineer

Drillers and blasters-surface Mining & quarrying and construction

Environmental management

Equipment designer

Government (mine inspector, health and safety, environment)

Mineral and metal processing

Mineral processor, metallurgist

Mining consultant

Mining financial analyst

Mining supplier

Occupational health and safety

Petroleum and gas industry

Production managers

Project engineer

Renewable resources

Sales engineer - Industrial/Mining

Supervisors, mineral and metal processing & mining and quarrying

Supervisor, mining and quarrying

Sustainability

Waste management

*Some careers may require additional training. Career paths are suggestions only.

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