Mining Engineering Technology (BTech)

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 technologists 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.

The hub for the interactive elements of the online courses is OnQ (Brightspace by Desire2Learn). It is an advanced integrated learning platform that brings together the ability to interact with your fellow classmates, access course resources, and get fast feedback - when you want it. Working with a Program Coordinator, you will build an Individual Learning Plan, customized to your needs. Regular check-ins will allow you the flexibility to adjust your course load in order to meet any changing job or family commitments.

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/admission/apply/index.php).

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.

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 Metrology and Data Analysis
- Geomechanics and Ground Control
- Business Law and Ethics
- Engineering Economics
- Ore Body Modelling and Resource Estimation

Acquire Skills. Gain Experience. Go Global. That is a degree from Queen’s.

btech.engineering.queensu.ca
MINING ENGINEERING TECHNOLOGY (BTech) MAJOR MAP *

BRIDGE

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

Courses vary depending on your selected stream.

GET THE COURSES YOU NEED

YEAR 3

Courses include:
- Introduction to Mining
- Technical Writing & Communication
- Engineering Physics, Engineering Chemistry
- Applied Metallurgy and Data Analysis
- Geomechanics and Ground Control
- Mining and Society
- Ore Body Modelling and Resource

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

YEAR 4

Courses include:
- Surface Mine Design
- Underground Mine Planning
- Metal Extraction Processes
- Sustainability and the Environment
- Mine Supervision and Project Management
- Physical Asset Management for

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

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 find/career counselling through MyCareer or call the Career Services reception at 613.533.2992.

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

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 mine engineer
• Drillers and blasters-surface mining & quarrying and construction
• Environmental management
• Equipment designer
• Government (mine inspector, health and safety, environment)
• Mineral processor, metallurgist
• Mining consultant
• Mining supplier
• Occupational health and safety
• Petroleum and gas industry
• Project engineer
• Renewable resources
• Sales engineer - Industrial/Minning
• Supervisor, mining and quarrying
• Waste management

* This map is intended to provide suggestions for activities and careers, but everyone’s abilities, experiences, and constraints are different. Build your own Major Map using our online My Major Map tool.
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.

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 resources – 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.

BTech MAJOR MAP

START DATES
in May, September, or January

POSITIONS
are paid and full-time

WORK TERMS
are 12-16 months long

PROGRAM OVERVIEW

- Graduate with “Professional Internship” on your degree.
- Learn about current advances, practices and technologies in business and industry.
- Test drive a career, earn a competitive salary, and get real world experience.

ELIGIBILITY

- 2nd or 3rd Year Students
- Minimum GPA of 1.9

WHY QUIP?

- Gain a year of career-related work experience.
- Build network connections.
- Receive support from Queen’s staff in job search and during internship.

SAMPLE PAST INTERNSHIPS

For more information, contact quip@queensu.ca or visit the Program Website.

Biotechnology Intern

Engineering & Applied Science Intern

Geothermal Engineering Student

Software Development Student

Mechatronics Intern

Personal and Physical Health

Athletics and Recreation Student Wellness Services

Socio-Cultural and Spiritual Health

Aboriginal Student Centre International Centre Chaplain Outreach Counsellor Cross-Cultural Counsellor Student Community Relations

Support for Student Success

Career and Professional Health

Career Services AMS International Centre

Academic and Intellectual Health

Student Academic Success Services: Learning Strategies and the Writing Centre Academic Advising Adaptive Technologies Learning Commons

Emotional and Mental Health

Student Wellness Services Peer Support Centre

Social and Interpersonal Health

AMS Rector Residence Life Student Experience Office Queen’s Legal Aid

Graduate with “Professional Internship” on your degree. Learn about current advances, practices and technologies in business and industry. Test drive a career, earn a competitive salary, and get real world experience. 2nd or 3rd Year Students Minimum GPA of 1.9 Gain a year of career-related work experience. Build network connections. Receive support from Queen’s staff in job search and during internship.

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