

POST-SECONDARY EDUCATION OPTIONS FOR MINING CAREERS



MINING & COMMUNITY ENGAGEMENT



EDUCATION & EMPLOYMENT



Geology, Environmental and Earth Sciences

Geologists and earth scientists work closely with other workers in a mine and on exploration sites. They explore and research the structure, processes, and composition of the earth.

Institution	Location	BSc or BASc	MSc or MASc	PhD	Graduate Diploma
University of Alberta	Edmonton, Alberta	•	•	•	
Université du Québec à Chicoutimi	Chicoutimi, Québec	•	•		•
Acadia University	Wolfville, Nova Scotia	•	•		
Brandon University	Brandon, Manitoba	•			
Brock University	St. Catharines, Ontario	•	•		
Carleton University	Ottawa, Ontario	•	•	•	
Dalhousie University	Halifax, Nova Scotia	•	•	•	
Lakehead University	Thunder Bay, Ontario	•	•		
Laurentian University	Sudbury, Ontario	•	•	•	
Malaspina University-College	Nanaimo, British Columbia	•			
McGill University	Montréal, Québec	•	•	•	
McMaster University	Hamilton, Ontario	•	•	•	
Memorial University of Newfoundland	St. John's, Newfoundland	•	•	•	
Queen's University	Kingston, Ontario	•	•	•	
Saint Mary's University	Halifax, Nova Scotia	•			
Simon Fraser University	Vancouver, British Columbia	•	•	•	
St. Francis Xavier University	Antigonish, Nova Scotia	•	•		

Institution	Location	BSc or BASc	MSc or MASc	PhD	Graduate Diploma
Thompson Rivers University	Kamloops, British Columbia	•			
Université du Québec à Montréal	Montréal, Québec	•	•		
Université Laval	Québec City, Québec	•	•	•	
University of British Columbia	Vancouver, British Columbia	•	•	•	
University of Calgary	Calgary, Alberta	•	•	•	
University of Guelph	Guelph, Ontario	•			
University of Manitoba	Winnipeg, Manitoba	•	•	•	
University of New Brunswick	Fredericton, New Brunswick	•	•	•	
University of Ottawa	Ottawa, Ontario	•	•	•	
University of Regina	Regina, Saskatchewan	•	•	•	
University of Saskatchewan	Saskatoon, Saskatchewan	•	•	•	
University of Toronto	Toronto, Ontario	•	•	•	
University of Victoria	Victoria, British Columbia	•	•	•	
University of Waterloo	Kitchener/Waterloo, Ontario	•	•		
University of Western Ontario	London, Ontario	•	•	•	
University of Windsor	Windsor, Ontario	•	•	•	
York University	Toronto, Ontario	•	•	•	

Mining and Mineral Engineering

Mining engineers are responsible for the planning, preparation, design and construction of a mine, its facilities and the extraction of all metal and non-metallic materials.

Institution	Location	BScs or BEng	MScs or MEng	PhD	Graduate Diploma
University of Alberta	Edmonton, Alberta	•	•	•	
Dalhousie University	Halifax, Nova Scotia	•	•	•	
École Polytechnique de Montréal	Montréal, Québec	•	•	•	•
Laurentian University	Sudbury, Ontario	•	•	•	
McGill University	Montréal, Québec	•	•	•	•
Queen's University	Kingston, Ontario	•	•	•	
Université du Québec en Abitibi-Témiscamingue	Amos, Québec		•		•
Université Laval	Québec City, Québec	•	•	•	
University of British Columbia	Vancouver, British Columbia	•	•	•	
University of Toronto	Toronto, Ontario	•			

Metallurgical Engineering

Metallurgical engineers research the different properties of metal and non-metallic materials to discover exciting new ways to develop machinery and processes for the extraction and refining of goods.

Institution	Location	BScs or BEng	MScs or MEng	PhD	Graduate Diploma
Dalhousie University	Halifax, Nova Scotia	•	•	•	
École Polytechnique de Montréal	Montréal, Québec		•	•	•
McGill University	Montréal, Québec		•	•	
McMaster University	Hamilton, Ontario	•			
Université Laval	Québec City, Québec	•	•	•	

DID YOU KNOW?

A junior mine engineer makes a base salary of \$70k/year.

College Programs

Many careers exist within exploration and operations that are essential to the development of the goods that we use every day. A few examples of these careers include: geomatic technicians, prospectors, blasters, drillers, technicians and technologists. You can also “earn while you learn” by taking an apprenticeship. Visit www.apprenticetrades.ca for more information.

Institution/Location	Program Name	Diploma	Certificate	ROA*
Assiniboine Community College <i>Brandon, Manitoba</i>	Geographic Information Systems Environmental Technologies	•		
Aurora College <i>Fort Smith, Northwest Territories</i>	Mine Industry Trades Access Mineral Processing Operator Training		• •	
British Columbia Institute of Technology <i>Vancouver, British Columbia</i>	Mining & Mineral Exploration Technology Natural Resources Geomatics Engineering Technology	•	•	
Cambrian College of Applied Arts and Technology <i>Sudbury, Ontario</i>	Mining Certificate Mining Engineering Technician Mining Engineering Technologist		• •	•
Camosun College <i>Victoria, British Columbia</i>	Civil and Mining Engineering Program			•
Cégep de l'Abitibi-Témiscamingue <i>Rouyn-Noranda, Québec</i>	Technologie Minérale – Exploitation Géologie Appliquée Minéralurgie	• • •		
Cégep de l'Outaouais <i>Gatineau, Québec</i>	Technologie de la -Geomatique/ Cartographie	•		
Cégep de Thetford <i>Thetford, Québec</i>	Technologie Minérale – Exploitation Minéralurgie	•		

Institution/Location	Program Name	Diploma	Certificate	ROA*
Cégep de Trois-Rivières <i>Champlain, Québec</i>	Technologie du Génie Métallurgique – Contrôle des matériaux Fabrication Mécanosoudée Procédés de Transformation	•	• •	
Cégep Limoilou <i>Québec, Québec</i>	Technologie de la Geomatique/ Cartographie			•
Collège Boréal <i>Sudbury, Ontario</i>	Techniques du Génie de Construction (minière et urbaine)			•
College of the North Atlantic <i>Labrador City, Labrador</i>	Mining Engineering Technician			•
College of the North Atlantic <i>St. John's, Newfoundland</i>	Geomatics Engineering Technology			•
College of the Rockies <i>Cranbrook, British Columbia</i>	Mining Apprenticeship Program (Heavy Duty/Electric)			•
Corona College <i>Grand Falls-Windsor, Newfoundland</i>	Hard Rock Miner Surface Miner Mill Processing Operator Diamond Driller Geological Assistant			• • •
Fleming College <i>Peterborough, Ontario</i>	Geomatics Technician			•
Haileybury School of Mines <i>Haileybury, Ontario</i>	Mining Engineering Technician Instrumentation Engineering			• •
Keyano College <i>Fort McMurray, Alberta</i>	Mine Operations (Co-op option)			•

Institution/Location	Program Name	Diploma	Certificate	ROA*
Lethbridge College <i>Lethbridge, Alberta</i>	Geomatics Engineering Technology Environmental Assessment and Restoration	•	•	
Loyalist College <i>Belleville, Ontario</i>	Survey Engineering Technician	•		
New Brunswick Community College <i>Moncton, New Brunswick</i>	Geographic Information Systems Technology	•		
Northern Alberta Institute of Technology <i>Edmonton, Alberta</i>	Geological Technology	•		
Northern College of Applied Arts and Technology <i>Timmins, Ontario</i>	Mining Engineering Technician Natural Resource Technician	•	•	
Northlands College <i>La Ronge, Saskatchewan</i>	Mine Training – Exploration Technician Training Trades and Vocations	•	•	•
Nova Scotia Community College <i>Halifax, Nova Scotia</i>	Survey Technician Geographic Information Systems Technician Applied Geomatics Research	•	•	•
Nunavut Arctic College <i>Baffin Island Region, Nunavut</i>	Mine Training Introductory Mineral Exploration Field Assistant			• •
Red River College <i>Winnipeg, Manitoba</i>	Geographic Information Systems Technology	•		

* Record of Achievement

Institution/Location	Program Name	Diploma	Certificate	ROA*
SAIT Polytechnic <i>Calgary, Alberta</i>	Bachelor of Applied Geographic Information Systems, Geomatics Engineering Technology	•		
Saskatchewan Institute of Applied Science and Technology (SIAST) <i>Prince Albert, Saskatchewan</i>	Underground Miner Geomatics Technology	•	•	
Southeast Regional College <i>Weyburn, Saskatchewan</i>	Handling and Management of Explosives	•		



Petroleum Engineering

A career as a petroleum engineer can take you all over the world. Petroleum engineers develop, plan, study and monitor the extraction of oil and gas deposits at oil refineries and drilling spots. As a petroleum engineer there is the opportunity to specialize in drilling, production and reservoir analysis.

Institution	Location	BScs or BEng	MScs or MEng	PhD	Graduate Diploma
University of Alberta	Edmonton, Alberta	•	•	•	
Dalhousie University	Halifax, Nova Scotia		•		
Memorial University of Newfoundland	St. John's, Newfoundland		•		•
University of Calgary	Calgary, Alberta	•	•	•	
University of Regina	Regina, Saskatchewan	•	•	•	

Admission Requirements and Prerequisites

For geology, earth and environmental earth sciences programs, the entrance level average ranges between 65%-75%. Prerequisite courses normally include, but are not limited to, advanced or university-level Math, Calculus, Physics, Biology and/or Chemistry. Graduate and Doctoral admission requirements for engineering, and geology, earth and environmental sciences are specific to the program, faculty and institution of study.

For additional information about university programs in your area, visit the Association of Universities and Colleges at www.aucc.ca

Generally, for engineering programs the minimum entrance level average ranges between 75%-85%. Prerequisite courses normally include, but are not limited to, advanced or university-level math, calculus, physics, biology, and/or chemistry.

Generally, admission into college mining operation programs throughout Canada requires a high school diploma or mature student status. Most also require the applicant to be 18 years of age or older. Strong math comprehension skills are an asset.

For additional information about college programs in your area, visit the Association of Canadian Community Colleges at www.accc.ca

More than 120 different occupations to choose from.

More new positions in Canada, as the industry continues to grow.

More travel, challenge, and adventure in one of Canada's highest paying industrial sectors.

A CAREER IN MINING IS MORE THAN YOU THINK

Mining is a thriving Canadian industry that is continually implementing new, environmentally sustainable business practices. Opportunities to work with state of the art technology, robotics, and other advanced tools draw professionals from fields as diverse as engineering, geology, science, business and from a wide variety of trades.

Discover your post-secondary options to get started in an exciting and rewarding opportunity in mining! In this brochure you will find a list of schools providing courses in some of the mining industry's related fields of study. You can also explore online at: www.aboriginalmining.ca

If you're looking for more from your career choice, choose a career in mining:

RESPONSIBLE, REWARDING, GREAT PAY, GREAT OPPORTUNITY



Explore for *more*
www.acareerinmining.ca



Association of Canadian
Community Colleges
www.accc.ca/programs

Association of Universities and
Colleges of Canada
www.aucc.ca



Canada

Funded in part by the Government of Canada's Sector Council Program.