MINING ENGINEERING, B.A.SC. (CLASS OF 2028)

General First Year 2024-2025 (https://www.queensu.ca/academic-calendar/engineering-applied-sciences/first-year-studies/)

Second Year CORE 2025-2026

Code	Title	Units
MINE 200	Engineering Design & Practice II	4.00
MINE 293	Eng Communications 2	1.00
CHEE 209	Analysis of Process Data	3.50
CIVL 230	Solid Mechanics I	4.25
MINE 201	Introduction to Mining and Mineral Processing	4.00
MECH 229	Kinematics and Dynamics	3.50
MTHE 225	Ordinary Differential Equations	3.50
CHEE 210	Thermodynamics of Energy Conversion Systems	3.50
CIVL 222	Numerical Methods	5.00
MECH 210	Electronic Circuits and Motors for Mechatronics	4.50
MINE 267	Applied Chemistry for Mining	3.50
MINE 268	Analytical Methods in Mining	1.00
MINE 272	Applied Data Science	4.50
Total Units		**45.75**

Third Year CORE 2026-2027

Code	Title	Units
MINE 321	Drilling & Blasting	4.50
MINE 325	Applied Rock Mechanics	4.50
MINE 326	Operations Research	4.50
MINE 330	Mineral Industry Economics	3.50
MINE 331	Methods Of Mineral Separation	4.50
GEOE 262	Aspects Mineral Deposits	3.75
MINE 341	Open Pit Mining	4.50
MINE 344	Underground Mining	4.00
MREN 241	Fluid Mechanics and Fluid Power	3.75
Total Units		**37.50**

Mining Option N1

Code	Title	Units
Third Year Core		37.50
MINE 339	Mine Ventilation	4.50
Mining Elective		6.00
Total Units		**48.00**

Minerals Processing Environmental Option N2

Code	Title	Units
Third Year Core		37.50
CHEE 319	Process Dynamics and Control	3.50
CHEE 321	Chemical Reaction Engineering	3.50
Mining Elective		3.00
Total Units		**47.50**

Mine-Mechanical Option N3

Code	Title	Units
Third Year Core		37.50
MECH 328	Dynamics And Vibration	3.50
MECH 323	Machine Design I	4.50
MECH 350	Automatic Control	3.50
Total Units		**49.00**

Fourth Year CORE 2027-2028

Code	Title	Units
MINE 422	Mining And Sustainability	4.00
MINE 431	Life-Cycle Assessment for Green Technologies	3.50
MINE 459	Asset Reliability Management	4.00
MINE 434	Project Report	4.00
Mining Elective		3.00
Complementary Studies, List A or B		3.00
Complementary Studies, List A		3.00
Total Units		**24.50**

Mining Option N1

Code	Title	Units
Fourth Year Core		20.50
MINE 467	Geostatistics and Orebody Modelling	4.50
MINE 445	Open Pit Mine Design	5.50
MINE 448	Underground Design	5.50
Total Units		**36.00**

Minerals Processing Environmental Option N2

Code	Title	Units
Fourth Year Core		20.50
MINE 451	Chemical Extraction Of Metals	4.00
MINE 455	Design, Analysis and Operation of Mineral Processes	4.50
MINE 458	Process Investigations	4.00
Mining Elective		3.00
Total Units		**36.00**

Mine-Mechanical Option N3

Code	Title	Units
Fourth Year Core		20.50
MINE 339	Mine Ventilation	4.50
MINE 471	Mine-Mechanical Design Project	5.50
Mining Elective		6.00
Total Units		**36.50**

Elective Requirements

Students in all options (N1-Mine-Mine, N2-Mineral Processing Environmental, N3-Mine-Mechanical) must take a minimum of 9 units from the approved Elective lists.

Mining Engineering: Electives (https://www.queensu.ca/academic-calendar/engineering-applied-sciences/academic-plans/mining/mining-engineering-electives/)

Complementary Studies

Refer to the Complementary Studies section of this calendar for details regarding the requirements for all Engineering programs. For the Mining Program, the Engineering Economics course is MINE 330 Mineral Industry Economics Mineral Industry Economics. The Communications course is APSC 293 Engineering Communications Engineering Communications. Included in the core Mining program is an additional 93 units of Professional Issues (equivalent to Complementary Studies List B) in MINE 422 Mining And Sustainability, MINE 431 Life-Cycle Assessment for Green Technologies, and MINE 459 Risk and Reliability Analysis for Industrial Asset Management, Health & Safety. In addition to this core content, Mining students must take at least 6 additional credits of Complementary Studies, of which at least 3 credits must be from List A and the remaining 3 credits can be from List A or B.