

MINING ENGINEERING: ELECTIVES

**Note - Information on this page may be out of date

**Please view the current 2022-2023 Academic Calendar here: <https://calendar.engineering.queensu.ca/index.php> (<https://calendar.engineering.queensu.ca/>)

Elective Requirements

Students in all three options (N1, N2, N3) must take a minimum of 12 credits of Elective courses from the approved Elective list.

Of these 12 credits, at least 6 credits must be from the relevant Mining Electives List A (-N1, -N2, or -N3). The remaining credits can be from Mining Electives List B, or also from the relevant Mining Electives List A (-N1, -N2, or -N3).

Elective List

- Some of the courses listed in this table also appear on Complimentary Studies List "A". Please note that a course can only count as either an Elective or a Complementary Studies List A (not as both).
- Please note that it is the student's responsibility to check SOLUS to determine if a course is being offered during a particular year and if it is, in which term it is being held. Course availability and the term in which it is held can change on a yearly basis.

Mining Electives List A - N1

Code	Title	Units
APSC 250	Biology Through an Engineering Lens	3.50
CHEE 319	Process Dynamics & Control	3.50
MECH 350	Automatic Control	3.50
MNTC P07	Surveying Principles	3.00
MNTC 415	Metal Extraction Processes	4.00
MNTC 418	Sustainability and the Environment	3.00
MNTC 419	Mine Supervision and Project Management	3.00
MNTC 423	Geomatics	3.00
LAW 204	Corporate Law	3.00
MINE 451	Chemical Extraction Of Metals	4.00

Mining Electives List A - N2

Code	Title	Units
APSC 250	Biology Through an Engineering Lens	3.50
LAW 204	Corporate Law	3.00
MNTC P07	Surveying Principles	3.00

MNTC 311	Ore Body Modelling and Resource Estimation	4.50
MNTC 316	Ventilation and Hydraulics	4.00
MNTC 413	Surface Mine Design	4.00
MNTC 414	Underground Mine Planning	4.00
MNTC 418	Sustainability and the Environment	3.00
MNTC 419	Mine Supervision and Project Management	3.00
MNTC 423	Geomatics	3.00

Mining Electives List A - N3

Code	Title	Units
APSC 250	Biology Through an Engineering Lens	3.50
LAW 204	Corporate Law	3.00
MINE 451	Chemical Extraction Of Metals	4.00
MNTC P07	Surveying Principles	3.00
MNTC 311	Ore Body Modelling and Resource Estimation	4.50
MNTC 415	Metal Extraction Processes	4.00
MNTC 418	Sustainability and the Environment	3.00
MNTC 419	Mine Supervision and Project Management	3.00
MNTC 423	Geomatics	3.00

Mining Electives List B

Code	Title	Units
MINE 300 series	Any 3rd-year non-core mining course offered by the mining department	
MINE 400 series	Any 4th-year non-core mining course offered by the mining department	
MINE 800 series	Any graduate mining course offered by the mining department and with approval of the School of Graduate Studies	
Languages Any language course from List "A" and List "C" selections. Note: Student's language skills will be evaluated prior to the approval of any language course		
APSC 250	Biology Through an Engineering Lens	3.50
APSC 303	Professional Internship	3.50
APSC 400	Technology, Engineering & Management (TEAM)	7.00
APSC 480	Multi-disciplinary Industry	9.00
CHEE 302	Technical Entrepreneurship	3.50
CHEE 310	(Deleted)	3.50
CHEE 323	Industrial Catalysis	3.50
CHEE 330	Heat And Mass Transfer	3.50



CHEE 342	Environmental Biotechnology	3.50	ECON 290	Environmental Economics and Assessment	3.00
CHEE 363	Electrochemical Engineering	3.50	ELEC 221	Electric Circuits	4.25
CHEE 371	Mitigation of Industrial Pollution	3.50	ELEC 252	Electronics I	4.25
CHEE 380	Biochemical Engineering	3.50	ELEC 270	Discrete Mathematics with Computer Engineering App	3.50
CHEE 412	Transport Phenomena	3.50	ELEC 271	Digital Systems	4.00
CHEE 414	Foundations of the Oil and Gas Industry	3.50	ELEC 274	Computer Architecture	4.00
CHEE 418	Strategies Proc Investigations	3.50	ELEC 278	Fundamentals Of Information Structures	4.00
CHEE 434	Process Control II	3.50	ELEC 280	Fundamentals of Electromagnets	3.75
CHEE 460	Appl Surface & Colloid Science	3.50	ELEC 333	Electric Machines	4.25
CIVL 215	Materials For Civil Engineers	4.50	ELEC 431	Power Electronics	3.25
CIVL 340	Geotechnical Engineering 1	3.75	ENSC 201	Environmental Toxicology and Chemical Risks	3.00
CIVL 341	Geotechnical Engineering 2	4.00	ENSC 301	Environmental Assessment	3.00
CIVL 371	Groundwater Engineering	3.75	ENSC 305	Social Environments	3.00
CIVL 471	Subsurface Contamination	4.00	ENSC 321	Environmental Justice in Global Context	3.00
COMM 200	Business Fundamentals	3.00	ENSC 390	Sustainability	3.00
COMM 211	Financial Accounting	3.00	GEOE 221	Geological Engineering Field Methods	5.00
COMM 212	Management Accounting	3.00	GEOE 249	Geophysical Char Of The Earth	3.50
COMM 221	Introduction To Finance	3.00	GEOE 319	Applied Geophysics	4.50
COMM 231	Fundamentals of Marketing	3.00	GEOE 333	Terrain Evaluation	4.00
COMM 251	Organizational Behaviour	3.00	GEOE 365	Geochemical Characterization Of The Earth	4.00
COMM 305	Introduction To Entrepreneurship	3.00	GEOE 463	Spatial Information Management in the Geosciences	3.50
COMM 310	Environmental Accounting	3.00	GEOE 475	Exploration and Environmental Geochemistry	4.30
COMM 311	Fin Acctng Pract Prin & Concep	3.00	GEOE 481	Advanced Structural Analysis	3.50
COMM 322	Advanced Corporate Finance	3.00	GPHY 242	Remote Sensing I: Remote Sensing of the Environment	3.00
COMM 323	Corporate Financial Planning	3.00	GPHY 243	Geographic Information Science	3.00
COMM 324	Investments & Portfolio Management	3.00	GPHY 304	Northern and Arctic Environments	3.00
COMM 325		3.00	GPHY 312	Watershed Hydrology	3.00
COMM 328	International Finance	3.00	GPHY 342	Remote Sensing II: Digital Image Processing	3.00
COMM 351	Leadership	3.00	GPHY 345	Spatial Analysis	3.00
COMM 353	Managing Across Cultures	3.00	GPHY 346	GIS and Modelling for Environmental Applications	3.00
COMM 357	Interpersonal Skills For Managers	3.00	GPHY 351	Geographies of Indigenous and Settler Relations	3.00
COMM 359	Work & Social Inequities	3.00	LAW 201	Introduction to Canadian Law	3.00
COMM 375	International Business and the Nonmarket Environment	3.00	LAW 207	International Law	3.00
COMM 381	Business Law I	3.00	LAW 202	Aboriginal Law	3.00
COMM 382	Business Law II	3.00	LAW 203	Workplace Law	3.00
COMM 408	Sustainability Strategies and Practices	3.00	LAW 206	Intellectual Property	3.00
COMM 409		3.00	MECH 270	Materials Science and Engineering	3.50
COMM 495	Project Management	3.00			
ECON 110	Principles of Economics	6.00			
ECON 111	Introductory Microeconomics	3.00			
ECON 112	Introductory Macroeconomics	3.00			
ECON 239	Economic Development	3.00			
ECON 240	Canadian Tax Policy	3.00			
ECON 261	Canadian Labour Relations	3.00			



MECH 323	Machine Design I	4.50
MECH 370	Prin Of Materials Processing	3.50
MECH 435	Internal Combustion Engines	3.50
MECH 456	Introduction To Robotics	3.50
MECH 465	Computer Aided Design	3.50
MECH 495	Ergonomics And Design	3.50