

# Bachelor of Science - Geology 2021-22

✓ YEAR ONE - Fall		✓ YEAR ONE - Winter	
✓	GEOL 1101 - The Dynamic Earth	✓	GEOL 1103 - Earth Through Time
	CHEM 1201 - General Chemistry – Structure and Bonding		MATH 1203 - Linear Algebra for Scientists and Engineers
	MATH 1200 - Calculus for Scientists I		COMP 2001 - Computer-Based Problem Solving for the Sciences
	PHYS 1201 - Classical Physics I		GNEED Foundation Cluster 4: one of GNEED 1401, 1403 or 1404
	GNEED Foundation Cluster 1: one of GNEED 1101 or 1103		GNEED Foundation Cluster 2: one of GNEED 1201, 1202, or 1203

Many courses are prerequisites for upper year courses. Check prerequisites at <http://catalog.mtroyal.ca/>

✓ YEAR TWO - complete the following courses*	
✓	GEOL 2300 - Introduction to Geological Field Methods I (6 days in August, 1.5 CR)
	GEOL 2103 - Minerals and Rocks - <i>Fall</i>
	GEOL 2111 - Crystallography and Optical Mineralogy - <i>Fall</i>
	GEOL 2105 - Structural Geology - <i>Winter</i>
	GEOL 2107 - Paleontology - <i>Winter</i>
	GEOL 2109 - Stratigraphy and Sedimentation - <i>Winter</i>
	CHEM 1202 - General Chemistry: Introduction to Quantitative Chemistry
	PHYS 1202 - Classical Physics II
	GNEED Foundation Cluster 3: one of GNEED 1301, 1303, or 1304
	GNEED Tier 2 Cluster2:
	GNEED Tier 2 Cluster 3:

\*The *Fall/Winter* notations indicate when you should be planning to take core courses. Certain core courses may have prerequisites that need to be completed in a particular sequence to avoid delays in graduation. In addition, some courses are only offered in one semester. If there is no notation, this course should be completed in year two but may be offered in either semester. It is your responsibility to plan your schedule and make sure that you are meeting necessary requirements. Consider consulting your advisor if you are uncertain or require clarification.

YEAR THREE - complete the following courses			
✓	<b>CORE Course Requirements:</b>	✓	<b>General Education and Elective:</b>
	GEOL 3300 - Geological Field Methods II (5 days in August, 1.5 CR)		GNEED Tier 2 Cluster 4:
	GEOL 3115 - Exploration Geophysics		GNEED Tier 3 (Cluster ___):
	GEOL 4105 - Hydrogeology		Elective course:
	GEOL 4107 - History of Western Canada <b>or</b> GEOL 4607 - Canadian Cordillera		
	GEOL 3103 - Igneous Petrology		
	GEOL 3111 - Metamorphic Petrology		
	GEOL 3113 - Geochemistry		
	GEOL 4601 - Plate Tectonic Regimes		

Take two Tier 3 courses from a minimum of two different clusters, take the third Tier 3 course from any cluster

YEAR FOUR - complete the following courses			
✓	<b>CORE Course Requirements:</b>	✓	<b>General Education and Elective requirement:</b>
	GEOL 4300 - Advanced Geological Field Methods (2-weeks in August)		GNEED Tier 3 (Cluster ___):
	GEOL 3107 - Geomorphology		GNEED Tier 3 (Cluster ___):
	GEOL 3109 - Sedimentary Petrology		
	GEOL 4101 - Advanced Topics in Sedimentary Geology		
	GEOL 4109 - Petroleum Geology		
	GEOL 4111 - Ore Deposits and Economic Geology		
	MATH 2235 - Statistics with Applications in Geology		

## PLEASE READ:

**Prerequisites and course descriptions: can be found in the Academic Calendar under the 'courses' link at <http://catalog.mtroyal.ca/>**

**General Education** approved courses, otherwise known as "GNEED requirements" are designed to give you a well-rounded knowledge base and are organized into 4 thematic clusters. Each Cluster has 3 levels: tier 1 (foundation), tier 2 and tier 3.

Cluster 1: Numeracy & Scientific Literacy  
Cluster 2: Values, beliefs & Identity  
Cluster 3: Community & Society  
Cluster 4: Communication

Students must take a foundation level course from each of the four clusters, three tier 2 GNEEDs (one from each of cluster 2, 3, and 4), and three tier 3 GNEEDs from at least two clusters, for a total of 10 GNEED courses.

For more information and a list of GNEED courses, visit [mtroyal.ca/gened](http://mtroyal.ca/gened) and click 'courses' on the left-hand navigation.

**Junior courses** are courses at the 1000 level. Students are allowed a maximum of sixteen junior courses for graduation purposes.

**Electives:** an elective is any three-credit course. It is advised that students select a senior level elective to avoid exceeding the sixteen junior course limit.

**Advising Plan:** This a suggested sequence for taking the required courses for your major. This plan factors in prerequisite requirements and will allow you to complete your degree in four years, provided you complete five courses per semester. This is just one example of how you can complete your degree requirements; you may find that a different sequence or a lighter course load works better for you.

To be considered a full-time student, students must be enrolled in a minimum of three, 3-credit courses.

Mount Royal's Geology program meets the Geoscience knowledge and experience requirements for professional registration in Canada. Please see the APEGA website for more information.

**APEGA: The Association of Professional Engineers and Geoscientists of Alberta.**