

Bachelor of Science - Chemistry 2020-21

STUDENT NAME:

STUDENT MRU ID #:

ADMISSION YEAR/CATALOGUE YEAR:

PLEASE READ:

General Education: General Education approved courses, otherwise known as “GNED 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 from each of the four clusters, three tier 2 GNEDs (one from each of cluster 2, 3, and 4), and a total of three tier 3 GNEDs from at least two clusters, for a total of 10 GNED courses.

For more information and a list of GNED courses, visit mroyal.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 in this major select senior level electives wherever possible to avoid exceeding the sixteen junior course limits.

Prerequisites and course descriptions: can be found in the Academic Calendar under the ‘courses’ link at <https://catalog.mroyal.ca/>

Advising Plan: Students are strongly advised to follow the progression of classes and course load indicated below. Deviation from the recommended course pattern may result in scheduling conflicts. To be considered full time a student must be enrolled in a minimum of 9 credit hours or three, 3- credit courses.

^F Indicates that the course runs in Fall semester only.

^W Indicates that the course runs in Winter semester only.

^{FW} Indicates that the course is offered in both Fall and Winter semester.

General Chemistry Options: (choose 7)

CHEM3202- Spectroscopic Methods F
CHEM 3602 – Elementary Quantum Mechanics W
CHEM 4701 – Molecular Modelling F
CHEM 5200 – CSL Project W
MATH 1203 – Linear Algebra FW
MATH 3200 – Mathematical Methods W
PHYS 2201 – Acoustics, Optics & Radiation F

Senior General Chemistry Options: (choose 3)

BCEM 4212 – Biochemical Pharmacology FW
CHEM 4213 – Drug Discovery W
CHEM 4411 – Organometallic Chemistry W
CHEM 4602 – Advanced Quantum Mechanics F
CHEM 4603 – Symmetry and Spectroscopy W
CHEM 4801 – Nuclear Chemistry

Must choose one of:

CHEM 4103 – Advanced Organic: Synthesis F
CHEM 4301 – Advanced Analytical Chemistry

Community Service Learning requires three courses with the ‘CSL’ designation, learn more here: mru.ca/csl – your Chemistry major may qualify.

YEAR ONE - FALL		
CHEM 1201 ^{FW}	General Chemistry - Structure and Bonding	
MATH 1200 ^{FW}	Calculus for Scientists I	
PHYS 1201 ^{FW}	Classical Physics I	
GNED Foundation ^{FW} Cluster 1	One of: GNED 1101 or 1103	
GNED Foundation ^{FW} Cluster 4	One of: GNED 1401 or 1404	
YEAR ONE - WINTER		
CHEM 1202 ^{FW}	General Chemistry - Introduction to Quantitative Chemistry	
MATH 2200 ^{FW}	Calculus for Scientists II (Pre-req: MATH 1200)	
PHYS 1202 ^{FW}	Classical Physics II (Pre-req: MATH 1200 and PHYS 1201)	
COMP 2001 ^{FW}	Programming for the Sciences (Pre-req: GNED Foundation Cluster 1)	
GNED Foundation ^{FW} Cluster 2	One of: GNED 1201, 1202, 1203 or 1204	
YEAR TWO – FALL		
CHEM 2101 ^{FW}	Organic Chemistry I (Pre-req: CHEM 1201 & 1202)	
CHEM 2301 ^F	Analytical Chemistry I (Pre-req: CHEM 1202 & MATH 1200)	
CHEM 2601 ^F	Physical Chemistry (Pre-req: CHEM 1201 & 1202, MATH 1200 and PHYS 1201)	
General Chemistry Option	Choose from list in margins – check prerequisites!	
General Chemistry Option	Choose from list in margins – check prerequisites!	
YEAR TWO – WINTER		
CHEM 2102 ^{FW}	Organic Chemistry II (Pre-req is CHEM 2101)	
BCEM 2201 ^{FW}	General Biochemistry (Pre-req: CHEM 2101)	
CHEM 2302 ^W	Analytical Chemistry II (Pre-req is CHEM 2302)	
General Chemistry Option	Choose from list in margins – check prerequisites!	
GNED Foundation ^{FW} Cluster 3	One of: GNED 1301, 1302, 1303 or 1304	
YEAR THREE – FALL		
CHEM 2401 ^F	Inorganic Chemistry (Pre-req: CHEM 1201 and 1202)	
CHEM 3200 ^F	Research Methods in Chemistry (Pre-req is: CHEM 2302 and COMP 2001)	
General Chemistry Option	Choose from list in margins – check prerequisites!	
GNED Tier 2 Cluster 2 ^{FW}		
GNED Tier 2 Cluster 3 ^{FW}		
YEAR THREE – WINTER		
CHEM 3601 ^W	Thermodynamics (Pre-req: CHEM 1201 & 1202, PHYS 1202, MATH 2200)	
General Chemistry Option	Choose from list in margins – check prerequisites!	
General Chemistry Option	Choose from list in margins – check prerequisites!	
GNED Tier 2 Cluster 4 ^{FW}		
Elective		
YEAR FOUR – FALL		
General Chemistry Option	Choose from list in margins – check prerequisites!	
Senior General Chemistry Options	Choose from list in margins – check prerequisites!	
GNED Tier 3		
GNED Tier 3		
Elective		
YEAR FOUR – WINTER		
Senior General Chemistry Options	Choose from list in margins – check prerequisites!	
Senior General Chemistry Options	Choose from list in margins – check prerequisites!	
GNED Tier 3		
Elective		
Elective		

This document is only intended to be a guide for students and should be used together with the Mount Royal University Academic Calendar which states academic policies and degree requirements. Be sure to consult with your Academic Advisor to confirm graduation requirements or if you have any questions.