### Approved Science Options: 2016-2017 Academic Calendar

#### Physical Sciences (B 233)
- ASTR 1001 – Planetary Astronomy
- CHEM 1202 – General Chemistry – Introduction to Quantitative Chemistry
- CHEM 1203 – The Organic Chemistry of Life
- CHEM 2101 – Organic Chemistry I
- CHEM 2102 – Organic Chemistry II
- CHEM 2205 – Computers in Chemistry
- CHEM 2211 – The Chemistry Between Us
- CHEM 2301 – Analytical Chemistry I: Quantitative Analysis
- CHEM 2302 – Analytical Chemistry II: Introduction to Instrumental Analysis
- CHEM 3103 – Advanced Organic Synthesis
- CHEM 3201 – Spectroscopy
- CHEM 3401 – Solid State
- CHEM 3601 – Thermodynamics
- CHEM 3602 – Elementary Quantum Mechanics
- CHEM 3801 – Nuclear Chemistry
- CHEM 3802 – The Science and Politics of Nuclear Energy
- CHEM 4213 – Drug Discovery
- CHEM 4701 – Molecular Modeling
- CHEM 5201 – Independent Projects I
- CHEM 5202 – Independent Projects II
- PHYS 1202 – Classical Physics II
- PHYS 1209 – Elementary Modern Physics
- PHYS 2201 – Acoustics, Optics and Radiation
- PHYS 2203 – Electromagnetism
- PHYS 3103 – Introduction to Biophysics
- PHYS 3401 – Solid State
- PHYS 3601 – Thermodynamics
- PHYS 3602 – Elementary Quantum Mechanics

#### Biological Sciences (B 344)
- Bcem 2201 – General Biochemistry
- Bcem 3201 – Protein Biochemistry
- Bcem 3202 – Enzymes and Metabolic Systems
- Bcem 4212 – Biochemical Pharmacology
- BIOL 2101 – Genetics
- BIOL 2102 – How They Do It: Patterns of Reproduction
- BIOL 2105 – Microbiology I
- BIOL 2202 – Cellular and Molecular Biology
- BIOL 2203 – Human Anatomy
- BIOL 2204 – Zoology II: Deuterostomes
- BIOL 2213 – Principles of Ecology and Evolution
- BIOL 2214 – Zoology I: Protocomes
- BIOL 2309 – Plants and People
- BIOL 3101 – Molecular Genetics
- BIOL 3102 – Intermediate Cell Biology
- BIOL 3103 – Introduction to Biophysics
- BIOL 3104 – Human Physiology I
- BIOL 3105 – Microbiology II
- BIOL 3106 – Evolutionary Biology
- BIOL 3107 – Evolution in Health and Disease (formerly BIOL 4204)
- BIOL 3108 – Conservation Biology
- BIOL 3203 – Genomes
- BIOL 3204 – Histology
- BIOL 3205 – Human Physiology II
- BIOL 3301 – Animal Behaviour
- BIOL 3316 – Human Adaptation to Environmental Stress
- BIOL 4207 – Womb to Tomb: Embryology, Development, and Aging
- BIOL 5201 – Independent Projects I
- BIOL 5202 – Independent Projects II

Note: Courses that are italicized are under development.

#### Mathematics and Computer Science (B 175)
- COMP 1502 – Programming II: Object Oriented Programming
- COMP 2008 – Scientific Computing I
- COMP 2503 – Programming III: Data Structures
- COMP 2511 – Web I: Client Development
- COMP 2521 – Database I: Data Modeling and Query Languages
- COMP 2531 – Computer Architecture and Operating Systems
- COMP 2541 – Systems Analysis
- COMP 3008 – Scientific Computing II
- COMP 3012 – Robotics
- COMP 3313 – Introduction to Computability
- COMP 3504 – Programming IV: Software Engineering
- COMP 3512 – Web II: Web Application Development
- COMP 3532 – System Administration and Maintenance
- COMP 3533 – Network Infrastructure and Security
- COMP 3551 – GUI Development
- COMP 3553 – Human Computer Interaction
- COMP 4513 – Web III: Advanced Web Development
- COMP 4522 – Database II: Advanced Databases
- COMP 4535 – Computer Security
- COMP 4543 – Project Management and Quality Assurance
- COMP 4545 – Information Systems Organization
- COMP 4555 – Games Development
- MATH 1202 – Calculus for Scientists II
- MATH 1203 – Linear Algebra for Scientists and Engineers
- MATH 1271 – Discrete Mathematics
- MATH 2101 – Abstract Algebra
- MATH 2301 – Calculus III
- MATH 2302 – Calculus IV
- MATH 2307 – Differential Equations I
- MATH 2311 – Linear Algebra II
- MATH 2321 – Mathematical Probability
- MATH 2323 – Introduction to Mathematical Statistics
- MATH 3101 – Numerical Analysis
- MATH 3303 – Topics in Applied Mathematics and Data Analysis
- MATH 4101 – Abstract Algebra II
- MATH 4102 – Analysis I
- MATH 4103 – Complex Analysis

#### Earth Sciences (B 248)
- GEOG 1101 – Physical Environment
- GEOG 1103 – Human Environment
- GEOG 1105 – Introduction to Mapping, GIS and Remote Sensing
- GEOG 2107 – Weather and Climate
- GEOG 2108 – Ecological Land Classification and Soils
- GEOG 2111 – Earth’s Changing Surface
- GEOG 2437 – Biogeography
- GEOG 2445 – Environmental Problems and Resource Management
- GEOG 2553 – Geographic Information Systems
- GEOG 2555 – Introduction to Remote Sensing
- GEOG 3107 – Advanced Biogeography
- GEOG 3109 – Overseas Field Study in Physical Geography
- GEOG 3309 – Overseas Field Study in Human Geography
- GEOG 3445 – Global Environmental Issues
- GEOG 3553 – Spatial Analysis and GIS
- GEOL 1101 – Physical Geology
- GEOL 1103 – Historical Geology
- GEOL 1151 – Introduction to the Petroleum Industry
- GEOL 2103 – Minerals and Rocks
- GEOL 2107 – Paleontology
- GEOL 2109 – Stratigraphy and Sedimentology
- GEOL 2151 – Environmental Geology and Earth Resources
- GEOL 2153 – Natural Hazards and Disasters
- GEOL 2155 – Geological History of Life
- GEOL 2157 – Water: Geologic and Geographical Issues
- GEOL 3107 – Geomorphology
- GEOL 3115 – Exploration Geophysics
- GEOL 4105 – Hydrogeology
- GEOL 4107 – Geology of Western Canada
- GEOL 4109 – Petroleum Geology

To properly plan your courses, semesters and degree program please check with the Departments directly for an indication of when a course normally runs.

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.