Bachelor of Science - Computer Science 2020-21

STUDENT NAME:

STUDENT ID #:

ADMISSION YEAR/CATALOGUE YEAR:

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Faculty of Science and Technology

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 course from each of the four clusters, three tier 2 GNEDs (one from each of cluster 2, 3, and 4), and three tier 3 GNEDs from at least two clusters, for a total of 10 GNED courses.

Junior courses are courses at the 1000 level. Students are allowed a maximum of 16 junior courses.

Prerequisites & Course descriptions can be found in the Academic Calendar or by visiting: catalog.mtroyal.ca under 'courses'.

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 5 courses per semester. This is just one example of how you can complete your degree requirements; you may find that a different sequence or smaller course load works better for you. To be considered full time a student must be enrolled in a minimum of three, 3-credit courses.

 $^{\rm F}$ Indicates that the course normally runs in Fall semester. $^{\rm W}$ Indicates that the course normally runs in Winter semester.

 $^{\rm FW}$ Indicates that the course normally runs both Fall and Winter.

*Approved Options: (Choose three)

COMP 2521: Database I: Data Mod. & Query Language ^{FW} COMP 3533: Network Infrastructure and Security ^{FW} COMP 3553: Human Computer Interaction ^W COMP 3625: Artificial Intelligence (2021-22 earliest) MATH 2101: Abstract Algebra ^{every other W}

**Approved Senior Options: (Choose three)

COMP 4555: Games Development ^F COMP 4633: Software Engineering II (2021-22 earliest) COMP 4635: Distributed Systems ^W COMP 4622: Advanced Databases ^{every other W} (2021-22 earliest) COMP 4630: Machine Learning (2021-22 earliest) COMP 5690: Senior Computer Science Project ^{FW}

***Approved cognate courses: see page 2

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

Course offerings in Fall or Winter semesters: to properly plan your courses, semesters and degree program please check with the departments directly for an indication of when a course is *normally* offered.

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 of if you have any

Approved Cognate Courses:

Astronomy:

ASTR 2107: Celestial Mechanics and Relativity MATH 2200: Calculus for Scientists II PHYS 1201: Classical Physics I One of: ASTR 1301: Planetary Astronomy ASTR 1303: Stars, Galaxies, and Cosmology

Biology:

BIOL 1202: Introduction to Cell Biology ^{FW} BIOL 1204: The Evolution of Eukaryotes ^{FW} Two of: BIOL 2101: Genetics ^W BIOL 2202: Cellular and Molecular Biology ^{FW} BIOL 2213: Principles of Ecology and Evolution ^F

Chemistry:

CHEM 1201: General Chemistry – Structure and Bonding ^{FW} CHEM 1202: General Chemistry – Introduction to Quantitative Chemistry ^{FW} CHEM 2301: Analytical Chemistry I: Quantitative Analysis ^F CHEM 2205: Computers in Chemistry (not currently running – please consult with Advisors about an appropriate substitution)

Geographic Information Systems:

GEOG 1101: The Physical Environment ^{FW} GEOG 1105: Intro to Mapping, GIS and Remote Sensing GEOG 2553: Geographic Information Systems ^{FW} GEOG 3553: Spatial Analysis and GIS ^W

Geology:

GEOL 1101: The Dynamic Earth ^F GEOL 1103: Earth Through Time ^W GEOL 2109: Stratigraphy and Sedimentation ^W GEOL 2151: Environmental Geology and Earth Resources

Mathematics (choose four from): MATH 2101: Abstract Algebra ^{every other W} MATH 2200: Calculus for Scientists II ^{FW} MATH 2307: Differential Equations I (not currently running – please consult with Advisors about an appropriate substitution) MATH 2311: Linear Algebra II ^{every other W opposite 2101} MATH 3200: Mathematical Methods ^W MATH 3101: Numerical Analysis ^{every other W}

Physics:

MATH 2200: Calculus for Scientists II ^{FW} PHYS 1201: Classical Physics I ^{FW} PHYS 1202: Classical Physics II ^{FW} PHYS 2201: Acoustics, Optics, and Radiation ^F