

# BCIS – Computer Information Systems 2023-24

## PLEASE READ:

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

**General Education:** General Education courses 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 MUST be from Cluster 1), and three tier 3 GNEDs from at least two clusters, for a total of 10 GNED courses. Visit [mru.ca/gned](http://mru.ca/gned) for more information and a list of GNED courses.

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

**Electives** are any 3-credit course that is not required in the major or GNED components. It is advised that courses from the 2XXX+ are chosen as electives to avoid exceeding the junior limit

**COOP/Work Experience:** Students must complete the Orientation to Co-operative Education course (COOP 0001) prior to the mandatory work term. To be eligible for a work term students must have completed the prerequisite courses and must obtain a minimum cumulative GPA. For additional information, please contact Robin Filmer, Work Experience Coordinator at [rfilmer@mtroyal.ca](mailto:rfilmer@mtroyal.ca) or 403-440-6844.

**Advising Plan:** This is 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.

*It is your responsibility to plan your schedule and make sure that you are meeting necessary requirements. Consult with your advisor if you are uncertain or require clarification.*

### Approved Senior Business Options, choose two:

All students must complete **two** (2) Approved Senior Business Options as part of their requirements. Students may choose any 3000-level or higher course offered by the Bissett School of Business.

### Senior Business or CS Options, choose two:

All students must complete **two** (2) additional approved senior options. Students can choose from the list of approved computer science options above or from any 3000-level or higher course offered by the Bissett School of Business.

| ✓ | YEAR ONE - Fall  | ✓ | YEAR ONE - Winter   |
|---|--|---|---|
|   | COMP 1701 – Introduction to Problem Solving and Programming  |   | COMP 1502 - Programming II                                      |
|   | GNED Foundation Cluster 1: one of GNE1101 or GNE1103   |   | COMP 2511 - Web I: Client Development                           |
|   | GNED Foundation Cluster 4: one of GNE1401, 1403 or GNE1404   |   | MGMT 3210 - Business Communication ( <i>prereq is GNE14XX</i> ) |
|   | MATH 1505 - Puzzling Adventures in Mathematics ( <i>Fall or Winter</i> )   |   |   |
|   | MKTG 2150 - Introduction to Marketing <b>or</b> LSCM 2201 - Introduction to Logistics & Supply Chain Management ( <i>Fall or Winter</i> )                              |   |   |
|   | MGMT 2130 - Mgmt. Principles & Practices <b>or</b> ENTR 2301 - Innovation & Entr. Experience <b>or</b> SINV 2201- Intro to Social Innovation ( <i>Fall or Winter</i> ) |   |   |
|   | GNED Foundation Cluster 3: one of GNE1301, 1303, or 1304 ( <i>Fall or Winter</i> )   |   |   |

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

| ✓ | YEAR TWO – Complete the following courses   |  |   |
|---|---|--|---|
|   | ACCT 2121 - Financial Accounting Concepts   |  | HRES 2170 – Introduction to Human Resources                               |
|   | COMP 2503 - Programming III: Data Structures  |  | COMP 2521 - Database I: Data Modelling & Query Languages                  |
|   | COMP 2531 - Computer Architecture and Operating Systems                                     |  | COMP 2541 - Systems Analysis  |
|   | GNED Foundation Cluster 2: one of GNE1201, 1202, or 1203                                    |  | GNED Tier 2 Cluster 2, 3, or 4: <i>no more than one from each cluster</i> |
|   | GNED Tier 2 any Cluster not yet taken   |  | GNED Tier 2 Cluster 1:  |
|   | COOP 0001* - Orientation to Cooperative Education ( <i>must be taken before COMP 3591</i> ) |  |   |

| ✓ | YEAR THREE – Complete the following courses     |  |  |
|---|---|--|--|
|   | COMP 3532 - System Admin & Maintenance          |  | COMP 3533 - Network Infrastructure           |
|   | COMP 3512 - Web II: Web Application Development |  | COMP 3309 – Information Technology & Society |
|   | Approved Senior CS Option                       |  | Approved Senior CS Option                    |
|   | Approved Senior Business Option                 |  | GNED Tier 3 (Cluster ____):                  |
|   | GNED Tier 3 (Cluster ____):                     |  | GNED Tier 3 (Cluster ____):                  |
| ✓ | YEAR THREE – Spring / Summer*                   |  |  |
|   | COMP 3591 – Mandatory Work Experience           |  |  |

\*This 4-month work term can take place after your second OR third year of study.

| ✓ | YEAR FOUR – Complete the following courses         |  |   |
|---|--|--|---|
|   | COMP 4543 - Project Management & Quality Assurance |  | Approved Senior Business Option:              |
|   | Approved Senior CS Option:                         |  | Approved Senior CS <b>or</b> Business Option: |
|   | Approved Senior CS Option:                         |  | Approved Senior CS <b>or</b> Business Option: |
|   | Elective course                                    |  | Elective course                               |
|   | Elective course                                    |  | Elective course                               |

### Approved Senior CS Options, choose four:

COMP 3504 - Programming IV: Software Engineering  
COMP 3551 - GUI Development  
COMP 3505 - Software Testing  
COMP 3523 - Applied Machine Learning  
COMP 3654 - Usable Privacy and Security  
COMP 4513 - Web III: Advanced Web Development  
COMP 4522 – Database II: Advanced Databases  
COMP 4535 - Computer Security  
COMP 4545 - Information Systems Organization  
COMP 4555 - Games Development  
COMP 5590 - Senior Project

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 questions at [scitechadvising@mtroyal.ca](mailto:scitechadvising@mtroyal.ca)