

# COMPUTING - MINOR (SCIENCE)

## COMP-Z

**Subject:** Administered by the School of Computing.

**Plan:** Consists of 48.00 units as described below.

**Program:** The Plan, in combination with a Major plan in another subject, and with sufficient electives, will lead to an Honours Bachelors Degree.

Code	Title	Units
<b>1. Core</b>		
<b>A. Complete the following:</b>		
CISC 121	Introduction to Computing Science I	3.00
CISC 124	Introduction to Computing Science II	3.00
<b>B. Complete the following:</b>		
CISC 203	Discrete Mathematics for Computing II	3.00
CISC 204	Logic for Computing Science	3.00
CISC 221	Computer Architecture	3.00
CISC 223	Software Specifications	3.00
CISC 235	Data Structures	3.00
CISC 360	Programming Paradigms	3.00
<b>2. Option</b>		
<b>A. Complete 3.00 units from the following:</b>		<b>3.00</b>
CISC at the 300-level or above		
CISC_Subs at the 300-level or above		
COCA at the 300-level or above		
COGS at the 300-level or above		
<b>B. Complete 9.00 units from the following:</b>		<b>9.00</b>
CISC at the 200-level or above		
CISC_Subs at the 200-level or above		
COCA at the 200-level or above		
COGS at the 200-level or above		
<b>3. Supporting</b>		
<b>A. Complete 6.00 units from the following:</b>		<b>6.00</b>
CISC 102	Discrete Mathematics for Computing I & MATH 112 and Introduction to Linear Algebra	
CISC 102	Discrete Mathematics for Computing I & MATH 111 and Linear Algebra	
MATH 110	Linear Algebra	
<b>B. Complete 6.00 units from the following:</b>		<b>6.00</b>
MATH 120	Differential and Integral Calculus	
MATH 121	Differential and Integral Calculus	
MATH 123	Differential and Integral Calculus I & MATH 124 and Differential and Integral Calculus II	
<b>Total Units</b>		<b>48.00</b>

## 4. Notes

A. Students with no programming experience should review the Introductory Courses (<https://www.queensu.ca/academic-calendar/arts-science/schools-departments-programs/computing/>) paragraph included on the School of Computing overview page in the *Calendar*.

B. A maximum of 6.00 units from courses offered by other Faculties and Schools may be counted toward the program and/or Plan requirements. This includes courses in BMED, COMM, GLPH, HSCI, LAW, NURS, and courses in the Faculty of Engineering and Applied Science.

## Computing Course List

The following list contains courses offered through other Departments. In accordance with Academic Regulation **2.6** (Access to Classes), students do not have enrolment priority in all of these courses. Access to these courses may only be made available during the Open Enrolment period, and then only if space permits.

## CISC\_Subs

Code	Title	Units
<b>Courses in other departments usable as CISC options</b>		
COMM 365	Advanced Business Decision Modeling	3.00
ELEC 470	Computer System Architecture	3.00
MATH 272	Applications of Numerical Methods	3.00
MATH 337	Stochastic Models in Operations Research	3.00
MATH 401	Graph Theory	3.00
MATH 402	Enumerative Combinatorics	3.00
MATH 434	Optimization Theory with Applications to Machine Learning	3.00
MATH 474	Information Theory	3.00