

# COMPUTER SCIENCE, B.C.SC., HONOURS

## Degree Requirements

### Honours (Including Co-operative Option if Selected) <sup>1,2,3</sup>

Course	Title	Hours
<b>Year 1</b>		
COMP 1010	Introductory Computer Science 1 <sup>4</sup>	3
COMP 1020	Introductory Computer Science 2 (B)	3
One of:		3
MATH 1220	Linear Algebra 1 (C+) <sup>4</sup>	
MATH 1300	Vector Geometry and Linear Algebra (C+) <sup>4</sup>	
One of:		3
MATH 1230	Differential Calculus (C+) <sup>4</sup>	
MATH 1500	Introduction to Calculus (C+) <sup>4</sup>	
MATH 1700	Calculus 2 (C) <sup>4</sup>	3
<b>Hours</b>		<b>15</b>
<b>Years 1-2</b>		
One of:		3
STAT 1000	Basic Statistical Analysis 1 (C)	
STAT 1150	Introduction to Statistics and Computing (C)	
6 credit hours from the Faculty of Arts, which should include the required 3 credit hour "W" course		6
18 credit hours of electives <sup>2,3</sup>		18
<b>Hours</b>		<b>27</b>
<b>Year 2</b>		
COMP 2080	Analysis of Algorithms	3
COMP 2140	Data Structures and Algorithms	3
COMP 2150	Object Orientation	3
COMP 2160	Programming Practices	3
COMP 2280	Introduction to Computer Systems	3
MATH 1240	Elementary Discrete Mathematics <sup>4</sup>	3
<b>Hours</b>		<b>18</b>
<b>Year 3</b>		
COMP 3030	Automata Theory and Formal Languages	3
COMP 3170	Analysis of Algorithms and Data Structures	3
COMP 3350	Software Engineering 1	3
COMP 3370	Computer Organization	3
COMP 3430	Operating Systems	3
<b>Hours</b>		<b>15</b>
<b>Years 3-4</b>		
21 credit hours of electives <sup>2</sup>		21
<b>Co-op Requirements (if selected):</b>		
SCI 3980	Co-operative Education Work Term 1	0
SCI 3990	Co-operative Education Work Term 2	0
SCI 4980	Co-operative Education Work Term 3	0
SCI 4990	Co-operative Education Work Term 4 (if a 4th work term is selected)	0
<b>Hours</b>		<b>21</b>

### Year 4

COMP 4620	Professional Practice in Computer Science	3
21 credit hours of 4000 level Computer Science courses		21
<b>Hours</b>		<b>24</b>
<b>Total Hours</b>		<b>120</b>

<sup>1</sup> Entry to the Honours Co-operative Option is at the end of second year. Employment terms follow 3A (September-December), 3B (May-August) and 4A (January-April). Students in the Co-operative Option must complete three employment terms and receive a passing grade in SCI 3980, SCI 3990, SCI 4980, and SCI 4990 (if selected) prior to the last academic term.

<sup>2</sup> Additional information on how students may select their courses can be found in the program Overview (p. ).

<sup>3</sup> IMPORTANT: The Honours degree need not be completed in the order prescribed in the grid above. The grid indicates one possible arrangement of the required courses and is meant to be a guide around which students can plan their program. Students in the Co-operative Option should be aware that while other arrangements are possible, they may jeopardize their chances of obtaining employment by selecting such arrangements. Students should discuss their planned sequence of courses with the department prior to making adjustments to the sequence above.

- <sup>4</sup>
- COMP 1012 may be taken in place of COMP 1010.
  - MATH 1210, MATH 1220 or MATH 1310 may be taken in place of MATH 1300;
  - MATH 1230, MATH 1510, MATH 1520, or MATH 1690 may be taken in place of MATH 1500;
  - MATH 1232, MATH 1710 or MATH 1690 may be taken in place of MATH 1700.
  - Honours students are encouraged to take MATH 1220 instead of MATH 1300 and to take MATH 1230 instead of MATH 1500 to better prepare them for later, higher-level studies.
  - Students who have previously completed COMP 2130 may use it in lieu of MATH 1240.

(Letters in brackets indicate minimum prerequisite standing for further study.)