## BACHELOR OF SCIENCE (Bsc) COMPUTER SCIENCE
### Specialized Honours (Software Development Stream)

Students are strongly advised to refer to online Academic Calendars before enrolling into courses: http://calendars.registrar.yorku.ca/

<table>
<thead>
<tr>
<th>PREREQUISITES/COREQUISITES</th>
<th>COURSES</th>
<th>CREDITS</th>
<th>GRADE</th>
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### First Year Courses
- LE/EECS 1001 1.00 Research Directions in Computing
- LE/EECS 1012 3.00 Introduction to Computer Science
- LE/EECS 1019 3.00 Discrete Mathematics for Computer Science
- LE/EECS 1022 3.00 Introduction to Software Development
- SC/MATH 1025 3.00 Applied Linear Algebra
- SC/MATH 1300 3.00 Differential Calculus with Applications
- SC/MATH 1310 3.00 Integral Calculus with Applications

**foundational science: 6 credits**

### Second Year Courses
- SC/MATH 1090 3.00 Introduction to Logic for Computer Science
- SC/MATH 2030 3.00 Elementary Probability
- LE/EECS 2001 3.00 Introduction to the Theory of Computation
- LE/EECS 2011 3.00 Fundamentals of Data Structures
- LE/EECS 2021 4.00 Computer Organization
- LE/EECS 2030 3.00 Advanced Object Oriented Programming
- LE/EECS 2031 3.00 Software Tools
- LE/EECS 2311 3.00 Software Development Project

### General Education/Electives

### Notes
### Third Year Courses

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<tr>
<th>COURSES</th>
<th>CREDITS EARNED</th>
<th>GRADE</th>
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<tr>
<td>LE/EECS 3000 3.00 Professional Practice in Computing</td>
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<tr>
<td>LE/EECS 3101 3.00 Design and Analysis of Algorithms</td>
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<td>LE/EECS 3311 3.00 Software Design</td>
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<td>LE/EECS 3342 3.00 System Specification and Refinement</td>
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<td>LE/EECS 3421 3.00 Introduction to Database Systems</td>
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<td>LE/EECS 3461 3.00 User Interfaces</td>
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At least 3 credits from
LE/EECS 3215 4.00, LE/EECS 3221 3.00

### Non-Science/Electives

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### Fourth Year Courses

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<tr>
<td>LE/EECS 4090 6.00 Interactive Systems Project</td>
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<tr>
<td>LE/EECS 4312 3.00 Software Engineering Requirements</td>
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<td>LE/EECS 4313 3.00 Software Engineering Testing</td>
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At least 3 additional credits:
LE/EECS 4101 3.00 or LE/EECS 4111 3.00 or LE/EECS 4115 3.00 for an overall total of at least 65 credits from computer science courses;

Additional elective credits, as required
for a total of 120 credits of which at least 30 credits must be neither computer science nor mathematics. 18 of these 30 credits are satisfied by the general education requirement.

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### A. General Education Requirement:

- **non-science requirement:** 12 credits; **mathematics:** satisfied within the core requirements; **computer science:** satisfied by the major requirements;
- **foundational science:** six credits from SC/BIOL 1000 3.00, SC/BIOL 1001 3.00 (or SC/BIOL 1010 6.00), SC/CHEM 1000 3.00, SC/CHEM 1001 3.00, SC/PHYS 1410 6.00 or SC/PHYS 1420 6.00 or SC/PHYS 1010 6.00.

### B. Major Requirements (as stated on your degree checklist)

### C. Science breadth:

24 credits in science disciplines outside the major, of which three credits must be at the 2000 level or above.

21 of these 24 credits, including 3 credits at the 2000 level, are satisfied by the above requirements.

### D. Upper level requirement:

A minimum of 42 credits at the 3000 level or higher.

### E. Additional elective credits, as required, for an overall total of 120 credits.

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**TOTAL CREDITS & CGPA** (minimum cumulative GPA of 5.00 (C+) required to graduate with an Honours BSc degree)

General Prerequisite: Most 2000-, 3000-, and 4000-level EECS courses require the following general (that is, common) prerequisites, in addition to other course-specific prerequisites: a cumulative grade point average of 4.50 or better over all completed major EECS courses. Note: "Major" courses are all EECS courses with second digit other than 5 and include LE/EECS 1028 3.00 (cross-listed to: SC/MATH 1028 3.00) and LE/EECS 1019 3.00 (cross-listed to: SC/MATH 1019 3.00).

Participation in the Co-op or internship option is highly recommended for students, but is not a degree requirement.