### INTERNATIONAL BACHELOR OF SCIENCE (IBSc) COMPUTER SCIENCE
Honours Major

**DEGREE CHECKLIST 2021-2022**

<table>
<thead>
<tr>
<th>COURSES</th>
<th>CREDITS EARNED</th>
<th>GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LE/EECS 1001 1.00</td>
<td>Research Directions in Computing</td>
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<tr>
<td>LE/EECS 1012 3.00 or LE/EECS 1013 3.00</td>
<td>Non-Centric Introduction to Computing or Introduction to Computer Science and Programming</td>
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<tr>
<td>LE/EECS 1019 3.00</td>
<td>Discrete Mathematics for Computer Science</td>
<td></td>
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<tr>
<td>LE/EECS 1022 3.00</td>
<td>Programming for Mobile Computing</td>
<td></td>
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<tr>
<td>SC/MATH 1015 3.00</td>
<td>Applied Linear Algebra</td>
<td></td>
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<tr>
<td>SC/MATH 1025 3.00</td>
<td>Differential Calculus with Applications</td>
<td></td>
</tr>
<tr>
<td>SC/MATH 1080 3.00</td>
<td>Integral Calculus with Applications</td>
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**First Year Courses**

- **Foundational science:**
  - six credits from SC/BIOL 1000 3.00, SC/BIOL 1001 3.00, SC/CHEM 1000 3.00, SC/CHEM 1001 3.00, SC/PHTHS 1011 3.00, SC/PHTHS 1012 3.00, SC/PHTHS 1411 3.00, SC/PHTHS 1412 3.00, SC/PHTHS 1421 3.00, SC/PHTHS 1422 3.00, SC/PHTHS 1420 6.00

- **General Education / Science Breadth / International Component**
  - See sections "A", "C", and "F" on page 2

**Second Year Courses**

- SC/MATH 1080 3.00 | Introduction to Logic for Computer Science |
- SC/MATH 2010 3.00 | Elementary Probability |
- LE/EECS 2001 3.00 | Introduction to the Theory of Computation |
- LE/EECS 2030 3.00 | Advanced Object Oriented Programming |
- LE/EECS 2011 3.00 | Fundamentals of Data Structures |
- LE/EECS 2021 4.00 | Computer Organization |
- LE/EECS 2031 3.00 | Software Tools |

**General Education / Science Breadth / International Component**

- See sections "A", "C", and "F" on page 2

**Notes**

Students are strongly advised to refer to online Academic Calendars before enrolling into courses: [http://calendars.registrar.yorku.ca/](http://calendars.registrar.yorku.ca/)
### Third Year Courses

<table>
<thead>
<tr>
<th>COURSES</th>
<th>CREDITS EARNED</th>
<th>GRADE</th>
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</thead>
<tbody>
<tr>
<td>LE/EECS 3000 3.00</td>
<td>Professional Practice in Computing</td>
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<tr>
<td>LE/EECS 3101 3.00</td>
<td>Design and Analysis of Algorithms</td>
<td></td>
</tr>
<tr>
<td>LE/EECS 3215 4.00</td>
<td>Software Design</td>
<td></td>
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<tr>
<td>LE/EECS 3221 3.00</td>
<td></td>
<td></td>
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<tr>
<td>LE/EECS 3311 3.00</td>
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<td></td>
</tr>
<tr>
<td>LE/EECS 3401 3.00</td>
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<tr>
<td>LE/EECS 3421 3.00</td>
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<tr>
<td>LE/EECS 3461 3.00</td>
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- At least 3 credits from LE/EECS 3000 3.00, LE/EECS 3215 4.00
- At least 3 credits from LE/EECS 3401 3.00, LE/EECS 3421 3.00, LE/EECS 3461 3.00

### Fourth Year Courses

- At least 12 credits from computer science courses (EECS) at the 4000 level
- Additional elective credits including 15 credits at the 3000-level or higher for a minimum of 120 total credits

### General Education / Science Breadth / International Component

- See sections "A", "C", and "F" below

### Notes

- **A. General Education Requirement:**
  - non-science requirement: 12 credits from the approved list of courses and subject areas in your Academic Calendar;
  - mathematics: satisfied within the core requirements;
  - computer science: satisfied by the major requirements;
  - science: satisfied by the BIOL, CHEM, or PHYS labs as stated on your degree checklist.
- **B. Major Requirements:**
  - As stated on your degree checklist.
- **C. Science Breadth:**
  - In addition to the courses specified in the checklist, 3 credits at any level are required in approved non-EECS science disciplines.
- **D. Upper Level Requirement:**
  - In addition to the upper year courses specified in the checklist, 15 credits at the 3000-level or higher are required
- **E. Additional elective credits, as required, for an overall total of 120 credits.
- **F. International Component**
  - A minimum of 12 credits of language study in one of the languages offered at York University;
  - A minimum of 12 credits of non-science courses with an international component (refer to sample list of courses in International/Bachelor of Arts or Bachelor of Science in the Programs section); this may also serve to meet the non-science requirement of the BSc general education component;
  - An additional six credits of language study or non-science international component courses for a total of 30 credits;
  - One to two exchange terms abroad as a full-time student at an institution with which York has a formal exchange agreement.

### TOTAL CGPA

- Minimum cumulative GPA of 5.00 (C+) required to graduate with an Honours iBSc degree

### EECS GPA Prerequisite

- Most 2000-, 3000-, and 4000-level EECS courses require a cumulative GPA of 4.5 or better over all EECS major courses in addition to other course-specific prerequisites. 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.