## DEGREE CHECKLIST
2023-2024

### BACHELOR OF ENGINEERING (BEng)
ELECTRICAL ENGINEERING

<table>
<thead>
<tr>
<th>COURSES</th>
<th>CREDITS EARNED</th>
<th>GRADE</th>
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<tbody>
<tr>
<td><strong>First Year Courses</strong></td>
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<tr>
<td>SC/CHM 1100 4.00 Chemistry and Materials Science for Engineers</td>
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<tr>
<td>LE/EECS 1011 3.00 Computational Thinking Through Mechatronics</td>
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<tr>
<td>LE/EECS 1021 3.00 Object Oriented Programming from Sensors to Actuators</td>
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<tr>
<td>LE/EECS 1028 3.00 Discrete Mathematics for Engineers</td>
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<tr>
<td>LE/ENG 1101 4.00 Renaissance Engineer 1: Ethics, Communication and Problem Solving</td>
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<tr>
<td>LE/ENG 1102 4.00 Renaissance Engineer 2: Engineering Design Principles</td>
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<tr>
<td>SC/MATH 1013 3.00 Applied Calculus I</td>
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<tr>
<td>SC/MATH 1014 3.00 Applied Calculus II</td>
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<tr>
<td>SC/MATH 1025 3.00 Applied Linear Algebra</td>
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<tr>
<td>SC/PHYS 1800 3.00 Engineering Mechanics</td>
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<tr>
<td>SC/PHYS 1801 3.00 Electricity, Magnetism and Optics for Engineers</td>
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<tr>
<td><strong>Second Year Courses</strong></td>
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<tr>
<td>LE/EECS 2021 4.00 Computer Organization</td>
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<tr>
<td>LE/EECS 2032 4.00 Introduction to Embedded Systems</td>
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<tr>
<td>LE/EECS 2200 3.00 Electrical Circuits</td>
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<tr>
<td>LE/EECS 2210 3.00 Electronic Circuits and Devices</td>
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<tr>
<td>LE/EECS 3451 4.00 Signals and Systems</td>
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<tr>
<td>LE/ENG 2001 3.00 Engineering Projects: Management, Economics &amp; Safety</td>
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<td>LE/ENG 2003 3.00 Effective Engineering Communication</td>
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<tr>
<td>SC/MATH 2015 3.00 Applied Multivariate and Vector Calculus</td>
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<tr>
<td>SC/MATH 2930 3.00 Introduction to Probability and Statistics</td>
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<tr>
<td>SC/PHYS 2020 3.00 Electricity and Magnetism</td>
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<tr>
<td>SC/PHYS 2211 1.00 Experimental Electromagnetism</td>
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<tr>
<td><strong>At least 3 additional credits from</strong></td>
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<tr>
<td>SC/Biol 1000 3.00, SC/Biol 1001 3.00, SC/CHM 1001 3.00, SC/CHM 2011 3.00, LE/ESSE 1011 3.00, SC/PHYS 1070 3.00 (alternatively SC/PHYS 1470 3.00), SC/PHYS 2010 3.00, SC/PHYS 2040 3.00, SC/PHYS 2060 3.00, HH/HIST 1001 3.00, HH/HIST 2002 3.00</td>
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Students are strongly advised to refer to online Academic Calendars before enrolling into courses: [http://calendars.registrar.yorku.ca/](http://calendars.registrar.yorku.ca/)
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<tr>
<th>COURSES</th>
<th>CREDITS</th>
<th>GRADE</th>
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<tr>
<td><strong>Third Year Courses</strong></td>
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<tr>
<td>LE/EECS 3201 4.00 Digital Logic Design</td>
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<tr>
<td>LE/EECS 3604 4.00 Electromagnetic Theory and Wave Propagation</td>
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<tr>
<td>LE/EECS 3622 4.00 Introduction to Power Systems</td>
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<tr>
<td>LE/ENG 3000 3.00 Professional Engineering Practice</td>
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<tr>
<td>LE/ESSE 2210 3.00 Engineering and the Environment</td>
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<tr>
<td>LE/ENG 4550 3.00 Introduction to Control Systems</td>
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<tr>
<td><strong>EE Technical Electives see below (14 Credits)</strong></td>
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<tr>
<td><strong>Complementary Studies (6 credits)</strong></td>
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**Fourth Year Courses**

- Full year course
- LE/ENG 4000 6.00 Engineering Project (Capstone)

At least 37 additional credits of Electrical Engineering (EE) technical electives from the following two lists (normally to be taken in 3rd and 4th year):

- **a) At least 22 credits from List A, including a minimum of 8.0 credits from:**
  - LE/EECS 3603 4.00, LE/EECS 3604 4.00, LE/EECS 3611 4.00, LE/EECS 3612 4.00, LE/EECS 3614 4.00,
  - LE/EECS 3615 3.00, LE/EECS 3621 3.00, LE/EECS 3622 3.00, LE/EECS 3623 3.00

- **b) Additional 15 credits from List A or B**
  - LE/EECS 3213 3.00, LE/EECS 3214 3.00, LE/EECS 3221 3.00, LE/EECS 4201 3.00,
  - LE/EECS 4210 3.00, LE/EECS 4215 3.00, LE/EECS 4221 3.00, LE/EECS 4403 3.00,
  - LE/EECS 4404 3.00, LE/EECS 4413 3.00, LE/EECS 4421 3.00,
  - LE/EECS 4423 3.00, LE/EECS 4452 3.00, LE/EECS 4471 3.00, LE/ENG 4650 3.00

- **Complementary Studies (6 credits)**

**TOTAL CREDITS & CGPA** (minimum overall GPA of 5.00 required to graduate in the BEng program)

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 Program is highly recommended for all engineering students, but is not a degree requirement.

**Notes**