### DEGREE CHECKLIST 2019-2020

### BACHELOR OF SCIENCE (BSc)

#### EARTH & ATMOSPHERIC SCIENCE

<table>
<thead>
<tr>
<th>COURSES</th>
<th>CREDITS EARNED</th>
<th>GRADE</th>
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</thead>
<tbody>
<tr>
<td><strong>First Year Courses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ SC/CHEM 1000 3.00</td>
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<tr>
<td>SC/CHEM 1001 3.00</td>
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<tr>
<td>Chemical Structure</td>
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<tr>
<td>Chemical Dynamics</td>
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<tr>
<td>□ LE/EECS 1541 3.00</td>
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<tr>
<td>LE/EECS 1011 3.00</td>
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<tr>
<td>Introduction to Computing for the Physical Sciences</td>
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<tr>
<td>Computational Thinking through Mechatronics</td>
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<tr>
<td>□ LE/ESSE 1010 3.00</td>
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<tr>
<td>LE/ESSE 1012 3.00</td>
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<tr>
<td>The Dynamic Earth and Space Geodesy</td>
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<tr>
<td>The Earth Environment</td>
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<tr>
<td>□ LE/ESSE 1011 3.00</td>
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<tr>
<td>Introduction To Atmospheric Science</td>
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<tr>
<td>□ SC/MATH 1013 3.00</td>
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<tr>
<td>Applied Calculus I</td>
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<tr>
<td>□ SC/MATH 1014 3.00</td>
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<tr>
<td>Applied Calculus II</td>
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<tr>
<td>□ SC/MATH 1025 3.00</td>
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<tr>
<td>Applied Linear Algebra</td>
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<tr>
<td>□ SC/PHYS 1010 6.00</td>
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<td>or both</td>
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<tr>
<td>SC/PHYS 1800 3.00</td>
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<td>&amp;</td>
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<tr>
<td>SC/PHYS 1801 3.00</td>
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<tr>
<td>Physics</td>
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<td>or both</td>
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<tr>
<td>Engineering Mechanics &amp; Electricity, Magnetism &amp; Optics for Engineers</td>
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<tr>
<td><strong>3 Non-Science Credits (or Electives)</strong></td>
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<tr>
<td><strong>Second Year Courses</strong></td>
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<tr>
<td>□ LE/EECS 2501 1.00</td>
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<tr>
<td>Fortran and Scientific Computing</td>
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<tr>
<td>□ LE/ESSE 2011 3.00</td>
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<tr>
<td>Introduction to Physical Meteorology</td>
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<td>□ LE/ESSE 2012 3.00</td>
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<tr>
<td>Introduction to Dynamic Meteorology</td>
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<tr>
<td>□ LE/ESSE 2030 3.00</td>
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<tr>
<td>Geophysics and Space Science</td>
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<tr>
<td>□ LE/ESSE 2470 3.00</td>
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<tr>
<td>LE/CIVL 2210 3.00</td>
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<tr>
<td>Introduction to Continuum Mechanics</td>
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<td>Fluid Mechanics</td>
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<tr>
<td>□ SC/MATH 2015 3.00</td>
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<tr>
<td>Applied Multivariate &amp; Vector Calculus</td>
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<tr>
<td>□ SC/MATH 2271 3.00</td>
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<tr>
<td>Differential Equations for Scientists and Engineers</td>
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Students are strongly advised to refer to online Academic Calendars before enrolling into courses: http://calendars.registrar.yorku.ca/
### COURSES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Grade</th>
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<tbody>
<tr>
<td>SC/MATH 2565 3.00 or SC/GEO 2420 3.00 or SC/MATH 2930 3.00</td>
<td></td>
<td>Introduction to Applied Statistics or Introductory Statistical Analysis in Geography or Introductory Probability and Statistics</td>
</tr>
<tr>
<td>SC/PHYS 2020 3.00</td>
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<td>Electricity and Magnetism</td>
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</tbody>
</table>

**6 credits of Non-Science (or Electives)**

**Third Year Courses**

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<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Grade</th>
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</thead>
<tbody>
<tr>
<td>LE/ESSE 3600 3.00</td>
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<td>Geographical Information Systems (GIS) and Spatial Analysis</td>
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</tbody>
</table>

**9 credits from:**

- LE/ESSE 3020 3.00, LE/ESSE 3030 3.00, LE/ESSE 3040 3.00, SC/MATH 3241 3.00

**9 additional credits from ESSE courses at 3000 level or higher**

**3 credits of Non-Science (or Electives)**

**Elective Credits**

A. General Education Requirement:
- non-science requirement: 12 credits;
- mathematics: SC/MATH 1013 3.00; SC/MATH 1014 3.00;
- computer science: LE/EECS 1011 3.00 or LE/EECS 1541 3.00;
- foundational science: SC/PHYS 1010 6.00 or both of SC/PHYS 1800 3.00 and SC/PHYS 1801 3.00.

B. Major Requirements the EATS program core, as specified above (19 credits);

C. Science breadth:
- Science breadth: satisfied by above requirements.

D. Upper level requirement:
- A minimum of 18 credits at the 3000 level or higher.

E. Additional elective credits, as required, for an overall total of 90 credits.

**TOTAL CREDITS & CGPA** (minimum overall GPA of 4.00 required to graduate with a BSc)

**NOTES**