### B.Sc. Four-Year Applied Computing (Geomatics)

#### C1. College Requirement (15cu)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 163</td>
<td>Mathematical Reasoning</td>
<td>Y1</td>
</tr>
<tr>
<td>MATH 164</td>
<td>Linear Algebra</td>
<td>Y1</td>
</tr>
</tbody>
</table>

**6cu from English Language Writing**

**Indigenous Learning**

#### C2. Breadth Requirement (6cu)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 163</td>
<td>Mathematical Reasoning</td>
<td>Y1</td>
</tr>
<tr>
<td>MATH 164</td>
<td>Linear Algebra</td>
<td>Y1</td>
</tr>
</tbody>
</table>

**6cu from Fine Arts, Humanities, Social Science, or Interdisciplinary Studies**

Refer to the programme description for the full list of courses that fulfill C1 and C2 requirements.

#### C3. Cognate Requirement (12cu)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 232</td>
<td>Ethics ... in Computer Science</td>
<td>Y2/3/4</td>
</tr>
</tbody>
</table>

**9 cu from Junior**

- **Junior: Biology:** BIOL 120, 121;  
- **Chemistry:** CHEM 112, 115, 250;  
- **Earth Sciences:** GEOG 120, GEOL 121, 122;  
- **Physics & Astronomy:** ASTR 113; PHYS 115, 117 or 125.

No more than 6 credit units from one subject may be used in C1, C2, and C3 Junior.

#### C4. Majors Requirement (60cu)

**CMPT 141**  Computing in the Biological Sciences  Y1  
**CMPT 145**  Introduction to Computer Science  Y1  
**GEOG 1**  One of GEOG 120, GEOG 125, or GEOG 130  
**CMPT 260**  Mathematical Logic and Computing  Y2  
**CMPT 270**  Developing Object-Oriented Systems  Y2  
**CMPT 280**  Intermediate Data Structures  Y2  
**GEOG 222**  Introduction to Geomatics  Y2  
**STAT 245**  Introduction to Statistical Methods  Y2  
**CMPT 318**  Data Analytics  Y3  
**CMPT 384**  Information Visualization  Y3  
**GEOG 302**  Quantitative Methods in Geography  Y3  
**GEOG 322**  Introduction to Geographic Information Systems  Y3  
**GEOG 323**  Remote Sensing  Y2  
**CMPT 487**  Image Processing and Computer Vision  Y4  
**CMPT ___**  12 credits from List 1 — can be from different foci  Y2/3/4  
**CMPT ___**  6 credits from List 2 — can be from different foci  Y3/4  

#### List 1: Software Engineering:  CMPT 214, CMPT 353, CMPT 370  
**Analytics:** CMPT 317, CMPT 360, CMPT 423, CMPT 489  
**User Interfaces and Visualization:** CMPT 381, CMPT 481, CMPT 484  

#### List 2: Planning:  PLAN 350, PLAN 360, PLAN 390  
**Geography:** GEOG 420, GEOG 423  

**NOTE:** Students interested in the CS Professional Internship Programme must take CMPT 370 in Y3.

#### C5. Electives Requirement (27cu)

Courses to complete the requirements for 120cu  
Honours program, of which at least 66 must be at the  
200-level or higher.  
Pre-requisites for chosen majors courses fit here

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2022/03/17