### B.Sc. Honours Applied Computing (Data Analytics)

Students are reminded that admission to honours is by application to the College, after completing 30 credit units at USaskatchewan with a 70% CWA overall and in CMPT courses. Admission to CMPT407 will be refused to students who are not admitted to honours.

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

- 6cu from **English Language Writing**
- **Indigenous Learning**
- MATH 163 Mathematical Reasoning
- MATH 164 Linear Algebra

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

- 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)

- 9 cu from **Junior**
- PHIL 232 Ethics in Computer Science

**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 (75—78cu)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMPT 141</td>
<td>Computing in the Biological Sciences</td>
<td>Y1</td>
</tr>
<tr>
<td>CMPT 145</td>
<td>Introduction to Computer Science</td>
<td>Y1</td>
</tr>
<tr>
<td>MATH 110 (or MATH 176)</td>
<td>Calculus I</td>
<td>Y1</td>
</tr>
<tr>
<td>MATH 116 (or MATH 177)</td>
<td>Calculus II</td>
<td>Y1</td>
</tr>
<tr>
<td>CMPT 260</td>
<td>Mathematical Logic and Computing</td>
<td>Y2</td>
</tr>
<tr>
<td>CMPT 270</td>
<td>Developing Object-Oriented Systems</td>
<td>Y2</td>
</tr>
<tr>
<td>CMPT 280</td>
<td>Intermediate Data Structures</td>
<td>Y2</td>
</tr>
<tr>
<td>MATH 211</td>
<td>Numerical Analysis I</td>
<td>Y2</td>
</tr>
<tr>
<td>MATH 268</td>
<td>Linear Algebra II</td>
<td>Y2</td>
</tr>
<tr>
<td>STAT 241</td>
<td>Probability Theory</td>
<td>Y2</td>
</tr>
<tr>
<td>STAT 242 or STAT 245</td>
<td></td>
<td>Y2</td>
</tr>
<tr>
<td>CMPT 317</td>
<td>Introduction to Artificial Intelligence</td>
<td>Y3/4</td>
</tr>
<tr>
<td>CMPT 318</td>
<td>Data Analytics</td>
<td>Y3/4</td>
</tr>
<tr>
<td>CMPT 360</td>
<td>Machines and Algorithms</td>
<td>Y3/4</td>
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<tr>
<td>CMPT 384</td>
<td>Information Visualization</td>
<td>Y3/4</td>
</tr>
<tr>
<td>STAT 344</td>
<td>Applied Regression Analysis</td>
<td>Y3/4</td>
</tr>
<tr>
<td>STAT 345</td>
<td>Design and Analysis of Experiments</td>
<td>Y3/4</td>
</tr>
<tr>
<td>STAT 346</td>
<td>Multivariate Analysis</td>
<td>Y3/4</td>
</tr>
<tr>
<td>CMPT ___</td>
<td>12 credits from CMPT 214, CMPT 353, CMPT 370, CMPT 394, CMPT 484, CMPT 499</td>
<td>Y2/3/4</td>
</tr>
<tr>
<td>CMPT ___</td>
<td></td>
<td>Y2/3/4</td>
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<tr>
<td>CMPT ___</td>
<td></td>
<td>Y2/3/4</td>
</tr>
<tr>
<td>CMPT ___</td>
<td></td>
<td>Y2/3/4</td>
</tr>
<tr>
<td>CMPT 407 or MATH 402</td>
<td>Honours Thesis</td>
<td>Y4</td>
</tr>
<tr>
<td>CMPT 423</td>
<td>Machine Learning</td>
<td>Y4</td>
</tr>
<tr>
<td>MATH ___</td>
<td>6 credits from MATH 238, MATH 313, MATH 314, MATH 325, MATH 327</td>
<td>Y2/3/4</td>
</tr>
</tbody>
</table>

#### C5. Electives Requirement (9—12cu)

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.

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

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2022/03/17