B.Sc. Honours Computer Science - Software Engineering Option

Students are reminded that admission to honours is by [application to the College](#), after completing second-year (CMPT215, 215, 260, 270, and 280) with a 70% CWA overall and in CMPT courses. Admission to CMPT405 will be refused to students who are not admitted to honours.

C1. College Requirement (15cu)

	6cu from **English Language Writing**		Y1
			Y1
	Indigenous Learning		
MATH 163	Mathematical Reasoning	**Quantitative Reasoning**	Y1
MATH 164	Linear Algebra		Y1

C2. Breadth Requirement (9cu)

	3cu from **Humanities** or **Social Science**	
	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 (or GE 449)	Ethics … in Computer Science	Y2

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.

C5. Electives Requirement (18cu)

	Business Science***	
	Courses to complete the requirements for 120cu Four-year program, of which at least 66 must be at the 200-level or higher.	

C4. Majors Requirement (66cu)

CMPT 141 (or 116)	Introduction to Computer Science	Y1
CMPT 145 (or 117)	Principles of Computer Science	Y1
CMPT 214	Programming Principles and Practice	Y2
CMPT 215 (or CME 331)	Computer Organization and Architecture	Y2
CMPT 260	Mathematical Logic and Computing	Y2
CMPT 270	Developing Object Oriented Systems	Y2
CMPT 280	Intermediate Data Structures	Y2
CMPT 332	Operating Systems Concepts	Y3/4
CMPT 340	Programming Language Paradigms	Y3/4
CMPT 353	Full-Stack Web Programming	Y3/4
CMPT 360	Machines and Algorithms	Y3/4
CMPT 370	Intermediate Software Engineering	Y3/4
CMPT 371	Software Management	Y3/4
CMPT 470	Advanced Software Engineering	Y3/4
CMPT 481	Human Computer Interaction	Y3/4
	CSPIP (CMPT401…403) and 6cu from **Upper CMPT**, or **CMPT405** and 3cu from **Upper CMPT**	
MATH 110 (or 133 or 176)	Calculus 1	Y1
MATH	6cu from **Mathematics List**	
MATH		Y1
STAT 241	Probability	
STAT 242 (or 245)	Statistics** (or EE216 or ME 251)	Y2

Upper CMPT: **Computer Science**: CMPT3XX or CMPT 410 (or higher)
 Bioinformatics: BINF 300
 Computer Engineering: CME 332, 341, 342, 433, 435, 451

CMPT 405:   Honours Project (must [apply to register](#))

Mathematics List: **Mathematics:** (one of MATH 116 or 134 or 177),
 211, 223, 225, 266 (post 2020), 276,
 327, 328, or (361 and 362), 364;
 Statistics: STAT 241, 344, 345, or 348;
 Philosophy: PHIL 243.

Business Science Note:*** If ECON 111 or 114 is used to meet C2, the slot becomes a free elective.
 Otherwise, the slot is a Business Science Requirement from the following list:
 Commerce: COMM 102, 105, 201, 203, 204, 205, 210, 304;
 Economics: ECON 111, 114;
 Agricultural Economics: AREC 230;
 Entrepreneurial Ventures: ENT 210, 220, 230.