B.Sc. Four-year Applied Computing (Bioinformatics)

C1. College Requirement (15cu)

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

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 (6cu)

CHEM 112	General Chemistry I	Y1
PHIL 232	Ethics … in Computer Science	

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

C5. Electives Requirement (15cu)

	Courses to complete the requirements for 120cu Four-year program, of which at least 66 must be at the 200-level or higher.	
	Pre-requisites for chosen majors courses fit here.	
	Students interested in CSPIP should take CMPT370.	

C4. Majors Requirement (78cu)

BIOL 120	the Nature of Life	Y1
BIOL 121	the Diversity of Life	Y1
BINF 151 (or CMPT 141)	Computing in the Biological Sciences	Y1
CMPT 145	Introduction to Computer Science	Y1
BMSC 200	Biomolecules	
CHEM 250	Introduction to Organic Chemistry	Y2
CMPT 260	Mathematical Logic and Computing	Y2
CMPT 270	Developing Object-Oriented Systems	Y2
CMPT 280	Intermediate Data Structures	Y2
BINF 351	Introduction to Bioinformatics	
CMPT 318	Data Analytics	Y3/4
CMPT 353	Full-stack Web Programming	Y3/4
CMPT 360	Machines and Algorithms	Y3/4
CMPT451	Modelling and Algorithms for Biological Systems	Y3/4
	BMSC 240 or BIOL 226	
	BMIS 340 or BIOL 316	
STAT 24_	STAT 245 or STAT 246	Y2
CMPT ___	*6 credits from List 1 — can be from different foci*	Y2/3/4
CMPT ___		Y2/3/4
	21 credits from List 2	

List 1: **Simulation:** CMPT 214, CMPT 394 **Artificial Intelligence:** CMPT 317, CMPT 423
Theory: CMPT 364, CMPT 463 **Visualization:** CMPT 384, CMPT 484

List 2:

ANBI 470	ANSC 313	BIOC 405, 406
BIOL 222, 325, 420, 421	BMIS 417, 487	BMSC 210, 220, 230, 320
CHEM 255	CPPS 331	PLSC 317, 411, 416

2022/03/17