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

#### 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

#### C3. Cognate Requirement (6cu)
- CHEM 112 General Chemistry I
- PHIL 232 Ethics in Computer Science

#### C4. Majors Requirement (78cu)
- **BIOL 120** the Nature of Life
- **BIOL 121** the Diversity of Life
- **BINF 151** (or CMPT 141) Computing in the Biological Sciences
- **CMPT 145** Introduction to Computer Science
- **BMSC 200** Biomolecules
- **CHEM 250** Introduction to Organic Chemistry
- **CMPT 260** Mathematical Logic and Computing
- **CMPT 270** Developing Object-Oriented Systems
- **CMPT 280** Intermediate Data Structures
- **CMPT 318** Data Analytics
- **CMPT 353** Full-stack Web Programming
- **CMPT 360** Machines and Algorithms
- **CMPT 451** Modelling and Algorithms for Biological Systems
- **BMSC 240** or **BIOL 226**
- **BMIS 340** or **BIOL 316**
- **STAT 245 or STAT 246**

#### 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 C.S.I.P should take CMPT370.

#### 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  BIOL 305, 406
- BIOL 222, 325, 420, 421  BMIS 417, 487  BMSC 210, 220, 230, 320
- CHEM 255  CPPS 331  PLSC 317, 411, 416

Pre-requisites for chosen majors courses fit here.

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

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