

REQUIRED JUNIOR LEVEL COURSES^{1,3}

3 - 6 CREDITS

- CMPT 101: Introduction to Computing I
- CMPT 103: Introduction to Computing II²
- Students who have previously completed CMPT 114 and CMPT 115 may use those courses to fulfill this requirement.⁴*

To meet the requirements of this major, students must complete a minimum of 15 credits at the 300- or 400-level.

REQUIRED SENIOR LEVEL COURSES

18 CREDITS

GENERAL COMPUTER SCIENCE MAJOR

- 6 CREDITS**
- CMPT 200: Data Structures & their Algorithms⁴
- CMPT 395: Introduction to Software Engineering⁵ [WINTER]⁶
- 9 CREDITS**
- in*
- CORE**
- COMPUTING**
- CMPT 201: Programming Methodology⁵ [WINTER]
- CMPT 204: Algorithms I [NOT OFFERED IN 2014/15]
- CMPT 229: Computer Organization & Architecture [FALL]
- CMPT 250: Human-Computer Interaction I [FALL]
- CMPT 291: Introduction to Relational Databases [FALL]
- 3 CREDITS**
- CMPT 496: Individual Project⁷
- CMPT 498: Team Project⁷

REQUIRED SENIOR LEVEL COURSES

30 CREDITS

SOFTWARE PROFESSIONAL STREAM

- 21 CREDITS**
- CMPT 200: Data Structures & their Algorithms⁴
- CMPT 201: Programming Methodology⁵ [WINTER]
- CMPT 204: Algorithms I
- CMPT 229: Computer Organization & Architecture
- CMPT 291: Introduction to Relational Databases
- CMPT 305: Object-Oriented Programming⁵
- CMPT 395: Introduction to Software Engineering [WINTER]
- 6 CREDITS**
- in*
- PROGRAMMING**
- CMPT 315: Web-Centric Computing & eCommerce
- CMPT 350: Human-Computer Interaction II
- CMPT 360: Introduction to Operating Systems
- CMPT 361: Introduction to Networks
- CMPT 430: 3D Game Development and Artificial Intelligence
- 3 CREDITS**
- CMPT 496: Individual Project⁷
- CMPT 498: Team Project⁷

GENERAL REQUIREMENTS⁸

12 - 24 CREDITS

- | | |
|---|--|
| <input type="checkbox"/> CMPT 201: Programming Methodology | <input type="checkbox"/> CMPT 340: Numerical Methods |
| <input type="checkbox"/> CMPT 204: Algorithms I | <input type="checkbox"/> CMPT 350: Human-Computer Interaction II |
| <input type="checkbox"/> CMPT 220: Unix, Scripting & Other Tools | <input type="checkbox"/> CMPT 351: Human-Computer Interaction: Usability |
| <input type="checkbox"/> CMPT 229: Computer Organization & Architecture | <input type="checkbox"/> CMPT 355: Introduction to Artificial Intelligence |
| <input type="checkbox"/> CMPT 230: Introduction to Computer Games | <input type="checkbox"/> CMPT 360: Introduction to Operating Systems |
| <input type="checkbox"/> CMPT 250: Human-Computer Interaction I | <input type="checkbox"/> CMPT 361: Introduction to Networks |
| <input type="checkbox"/> CMPT 272: Formal Systems & Logic | <input type="checkbox"/> CMPT 370: Introduction to Computer Graphics |
| <input type="checkbox"/> CMPT 280: Introduction to Computer Security | <input type="checkbox"/> CMPT 385: Introduction to Database Concepts |
| <input type="checkbox"/> CMPT 291: Introduction to Relational Databases | <input type="checkbox"/> CMPT 391: Database Management Systems |
| <input type="checkbox"/> CMPT 305: Object-Oriented Programming | <input type="checkbox"/> CMPT 399: Topics in Computer Science ⁷ |
| <input type="checkbox"/> CMPT 306: Non-Procedural Programming | <input type="checkbox"/> CMPT 430: 3D Game Development & Artificial Intelligence |
| <input type="checkbox"/> CMPT 310: Computers & Society | <input type="checkbox"/> CMPT 491: Datamining and Advanced Databases |
| <input type="checkbox"/> CMPT 311: Phenomenon Technology | <input type="checkbox"/> CMPT 496: Individual Project ⁷ |
| <input type="checkbox"/> CMPT 315: Web-Centric Computing & eCommerce | <input type="checkbox"/> CMPT 498: Team Project ⁷ |
| <input type="checkbox"/> CMPT 330: Introduction to Real Time Gaming | <input type="checkbox"/> CMPT 499: Topics in Computer Science ⁷ |

IMPORTANT PLANNING NOTES

1. These courses can be used to satisfy core requirements in the Bachelor of Science degree.
2. The prerequisites for **CMPT 103** are **CMPT 101** or, at the high school level, three credits of intermediate CSE including CSE 2120. If students possess high school level prerequisites, they are required to complete 3 credits of junior level prerequisites for this major (**CMPT 103**). If students do not possess high school level prerequisites, they must complete 6 credits of junior level prerequisites (**CMPT 101** and **CMPT 103**).
3. Students are required to consult with the MacEwan University Academic Calendar to ensure they meet the prerequisites for all Computer Science courses they enrol in.
4. Students who completed **CMPT 114** and **CMPT 115** as their prerequisite junior courses cannot take **CMPT 200**. Students in this situation who are taking the **general Computer Science major** will complete 27 credits of general requirements, instead of 24 credits. Students in this situation who are taking the **Software Professional stream** will complete 15 credits of general requirements instead of 12 credits.
5. Students who intend to major in Computer Science are encouraged to take **CMPT 201**, **CMPT 305** and **CMPT 395** early in their degree, because they are prerequisites for key required courses.
6. We've provided the terms in which some key Computer Science courses are typically offered. Other courses are offered on a rotating basis.
7. Students may take **CMPT 399** and **CMPT 499** for credit a maximum of two times, as long as the course topic is different each time they take any of the courses. Students may take **CMPT 496** and **CMPT 498** for credit a maximum of two times.
8. Students who have chosen the **general Computer Science major** must take 24 credits of general requirements. Students who have chosen the **Software Professional stream** must take 12 credits of general requirements. Please note the caveat to this requirement, explained above.