

Course Sequence Computer Engineering

1st YEAR (30 credits)

| | | <u>Session</u> | <u>Prerequisite</u> |
|---------|---------------------------------------|----------------|---|
| CHM1311 | Principles of Chemistry | Fall | 4U chemistry or OAC Chemistry or equivalent. |
| GNG1105 | Engineering Mechanics | Fall | Physics 4U, advanced functions and Introductory Calculus 4U or equivalent |
| ITI1120 | Introduction to computing I | Fall | |
| MAT1320 | Calculus I | Fall | One of MAT1339, Ontario 4U Calculus and Vectors MCV4U) or an equivalent. |
| MAT1341 | Introduction to Linear Algebra | Fall | MAT1339 or Ontario 4U Calculus and Vectors (MCV4U), or an equivalent. |
| ITI1100 | Digital systems I | Winter | |
| ITI1121 | Introduction to computing II | Winter | ITI1120 |
| MAT1322 | Calculus II | Winter | MAT1320 |
| MAT1348 | Discrete Mathematics for Computing | Winter | |
| PHY1124 | Fundamentals of Physics for Engineers | Winter | OAC or 4U Physics, MAT1320 |

2nd YEAR (36 credits)

| | | <u>Session</u> | <u>Prerequisite</u> |
|------------------------|---|----------------|---|
| CEG2136 | Computer architecture I | Fall | ITI1100 |
| CSI2110 | Data Structures and Algorithms | Fall | ITI1121, MAT1348 |
| ELG2138 | Circuit Theory I | Fall | ITI1100, MAT1341, MAT1322 |
| MAT2322 | Calculus III for Engineers | Fall | (MAT1322 or MAT1325 or MAT1332), (MAT1341 or CEGEP linear algebra) |
| ENG1112 | Technical Report Writing | Fall | |
| SEG2105 | Introduction to Software Engineering | Fall | ITI1121 |
| ELG2136 | Electronics I | Winter | ELG2138, MAT2384 |
| ELG2911 | Professional Practice in Information Technology and Engineering | Winter | |
| MAT2377 | Probability and Statistics for Engineers | Winter | MAT1320 or MAT1330; corequisite: MAT1322 or MAT1325 or MAT1332 |
| PHY2323 | Electricity and Magnetism | Winter | (MAT2121 or MAT2122 or MAT2322), (PHY1124 or {PHY1121, PHY1122} or {PHY1321, PHY1322} or {PHY1331, PHY1322}). |
| SEG2106 | Software Construction | Winter | |
| Complementary elective | | Winter | |

3rd YEAR (33 credits)

| | | <u>Session</u> | <u>Prerequisite</u> |
|------------------------|---|------------------------------------|---|
| CEG3136 | Computer Architecture II | Fall | CEG2136 |
| CEG3155 | Digital Systems II | Fall | CEG2136 |
| ECO1192 | Engineering Economics | Fall | |
| ELG3125 | Signal and System Analysis | Fall | ELG2138 |
| HIS2129 or PHI2394 | Technology, Society and Environment since 1800 / Scientific Thought and Social Value | Winter (HIS2129) Fall (PHI2394) | |
| MAT2384 | Ordinary Differential Equations and Numerical Methods | Fall | MAT1341, (MAT1322 or MAT1325 or MAT1322) |
| CEG3156 | Computer Systems Design | Winter | CEG3155 |
| CEG3185 | Introduction to Data Communications and Networking | Winter | MAT2377 or (MAT2371, MAT2375), or corequisite: ELG3126 |
| CSI3131 | Operating Systems | Winter | CEG2136, CSI2110 |
| ELG3155 | Introduction to Control Systems | Winter | ELG3125 |
| Complementary elective | | Winter | |

4th YEAR (30 credits)

| | | <u>Session</u> | <u>Prerequisite</u> |
|------------------------|---|-----------------------|----------------------------|
| CEG4136 | Computer Architecture III | Fall | CEG3136 |
| CEG4912 | Computer Engineering Design Project I | Fall | CEG3136, CEG3156 |
| Science elective | | Fall/Winter | |
| Technical elective | | Fall/Winter | |
| Technical elective | | Fall/Winter | |
| CEG4166 | Real-Time Systems Design | Winter | CSI3131 |
| CEG4913 | Computer Engineering Design Project II | Winter | CEG4912 |
| GNG4170 | Engineering Law | Winter | |
| Complementary elective | | Fall/Winter | |
| Technical elective | | Fall/Winter | |
| Technical elective | | Fall/Winter | |