

Course Sequence
Electrical Engineering (Electronics) and Computing Technology

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.
ITI1121	Introduction to Computing II	Winter	ITI1120
ITI1100	Digital systems I	Winter	
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
ENG1112	Technical Report Writing	Fall	
MAT2322	Calculus III for Engineers	Fall	(MAT1322 or MAT1325 or MAT1332), (MAT1341 or CEGEP linear algebra)
MAT2384	Ordinary Differential Equations and Numerical Methods	Fall	MAT1341, (MAT1322 or MAT1325 or MAT1322)
CSI2101	Discrete Structures	Winter	MAT1348
CSI2120	Programming Paradigms	Winter	CSI2110
ELG2911	Professional Practice in Information Technology and Engineering	Winter	
ELG2136	Electronics I	Winter	ELG2138, MAT2384
ELG2137	Circuit Theory II	Winter	ELG2138, MAT2384
PHY2323	Electricity and Magnetism	Winter	(MAT2121 or MAT2122 or MAT2322), (PHY1124 or {PHY1121, PHY1122} or {PHY1321, PHY1322} or {PHY1331, PHY1322}).

3rd YEAR (27 credits)

		<u>Session</u>	<u>Prerequisite</u>
SEG2105	Introduction to Software Engineering	Fall	IT11121
ELG3106	Electromagnetic Engineering	Fall	MAT2322, MAT2384, PHY2323
ELG3125	Signal and System Analysis	Fall	ELG2138
ELG3136	Electronics II	Fall	ELG2136
ELG3316	Electric Machines and Power Systems	Fall	ELG2138, ELG2136
ELG3126	Random Signals and Systems	Winter	ELG3125
ELG3155	Introduction to Control Systems	Winter	ELG3125
ELG3175	Introduction to Communication Systems	Winter	ELG3125. Corequisite: ELG3126
CEG3185	Introduction to Data Communications and Networking	Winter	MAT2377 or (MAT2371, MAT2375), or corequisite:

4th YEAR – ELECTRONICS (30 credits)

		<u>Session</u>	<u>Prerequisite</u>
ELG4117	Optoelectronics and Optical Components	Fall	ELG3106, ELG3136
ELG4139	Electronics III	Fall	ELG3136, ELG3155
ELG4176	Communication Systems	Fall	ELG3175, ELG3126
ELG4912	Electrical Engineering Design Project: Part I	Fall	ELG3106, ELG3136, ELG3175, ELG3155
Technical elective		Fall/Winter	
ELG4115	Microwave Circuits	Winter	ELG3106, ELG3136
ELG4137	Principles and Applications of VLSI Design	Winter	ELG2136
ELG4177	Digital Signal Processing	Winter	ELG3125
ELG4913	Electrical Engineering Design Project: Part II	Winter	ELG4912
PHY2361	Modern physics	Winter	MAT1341, (MAT1322 or MAT1325 or MAT1332), (PHY1124 or (PHY1121, PHY1122) or (PHY1321, PHY1322) or (PHY1331, PHY1322))

5th YEAR (30 credits)

		<u>Session</u>	<u>Prerequisite</u>
CSI2372	Advanced Programming Concepts with C++	Fall	IT11121, IT11100
CSI3120	Programming Language Concepts	Fall	CSI2101, CSI2120
ECO1192	Engineering Economics	Fall/Winter	
1 CSI/CEG/SEG 3000 level Elective		Fall/Winter	
CSI3131	Operating Systems	Winter	CEG2136, CSI2110
SEG2106	Software Construction	Winter	CSI2110, SEG2105
HIS2129 or PHI2394	Technology, Society and Environment since 1800 / Scientific Thought and Social Value	Winter (HIS2129) Fall (PHI2394)	
Elective		Fall/Winter	
Elective		Fall/Winter	