Course Sequence
Software Engineering

1st YEAR (30 credits)

		Session	Prerequisite
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)

		Session	Prerequisite
CEG2136	Computer architecture I	Fall	ITI1100
CSI2110	Data Structures and Algorithms	Fall	ITI1121, MAT1348
ECO1192	Engineering Economics	Fall	
ENG1112	Technical Report Writing	Fall	
SEG2105	Introduction to Software Engineering	Fall	ITI1121
Science Elective		Fall/Winter	
ADM1100	Introduction to Business Management	Winter	
CSI2101	Discrete Structures	Winter	MAT1348
CSI2132	Databases I	Winter	CSI2110
MAT2377	Probability and Statistics for Engineers	Winter	MAT1320 or MAT1330; corequisite: MAT1322 or MAT1325 or MAT1332
SEG2106	Software Construction	Winter	CSI2110, SEG2105
SEG2911	Professional Software Engineering Practice	Winter	

3rd YEAR (33 credits)

		Session	Prerequisite
CSI3105	Design and Analysis of Algorithms I	Fall	CSI2110, CSI2101 or for honors mathematics students: CSI2110, (MAT2141 or MAT2143)
SEG3101	Software Requirements Analysis	Fall	SEG2105
SEG3102	Software Design and Architecture	Fall	(SEG2105, CSI2120) ou SEG2106
HIS2129 or PHI2394	Technology, Society and Environment since 1800 / Scientific Thought and Social Value	Winter (HIS2129) Fall (PHI2394)	
Computing elective[1]		Fall	
Engineering elective[2]		Fall/Winter	
CSI3131	Operating systems	Winter	CEG2136, CSI2110
SEG3103	Software Quality Assurance	Winter	SEG2105
SEG3125	Analysis and Design of User Interfaces	Winter	SEG2105
CEG3185	Introduction to Data Communications and Networking	Winter	MAT2377 or (MAT2371, MAT2375), or corequisite : ELG3126
Technical elective		Fall/Winter	

[1] 6 credits from: {CEG3136/3536, CEG3155/3555, CSI2120/2520, CSI2372/2772, CSI3130/3530, CSI3140/3540, CSI4139/4539 / CEG4399/4799, SEG4110, SEG4156 et SEG4189}

[2] 3 credits from: {CHG2317/2717, CVG2141/2541, CVG2149/2549, ELG2138/2538, MCG2108/2508, MCG2130/2530 et MCG2360/2760}

4th YEAR (33 credits)

		Session	Prerequisite
SEG4105	Software Project Management	Fall	SEG2105 plus two third year SEG or CSI courses
SEG4910	Engineering Capstone Project - Part 1	Fall	Completion of all 3000 series SEG courses required by the SEG program. Note: The project started in SEG4910 must be completed in SEG4911; if a student has to start a new project, SEG4910 must be repeated
Science elective		Fall/Winter	
Technical elective[3]		Fall/Winter	
Technical elective[3]		Fall/Winter	
Computing elective[1]		Fall	
SEG4145	Real Time and Embedded Software Design	Winter	CEG2136, CSI3131, SEG2106
SEG4911	Engineering Capstone Project - Part 2	Winter	SEG4910
Technical elective[3]		Fall/Winter	
Technical elective[3]		Fall/Winter	
Technical elective[3]		Fall/Winter	

[1] 6 credits from: {CEG3136/3536, CEG3155/3555, CSI2120/2520, CSI2372/2772, CSI3130/3530, CSI3140/3540, CSI4139/4539 / CEG4399/4799, SEG4110, SEG4156 et SEG4189}

[3] 15 credits at the 3000 level from {CEG/CSI/ELG/SEG} or 12 credits at the 3000 level from {CEG/CSI/ELG/SEG} and 3 credits from ADM3378 et GEG2320}