Course sequence

Civil Engineering and Computing Technology

1st YEAR (30 credits)

		Session	Prerequisite
CHM1311	Principles of Chemistry	Fall	4U chemistry or OAC Chemistry or equivalent.
ENG1112	Technical Report Writing	Fall	
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.
CVG1107	Civil Engineering Graphics and Seminars	Winter	
ITI1121	Introduction to Computing II	Winter	ITI1120
MAT1322	Calculus II	Winter	MAT1320
MAT1341	Introduction to Linear Algebra	Winter	MAT1339 or Ontario 4U Calculus and Vectors (MCV4U), or an equivalent.
PHY1122	Fundamentals of Physics II	Winter	OAC or 4U Physics; corequisite: MAT1320

2nd YEAR (36 credits)

		Session	Prerequisite
CVG2132	Fundamentals of Environmental Engineering	Fall	CHM1311
CVG2141	Civil Engineering Materials	Fall	CHM1311
CVG2149	Civil Engineering Mechanics	Fall	GNG1105, MAT1322, PHY1122
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 MAT1332)
SEG2105	Introduction to Software Engineering	Fall	ITI1121
CVG2107	Geotechnical Materials and Processes	Winter	
CVG2116	Introduction to Fluid Mechanics	Winter	CVG2149, MAT1322
CVG2140	Mechanics of Materials I	Winter	GNG1105
CVG2171	Surveying and Measurements	Winter	
CVG2181	Numerical Modelling in Civil Engineering	Winter	GNG1106, MAT2322, MAT2384
MAT1348	Discrete Mathematics for Computing	Winter	MAT1318, Ontario 4U Advanced Functions (MHF4U) or equivalent

3rd YEAR (36 credits)

		Session	Prerequisite
CSI2110	Data Structures and Algorithms	Fall	ITI1121, MAT1348
CVG3109	Soil Mechanics I	Fall	CVG2107, CVG2140
CVG3116	Hydraulics	Fall	CVG2116
CVG3140	Theory of Structures I	Fall	CVG2140, CVG2149
CVG3141	Mechanics of Materials II	Fall	CVG2140, CVG2149, MAT2384
HIS2129 or	Technology, Society and Environment since 1800 /	Winter (HIS2129)	
PHI2394	Scientific Thought and Social Value	Fall (PHI2394)	
CVG3106	Soil Mechanics II	Winter	CVG3109
CVG3132	Physical / Chemical Unit Operations of Water and Wastewater Treatment	Winter	CVG2116, CVG2132
CVG3147	Structural Steel Design I	Winter	CVG2141, CVG3140, CVG3141. Corequisite:

			MAT2377
CVG3148	Reinforced Concrete Design I	Winter	CVG2141, CVG3140
ITI1100	Digital Systems I	Winter	
MAT2377	Probability and Statistics for Engineers	Fall	MAT1320 or MAT1330; corequisite: MAT1322 or MAT1325 or MAT1332

4th YEAR (30 credits)

		Session	Prerequisite
CVG3120	Hydrology	Fall	MAT2377
CVG4148	Theory of Structures II	Fall	CVG2181, CVG3140
CVG4150	Highway and Transportation Engineering	Fall	CVG2171, CVG2107, CVG2141
Elective		Fall	
Science Elective		Fall	
CSI2120	Programming Paradigms	Winter	CSI2110
CVG4113	Hydraulics of Water Supply and Sewer Systems	Winter	CVG3116
CVG4130	Advanced Environmental Engineering	Winter	CVG2132
ECO1192	Engineering Economics	Winter	
Elective (CSI, SEG, GEO4301A: GIS for Science and Engineering)		Winter	

5th YEAR (30 credits)

		Session	Prerequisite
CVG4001	Introduction to Civil Engineering Project	Fall	CVG3106, CVG3116, CVG3132, CVG3147, CVG3148
CVG4108	Geotechnical Design	Fall	CVG3109, CVG3106
Elective		Fall	
Elective (CSI, SEG, for Science and Engineering)		Fall	
CVG4175	Field Investigations	Fall	CVG2132, CVG3116, CVG3106
CVG4907	Engineering Design Project	Winter	CVG4001
GNG4170	Engineering Law	Winter	
Elective (CSI, SEG, GEO4301 GIS for Science and Engineering)		Winter	
Elective (CSI, SEG, GEO4301: GIS for Science and Engineering)		Winter	
Technical Elective		Winter	