

Course sequence
Civil Engineering

1st YEAR (30 credits)

| | | <u>Session</u> | <u>Prerequisite</u> |
|------------------|---|-----------------------|--|
| 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. |
| GNG1106 | Fundamentals of Engineering Computation | Fall | |
| MAT1320 | Calculus I | Fall | One of MAT1339, Ontario 4U Calculus and Vectors (MCV4U) or an equivalent. |
| CVG1107 | Civil Engineering Graphics and Seminars | Winter | |
| 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 (preferred) or MAT1330. |
| Science Elective | | Winter | |

2nd YEAR (36 credits)

| | | <u>Session</u> | <u>Prerequisite</u> |
|---------|---|-----------------------|--|
| 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) |
| MAT2377 | Probability and Statistics for Engineers | Fall | MAT1320 or MAT1330; corequisite: MAT1322 or MAT1325 or MAT1332 |
| MAT2384 | Ordinary Differential Equations and Numerical Methods | Fall | MAT1341, (MAT1322 or MAT1325 or MAT1332) |
| CVG2107 | Geotechnical Materials and Processes | Winter | CVG2149, MAT1322 |
| CVG2116 | Introduction to Fluid Mechanics | Winter | GNG1105 |
| CVG2140 | Mechanics of Materials I | Winter | |
| CVG2171 | Surveying and Measurements | Winter | |
| CVG2181 | Numerical Modelling in Civil Engineering | Winter | GNG1106, MAT2322, MAT2384 |
| ECO1192 | Engineering Economics | Winter | |

3rd YEAR (33 credits)

| | | <u>Session</u> | <u>Prerequisite</u> |
|--------------------|--|------------------------------------|----------------------------|
| CVG3109 | Soil Mechanics I | Fall | CVG2107, CVG2140 |
| CVG3116 | Hydraulics | Fall | CVG2116 |
| CVG3120 | Hydrology | Fall | MAT2377 |
| CVG3140 | Theory of Structures I | Fall | CVG2140, CVG2149 |
| CVG3141 | Mechanics of Materials II | Fall | CVG2140, CVG2149, MAT2384 |
| HIS2129 or PHI2394 | Technology, Society and Environment since 1800 / Scientific Thought and Social Value | Winter (HIS2129) Fall (PHI2394) | |
| CVG3106 | Soil Mechanics II | Winter | CVG3109 |
| CVG3132 | Physical / Chemical Unit Operations of Water and Wastewater Treatment | Winter | CVG2116, CVG2132 |

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| CVG3147 | Structural Steel Design I | Winter | CVG2141, CVG3140, CVG3141. Corequisite: MAT2377 |
| CVG3148 Elective | Reinforced Concrete Design I | Winter Winter | CVG2141, CVG3140 |

4th YEAR (33 credits)

| | | <u>Session</u> | <u>Prerequisite</u> |
|---------------------|--|-----------------------|---|
| CVG4001 | Introduction to Civil Engineering Project | Fall | CVG3106, CVG3116, CVG3132, CVG3147, CVG3148 |
| CVG4108 | Geotechnical Design | Fall | CVG3109, CVG3106 |
| CVG4148 | Theory of Structures II | Fall | CVG2181, CVG3140 |
| CVG4150 | Highway and Transportation Engineering | Fall | CVG2171, CVG2107, CVG2141 |
| CVG4175 Elective | Field Investigations | Fall Fall | CVG2132, CVG3116, CVG3106 |
| CVG4113 | Hydraulics of Water Supply and Sewer Systems | Winter | CVG3116 |
| CVG4130 | Advanced Environmental Engineering | Winter | CVG2132 |
| CVG4907 | Engineering Design Project | Winter | CVG4001 |
| GNG4170 | Engineering Law | Winter | |
| Technical Elective | | Winter | |