2015-2016 Course Sequence BASc in Civil Engineering, Structural and Geotechnical Option

CHM1311	1 st YEAR (30 cm	<u>redits)</u>	<u>Session</u>	Prerequisite(s)
Engineering Mechanics Fall Physics 4U, advanced functions and Introductory Calculus 4U or equivalent Calculus 10 Fall One of MAT1339, Ontario 4U Calculus and Vectors MCV4U) or an equivalent Calculus and Vectors MCV4U) or an equivalent Calculus and Vectors MCV4U) or an equivalent MAT1322 Calculus II Introduction to Linear Algebra Winter MAT1339 or Ontario 4U Calculus and Vectors (MCV4U), or an equivalent Vectors (MCV4U), or and equivalent Vectors (MCV4U),			Fall	4U or OAC Chemistry or equivalent
Calculus 4U or equivalent Calculus 4U or equivalent	ENG1112	Technical Report Writing	Fall	
Second	GNG1105	Engineering Mechanics	Fall	
Calculus I Fall One of MAT1339, Ontario 4U Calculus and Vectors	GNG1106			
MCV4U) or an equivalent Seminars Winter MAT1320	MATE1220			O CMATTION O COMMING IN THE
Seminars Winter Winter MAT1320 MAT1341 Introduction to Linear Algebra Winter MAT1330 or Ontario 4U Calculus and MAT1341 Introduction to Linear Algebra Winter MAT1330 or Ontario 4U Calculus and PHY1122 Fundamentals of Physics II Winter OAC or 4U Physics; corequisite: MAT1320 (preferred) or MAT1330 ECO1192 Engineering Economics Winter 2nd YEAR (36 credits) Session Prerequisite(s) CVG2152 Fundamentals of Environmental Engineering Materials Fall CHM1311 CVG2141 Civil Engineering Materials Fall GR01105, MAT1322, PHY1122 CAlculus III for Engineers Fall GR01105, MAT1325 or MAT1332, MAT2384 Ordinary Differential Equations Fall MAT1341 or CEGEP linear algebra) MAT2384 Ordinary Differential Equations Fall MAT1341, (MAT1322 or MAT1325 or MAT1332) Elective Fall CVG2107 Geotechnical Materials and Processes Winter CVG2109 Geotechnical Materials and Processes Winter GR01105, MAT1322 CVG2116 Introduction to Plaid Mechanics Winter GR01105, MAT2322, MAT2384 CVG2171 Surveying and Measurements Winter GR01106, MAT2327, MAT2384 CVG2171 Surveying and Measurements Winter GR01106, MAT2327, MAT2384 CVG2180 Soil Mechanics I Fall CVG2107, CVG2140 CVG3116 Hydraulies Fall CVG2116, CVG2149 CVG3140 Theory of Structures I Fall CVG2140, CVG2149, MAT2384 CVG3141 Mechanics of Materials II Fall CVG2140, CVG2149, MAT2384 CVG3140 Soil Mechanics II Winter CVG2140, CVG2149, MAT2384 CVG3147 Structural Steel Design I Winter CVG2141, CVG3140, CVG3141. Core			Fall	· · · · · · · · · · · · · · · · · · ·
MAT1342 Calculus II Winter MAT1320 MAT1341 Introduction to Linear Algebra Winter MAT1330 or Ontario 4U Calculus and Vectors (MCV4U), or an equivalent OAC or 4U Physics; corequisite: MAT1320 (preferred) or MAT1330 ECO1192 Engineering Economics Winter 2nd YEAR (36 credits) CVG2132 Fundamentals of Environmental Engineering Materials Fall CHM1311 CVG2141 Civil Engineering Mechanics Fall CHM1311 CVG2140 Civil Engineering Mechanics Fall CHM1311 CVG2141 Civil Engineering Mechanics Fall CHM1311 CVG2140 Civil Engineering Miner Fall CHM1311 CVG2140 Civil Engineering Miner Fall CHM13120 or MAT1325 or MAT1325 or MAT1332) CVG2107 Geotechnical Methods Elective Fall CVG2107 Geotechnical Materials and Processes Winter CVG2107 Geotechnical Materials Winter CVG2116 Introduction to Fluid Mechanics Winter CVG2111 Surveying and Measurements Winter CVG2111 Surveying and Statistics for Engineers Winter CVG2116 Numerical Modelling in Civil CVG2116 CVG2119 CVG3116 Hydrology Fall MAT2377 CVG3116 Hydrology Fall CVG2116 CVG2149 CVG2141 CVG2149 CVG2141 CVG3140 CVG2141 CVG3140 CVG3141 CVG3141 CVG3141 CVG3141 CVG3141 CVG3140 C	CVG1107		Winter	
MAT1341	MAT1322			MAT1320
Vectors (MCV4U), or an equivalent				
PHY1122	1,1111011	muoduction to Zinem i ngeeru	, , , , , , , , , , , , , , , , , , ,	
Preceditis	PHY1122	Fundamentals of Physics II	Winter	OAC or 4U Physics; corequisite: MAT1320
Fundamentals of Environmental Engineering Fall CHM1311	ECO1192	Engineering Economics	Winter	(protected) of Marriago
Fundamentals of Environmental Engineering Fall CHM1311	2 nd VEAR (36 c	redits)	Session	Prerequisite(s)
Engineering		Fundamentals of Environmental	<u>Debbioli</u>	Trereduste(b)
CVG2141 Civil Engineering Materials Fall CHM1311	0,02102		Fall	CHM1311
CVG2149	CVG2141			
MAT2322 Calculus III for Engineers Fall (MAT1322 or MAT1325 or MAT1332), (MAT2384 Ordinary Differential Equations and Numerical Methods Elective Fall MAT1341, (MAT1322 or MAT1325 or MAT1332) CVG2110 Geotechnical Materials and Processes Winter CVG2116 Introduction to Fluid Mechanics Winter CVG2140 Mechanics of Materials I Winter CVG2171 Surveying and Measurements Winter CVG2181 Numerical Modelling in Civil Engineering Winter CVG2181 Numerical Modelling in Civil Engineering Winter MAT2377 Probability and Statistics for Engineers Winter CVG3109 Soil Mechanics I Fall CVG2107, CVG2140 CVG3116 Hydraulics Fall CVG2116 CVG3120 Hydrology Fall MAT2377 CVG3141 Mechanics of Materials II Fall CVG2149, MAT2384 PHI2394 Scientific Thought and Social Values Fall or HIS2129 Technology, Society and Environment Winter CVG3132 Physical / Chemical Unit Operations of Water and Wastewater Treatment Winter CVG3147 Structural Steel Design I Winter CVG3148 Reinforced Concrete Design I Winter CVG3141, CVG3140, CVG3140, CVG3141, CVG				
MAT2384 Ordinary Differential Equations and Numerical Methods Elective Fall CVG2107 Geotechnical Materials and Processes Winter CVG2116 Introduction to Fluid Mechanics Winter CVG21140 Mechanics of Materials I Winter CVG2171 Surveying and Measurements Winter CVG2181 Numerical Modelling in Civil Engineering Winter MAT2377 Probability and Statistics for Engineers Winter MAT2377 Preequisite(s) CVG3109 Soil Mechanics I Fall CVG2107, CVG2140 CVG3120 Hydrology Fall MAT2377 CVG3140 Theory of Structures I Fall CVG2140, CVG2149 CVG3141 Mechanics of Materials II Fall CVG2140, CVG2149 Fall CVG2140, CVG2149, MAT2384 PHI2394 Scientific Thought and Social Values Fall or HIS2129 Technology, Society and Environment Winter since 1800 CVG3132 Physical / Chemical Unit Operations of Water and Wastewater Treatment Winter CVG3147 Structural Steel Design I Winter CVG2141, CVG3140, CVG3141. Corequisite: MAT2377 CVG3148 Reinforced Concrete Design I Winter CVG2141, CVG3140	MAT2322		Fall	
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CVG2171 CVG2181 Numerical Modelling in Civil Engineering Winter MAT2377 Probability and Statistics for Engineers Winter MAT2377 Probability and Statistics for Engineers Winter MAT1322 or MAT1325 or MAT1332 3rd YEAR (33 credits) Session CVG3109 Soil Mechanics I Fall CVG2107, CVG2140 CVG3116 Hydraulics Fall CVG2116 CVG3120 Hydrology Fall MAT2377 CVG3140 Theory of Structures I Fall CVG2140, CVG2149 CVG2140, CVG2149 CVG2141 Mechanics of Materials II Fall CVG2140, CVG2149, MAT2384 PHI2394 Scientific Thought and Social Values Fall or HIS2129 Technology, Society and Environment winter since 1800 CVG3106 Soil Mechanics II Winter CVG3109 CVG3132 Physical / Chemical Unit Operations of Water and Wastewater Treatment Winter CVG3147 Structural Steel Design I Winter CVG3148 Reinforced Concrete Design I Winter CVG2141, CVG3140	CVG2116	Introduction to Fluid Mechanics	Winter	CVG2149, MAT1322
CVG2181 Numerical Modelling in Civil Engineering Winter GNG1106, MAT2322, MAT2384 MAT2377 Probability and Statistics for Engineers Winter MAT1322 or MAT1325 or MAT1332 3rd YEAR (33 credits) Session Prerequisite(s) 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 CVG3141 Mechanics of Materials II Fall CVG2140, CVG2149, MAT2384 PHI2394 Scientific Thought and Social Values Fall or HIS2129 Technology, Society and Environment Winter since 1800 CVG3106 Soil Mechanics II Winter CVG3109 CVG3132 Physical / Chemical Unit Operations of Water and Wastewater Treatment Winter CVG2141, CVG2132 CVG3147 Structural Steel Design I Winter CVG2141, CVG3140, CVG3141. Corequisite: MAT2377 CVG3148 Reinforced Concrete Design I Winter CVG2141, CVG3140	CVG2140	Mechanics of Materials I	Winter	GNG1105
Engineering Winter GNG1106, MAT2322, MAT2384 MAT2377 Probability and Statistics for Engineers Winter MAT1322 or MAT1325 or MAT1332 3rd YEAR (33 credits) Session Prerequisite(s) 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 CVG3141 Mechanics of Materials II Fall CVG2140, CVG2149, MAT2384 PHI2394 Scientific Thought and Social Values Fall or HIS2129 Technology, Society and Environment Winter since 1800 CVG3106 Soil Mechanics II Winter CVG3109 CVG3132 Physical / Chemical Unit Operations of Water and Wastewater Treatment Winter CVG3147 Structural Steel Design I Winter CVG2141, CVG3140, CVG3141. Corequisite: MAT2377 CVG3148 Reinforced Concrete Design I Winter CVG2141, CVG3140	CVG2171	Surveying and Measurements	Winter	
MAT2377 Probability and Statistics for Engineers Winter MAT1322 or MAT1325 or MAT1332 3rd YEAR (33 credits) Session CVG3109 Soil Mechanics I Fall CVG2107, CVG2140 CVG3116 Hydraulics Fall CVG2116 CVG3120 Hydrology Fall MAT2377 CVG3140 Theory of Structures I Fall CVG2149, CVG2149 CVG3141 Mechanics of Materials II Fall CVG2140, CVG2149 CVG3141 Mechanics of Materials II Fall CVG2140, CVG2149, MAT2384 PHI2394 Scientific Thought and Social Values Fall or HIS2129 Technology, Society and Environment Winter since 1800 CVG3132 Physical / Chemical Unit Operations of Water and Wastewater Treatment Of Winter CVG3147 Structural Steel Design I Winter CVG3148 Reinforced Concrete Design I Winter CVG3141, CVG3140	CVG2181	Numerical Modelling in Civil		
Session Prerequisite(s)				
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CVG3141 Mechanics of Materials II Fall CVG2140, CVG2149, MAT2384 PHI2394 Scientific Thought and Social Values Fall or HIS2129 Technology, Society and Environment winter since 1800 CVG3106 Soil Mechanics II Winter CVG3109 CVG3132 Physical / Chemical Unit Operations of Water and Wastewater Treatment of Winter Structural Steel Design I Winter CVG2141, CVG3140, CVG3141. Corequisite: MAT2377 CVG3148 Reinforced Concrete Design I Winter CVG2141, CVG3140	CVG3140		Fall	CVG2140, CVG2149
PHI2394 Scientific Thought and Social Values Fall or HIS2129 Technology, Society and Environment Winter since 1800 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	CVG3141		Fall	CVG2140, CVG2149, MAT2384
or HIS2129 Technology, Society and Environment Winter since 1800 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	PHI2394	Scientific Thought and Social Values	Fall	
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of Water and Wastewater Treatment CVG2116, CVG2132 Structural Steel Design I Winter CVG3147, CVG3140, CVG3141. Corequisite: MAT2377 CVG3148 Reinforced Concrete Design I Winter CVG2141, CVG3140	CVG3132			
CVG3148 Reinforced Concrete Design I Winter CVG2141, CVG3140		of Water and Wastewater Treatment	Winter	CVG2116, CVG2132
	CVG3147	Structural Steel Design I	Winter	· · · · · · · · · · · · · · · · · · ·
	CVG3148	Reinforced Concrete Design I	Winter	
	Science Elective	-	Winter	

4 th YEAR (33 credits)		Session	Prerequisite(s)
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
CVG4173	Construction Management	Fall	CVG3106, CVG3147, CVG3148
CVG4175	Field Investigations	Fall	CVG2132, CVG3116, CVG3106
CVG4907	Engineering Design Project	Winter	CVG4001
GNG4170	Engineering Law	Winter	
Elective		Winter	
Technical Elective		Winter	
3 credits from CVG4143, CVG4145 or CVG4146		Winter	