

2015-2016 Course Sequence
BASc in Mechanical Engineering and BSc in Computing Technology

1st YEAR (30 credits)

		<u>Session</u>	<u>Prerequisite(s)</u>
CHM1311	Principles of Chemistry	Fall	4U 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
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
MCG1100	Introduction to Mechanical Engineering	Winter	Corequisite: GNG1105
PHY1122	Fundamentals of Physics II	Winter	OAC or 4U Physics; corequisite: MAT1320 (preferred) or MAT1330

2nd YEAR (36 credits)

		<u>Session</u>	<u>Prerequisite(s)</u>
ADM1100	Introduction to Business Management	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 MAT1332)
MCG2108	Mechanics II	Fall	GNG1105; corequisite: MAT2322
MCG2130	Thermodynamics I	Fall	
MCG2360	Engineering Materials I	Fall	
CVG2140	Mechanics of Materials	Winter	GNG1105
ELG2336	Electric Circuits and Machines for Mechanical Engineering	Winter	PHY1122; corequisite: MAT2384
MAT1348	Discrete Mathematics for Computing	Winter	
MCG2101	Introduction to Design	Winter	MCG1100, MCG2108, (MCG2360 or MCG2141)
MCG2131	Thermodynamics II	Winter	MCG2130
MCG2361	Engineering Materials II	Winter	MCG2360

3rd YEAR (36 credits)

		<u>Session</u>	<u>Prerequisite(s)</u>
CSI2110	Data Structures and Algorithms	Fall	ITI1121, MAT1348
ELG3336	Electronics for Mechanical Engineers	Fall	ELG2336
MAT3320	Mathematics for Engineers	Fall	(MAT2121 or MAT2322), (MAT2324 or MAT2384)
MCG3130	Dynamics of Machinery	Fall	MCG2108
MCG3306	System Dynamics	Fall	MAT2384, MCG2108
MCG3340	Fluid Mechanics I	Fall	MCG2108, MCG2130
ITI1100	Digital systems I	Winter	
MCG3110	Heat Transfer	Winter	MCG3340
MCG3131	Machine Design	Winter	CVG2140, MCG2101, (MCG2361 or MCG2142)
MCG3145	Advanced Strength of Materials	Winter	CVG2140, MCG2108
MCG3307	Control Systems	Winter	MAT3320, MCG3130, MCG3306, MCG3340, ELG3336. Corequisite: MCG3110
MCG3341	Fluid Mechanics II	Winter	MCG3340

4th YEAR (33 credits)

		<u>Session</u>
CEG2136	Computer Architecture I	Fall
CSI2372	Advanced Programming Concepts with C++	Fall
MAT2377	Probability and Statistics for Engineers	Fall
MCG4328	Manufacturing	Fall
Technical Elective		Fall
Elective		Fall
CSI2120	Programming Paradigms	Winter
ECO1192	Engineering Economics	Winter
MCG4308	Mechanical Vibration Analysis	Winter
MCG4340	Mechanical Engineering Laboratory	Winter
Technical Elective		Winter

Prerequisite(s)

ITI1100

ITI1121, ITI1100

MAT1320 or MAT1330; corequisite:
MAT1322 or MAT1325 or MAT1332

MCG3110, MCG3340, (MCG2361 or MCG2142)

CSI2110 Development

MAT3320, MCG3130

MCG3110, MCG3131, (MCG3145 or MCG3141),
(MCG3307 or MCG3142)

5th YEAR (27 credits)

		<u>Session</u>
MCG4322 (6 credits)	Computer-Aided Design	Fall
CEG3136	Computer Architecture II	Fall
Technical Elective		Fall
PHI2394	Scientific Thought and Social Values	Fall
or		
GNG4120	Technology Entrepreneurship for Engineers and Computer Scientists	Fall
or		
HIS2129	Technology, Society and Environment since 1800	Winter
CSI3131	Operating Systems	Winter
GNG4170	Engineering Law	Winter
Technical elective		Winter
Elective from CSI, SEG or CEG 2000 level or above		Winter

Prerequisite(s)

24 MCG credits at the 3000 level

CEG2136

CEG2136, CSI2110