



**DEGREE CHECKLIST
2019-2020**

**BACHELOR OF ENGINEERING (BEng)
SOFTWARE ENGINEERING**

NAME

STUDENT #

Students are strongly advised to refer to online Academic Calendars before enrolling into courses: <http://calendars.registrar.yorku.ca/>

	COURSES		CREDITS EARNED	GRADE
First Year Courses				
	<input type="checkbox"/>	SC/CHEM 1100 4.00 Chemistry and Materials Science for Engineers		
	<input type="checkbox"/>	LE/EECS 1011 3.00 Computational Thinking Through Mechatronics		
	<input type="checkbox"/>	LE/EECS 1021 3.00 Object Oriented Programming from Sensors to Actuators		
	<input type="checkbox"/>	LE/EECS 1028 3.00 Discrete Mathematics for Engineers		
	<input type="checkbox"/>	LE/ENG 1101 4.00 Renaissance Engineer 1: Ethics, Communication and Problem Solving		
	<input type="checkbox"/>	LE/ENG 1102 4.00 Renaissance Engineer 2: Engineering Design Principles		
	<input type="checkbox"/>	SC/MATH 1013 3.00 Applied Calculus I		
	<input type="checkbox"/>	SC/MATH 1014 3.00 Applied Calculus II		
	<input type="checkbox"/>	SC/MATH 1025 3.00 Applied Linear Algebra		
	<input type="checkbox"/>	SC/PHYS 1800 3.00 Engineering Mechanics		
	<input type="checkbox"/>	SC/PHYS 1801 3.00 Electricity, Magnetism and Optics for Engineers		
Second Year Courses				
	<input type="checkbox"/>	SC/MATH 1090 3.00 Introduction to Logic for Computer Science		
	<input type="checkbox"/>	LE/EECS 2011 3.00 Fundamentals of Data Structures		
	<input type="checkbox"/>	LE/EECS 2021 4.00 Computer Organization		
	<input type="checkbox"/>	LE/EECS 2030 3.00 Advanced Object Oriented Programming		
	<input type="checkbox"/>	LE/EECS 2032 4.00 Introduction to Embedded Systems		
	<input type="checkbox"/>	LE/EECS 2200 3.00 Electrical Circuits		
	<input type="checkbox"/>	LE/EECS 2311 3.00 Software Development Project		
	<input type="checkbox"/>	LE/ENG 2001 3.00 Engineering Projects: Management, Economics & Safety		
	<input type="checkbox"/>	LE/ENG 2003 3.00 Effective Engineering Communication		
	<input type="checkbox"/>	SC/MATH 2015 3.00 Applied Multivariate and Vector Calculus		
	<input type="checkbox"/>	SC/MATH 2930 3.00 Introduction to Probability and Statistics		
	<input type="checkbox"/>	SC/PHYS 2020 3.00 Electricity and Magnetism		
	<input type="checkbox"/>	SC/PHYS 2211 1.00 Experimental Electromagnetism		
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Third Year Courses				
	<input type="checkbox"/>	LE/EECS 3101 3.00	Design and Analysis of Algorithms	
	<input type="checkbox"/>	LE/EECS 3201 4.00	Digital Logic Design	
	<input type="checkbox"/>	LE/EECS 3216 3.00	Digital Systems Engineering: Modeling, Implementation and Validation	
	<input type="checkbox"/>	LE/EECS 3221 3.00	Operating System Fundamentals	
	<input type="checkbox"/>	LE/EECS 3311 3.00	Software Design	
	<input type="checkbox"/>	LE/EECS 3342 3.00	System Specification and Refinement	
	<input type="checkbox"/>	LE/ENG 3000 3.00	Professional Engineering Practice	
	<input type="checkbox"/>	ES/ENVS 2150 3.00 or LE/ESSE 2210 3.00	Environment, Technology and Sustainable Society I OR Engineering and the Environment	
At least 3 additional credits from SC/BIOL 1000 3.00, SC/BIOL 1001 3.00, SC/CHEM 1001 3.00, SC/CHEM 2011 3.00, LE/ESSE 1011 3.00, LE/ESSE 1012 3.00, SC/PHYS 1070 3.00, SC/PHYS 1470 3.00, SC/PHYS 2010 3.00, SC/PHYS 2040 3.00, SC/PHYS 2060 3.00, HH/IHST 1001 3.00, HH/IHST 1002 3.00	<input type="checkbox"/>			
Complementary Studies (9 credits)	<input type="checkbox"/>			
	<input type="checkbox"/>			
Fourth Year Courses				
	<input type="checkbox"/>	LE/EECS 4312 3.00	Software Engineering Requirements	
	<input type="checkbox"/>	LE/EECS 4313 3.00	Software Engineering Testing	
	<input type="checkbox"/>	LE/EECS 4314 3.00	Advanced Software Engineering	
	<input type="checkbox"/>	LE/EECS 4315 3.00	Mission-Critical Systems	
	<input type="checkbox"/>	LE/EECS 4413 3.00	Building E-Commerce Systems	
	<input type="checkbox"/>	LE/ENG 4000 6.00	Engineering Project	
Complementary Studies (3 credits)	<input type="checkbox"/>			
	<input type="checkbox"/>			
Choose ONE of the following streams (16 credits):				
General Stream:	<input type="checkbox"/>	LE/EECS 3451 4.00	Signals and Systems	
	<input type="checkbox"/>	LE/ENG 4550 3.00	Introduction to Control Systems	
Plus 9 additional credits from computer science courses at the 3000 and 4000 level. At least 6 of these credits must be from the following list: LE/EECS 3214 3.00, LE/EECS 3421 3.00, LE/EECS 3461 3.00, LE/EECS 3481 3.00, LE/EECS 3482 3.00, LE/EECS 4214 3.00, LE/EECS 4215 3.00, LE/EECS 4411 3.00, LE/EECS 4412 3.00, LE/EECS 4441 3.00, LE/EECS 4481 4.00, LE/EECS 4482 3.00, LE/EECS 4404 3.00	<input type="checkbox"/>			
	<input type="checkbox"/>			
	<input type="checkbox"/>			
	<input type="checkbox"/>			
Software Security Stream:	<input type="checkbox"/>	LE/EECS 3214 3.00	Computer Network Protocols and Applications	
	<input type="checkbox"/>	LE/EECS 3481 3.00	Applied Cryptography	
	<input type="checkbox"/>	LE/EECS 3482 3.00	Introduction to Computer Security	
	<input type="checkbox"/>	LE/EECS 4481 4.00	Computer Security Laboratory	
	<input type="checkbox"/>	LE/EECS 4482 3.00	Computer Security Management: Assessment and Forensics	
TOTAL CREDITS & CGPA (minimum overall GPA of 5.00 required to graduate in the BEng program)				
General Prerequisite: Most 2000-, 3000-, and 4000-level EECS courses require the following general (that is, common) prerequisites, in addition to other course-specific prerequisites: a cumulative grade point average of 4.50 or better over all completed major EECS courses. Note: "Major" courses are all EECS courses with second digit other than 5 and include LE/EECS 1028 3.00 (cross-listed to: SC/MATH 1028 3.00) and LE/EECS 1019 3.00 (cross-listed to: SC/MATH 1019 3.00).				
Participation in the Co-Op Program is highly recommended for all engineering students, but is not a degree requirement.				
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