

**DEGREE CHECKLIST
2016-2017**

**BACHELOR OF ENGINEERING
ELECTRICAL ENGINEERING**

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

COURSES

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 Engineering 1: Ethics, Communication and Problem Solving
<input type="checkbox"/>	LE/ENG 1102 4.00	Renaissance Engineering 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"/>	LE/EECS 2021 4.00	Computer Organization
<input type="checkbox"/>	LE/EECS 2030 3.00	Advanced Object-Oriented Programming
<input type="checkbox"/>	LE/EECS 2031 3.00	Software Tools
<input type="checkbox"/>	LE/EECS 2200 3.00	Electrical Circuits
<input type="checkbox"/>	LE/EECS 2210 3.00	Electronic Circuits and Devices
<input type="checkbox"/>	LE/EECS 2602 4.00	Signals and Systems in Continuous Time
<input type="checkbox"/>	LE/ENG 2001 3.00	Engineering Projects: Management, Economics & Safety
<input type="checkbox"/>	LE/ENG 2003 3.00	Effective Communication for Engineers
<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 Magnetics
<input type="checkbox"/>	SC/PHYS 2211 1.00	Experimental Electromagnetism

3 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

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		COURSES	
Third Year Courses			
	<input type="checkbox"/>	LE/EECS 3201 4.00	Digital Logic Design
	<input type="checkbox"/>	LE/EECS 3215 4.00	Embedded Systems
	<input type="checkbox"/>	LE/EECS 3602 4.00	Systems and Random Process in Discrete Time
	<input type="checkbox"/>	LE/EECS 3603 4.00	Introduction to Power Systems
	<input type="checkbox"/>	LE/EECS 3604 4.00	Electromagnetic Theory and Wave Propagation
	<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 (OR Engineering and the Environment)
Complementary Studies (6 credits)	<input type="checkbox"/>		
	<input type="checkbox"/>		
Additional Third and Fourth Year Courses			
	<input type="checkbox"/>	LE/ENG 4000 6.00	Engineering Project
	<input type="checkbox"/>	LE/ENG 4550 3.00	Control Systems
Complementary Studies (6 credits)	<input type="checkbox"/>		
	<input type="checkbox"/>		
At Least 28 Additional Credits of EE Technical Electives from Two lists, a) and b) as follows:			
List a) At least 16 credits from a list of Major Courses:	<input type="checkbox"/>	LE/EECS 3611 4.00	Analog Integrated Circuit Design
	<input type="checkbox"/>	LE/EECS 3612 4.00	Introduction to Sensors and Measurement Instruments
	<input type="checkbox"/>	LE/EECS 4611 4.00	Advanced Analog Integrated Circuit Design
	<input type="checkbox"/>	LE/EECS 4612 4.00	Digital Very Large Scale Integration
	<input type="checkbox"/>	LE/EECS 4613 4.00	Power Electronics
	<input type="checkbox"/>	LE/EECS 4614 4.00	Electro-Optics
	<input type="checkbox"/>	LE/EECS4621 4.00	Advanced Power Electronic Applications
	<input type="checkbox"/>	LE/EECS 4622 4.00	Introduction to Energy Systems
	<input type="checkbox"/>	LE/EECS 4623 4.00	Alternative Energy Systems
	<input type="checkbox"/>	LE/EECS 4214 4.00	Digital Communications
	<input type="checkbox"/>	LE/EECS 4641 4.00	Biological Instruments
	<input type="checkbox"/>	LE/EECS 4642 4.00	Medical Imaging Systems
	<input type="checkbox"/>	LE/EECS 4643 4.00	Biomedical Signal Analysis
	<input type="checkbox"/>	LE/EECS 4644 4.00	Computer-Aided Interventions
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List b) Additional credits from a list of general EECS courses to the right for a total of at least 28 credits:	<input type="checkbox"/>	LE/EECS 3213 3.00	Communication Networks
	<input type="checkbox"/>	LE/EECS 3214 3.00	Computer Network Protocols and Applications
	<input type="checkbox"/>	LE/EECS 3221 3.00	Operating System Fundamentals
	<input type="checkbox"/>	LE/EECS 4201 3.00	Computer Architecture
	<input type="checkbox"/>	LE/EECS 4210 3.00	Architecture and Hardware for Digital Signal Processing
	<input type="checkbox"/>	LE/EECS 4215 3.00	Mobile Communications
	<input type="checkbox"/>	LE/EECS 4221 3.00	Operating System Design
	<input type="checkbox"/>	LE/EECS 4352 3.00	Real-Time Systems Practice
	<input type="checkbox"/>	LE/EECS 4403 3.00	Soft Computing
	<input type="checkbox"/>	LE/EECS 4404 3.00	Introduction to Machine Learning and Pattern Recognition
	<input type="checkbox"/>	LE/EECS 4413 3.00	Building E-Commerce Systems
	<input type="checkbox"/>	LE/EECS 4421 3.00	Introduction to Robotics
	<input type="checkbox"/>	LE/EECS 4422 3.00	Computer Vision
	<input type="checkbox"/>	LE/EECS 4452 3.00	Digital Signal Processing: Theory and Applications
	<input type="checkbox"/>	LE/EECS 4471 3.00	Introduction to Virtual Reality
TOTAL CREDITS & CGPA (minimum overall GPA of 5.00 required to graduate in the BEng program)			
¹ General prerequisites for EECS courses: CGPA of 4.5 or better on completed major (i.e., second digit is not 5) EECS courses			
A Co-op option is highly recommended for all engineering students, but is not a degree requirement.			
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