

**DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING**

Course Sequence A: Applies to the Students enrolled in Fall 2023

**YEARWISE COURSE LIST FOR COMPLETION OF GRADUATION REQUIREMENTS**

1st Year		
Fall Term	Winter Term	Summer term
GENG-1101: Engineering I	CHEM-1103: Topics in General Chemistry	
GENG-1102: Engineering Graphics	GENG-1110: Engineering Mechanics I	
MATH-1270: Linear Algebra	GENG-1201: Cornerstone Design	
MATH-1720: Differential Calculus	GENG-1202: Introductory Electrical and Computer Engineering	
PHYS-1400: Introductory Physics I	MATH-1730: Integral Calculus	
Second Year		
Fall Term	Winter Term	Summer Term
GENG-2101: Engineering II	ELEC-2170: Digital Logic Design	GENG-2980: Work Term I (Co-Op Students Only)
PHYS-2100: Topics in Physics	ELEC-2200: Circuit Analysis II	
ELEC-2141: Circuit Analysis I	ELEC-2260: Electronics I	
ELEC-2240: Signals and Systems	ELEC-2280: Electromagnetic Fields	
MATH-2780: Vector Calculus	ELEC-2320: Software Fundamentals	
MATH-2790: Differential Equations	GENG-2220: Engineering Probability & Statistics	
3rd Year		
Fall Term	Winter Term	Summer Term
ELEC-3000: Engineering Design	GENG-3980: Work Term II (Co-Op Students Only)	ELEC-3010: Computer Aided Analysis
ELEC-3130: Electromechanical Systems		ELEC-3030: Physical Electronics
ELEC-3160: Electronics II		ELEC-3040: Embedded System Design
ELEC-3270: Microprocessors		ELEC-3240: Control Systems I
GENG-3130: Engineering Economics		ELEC-3290: Analog Communications
*One complementary studies course from the Faculty of Engineering's approved list		
4th year		
Fall Term	Winter Term	Summer Term
GENG-4980: Work Term III (Co-Op Students Only)	ELEC-4000A: Capstone Design Project	ELEC-4000B: Capstone Design Project
	ELEC-4310: Control Systems II	ELEC-4320: EM Waves and Radiating Systems
	ELEC-4570: Fundamentals of Digital Signal Processing	**two (2) or three (3) courses from the elective course list above
	*One complementary studies course from the Faculty of Engineering's approved list (New)	
	**one (1) or two (2) courses from the elective course list below:	

4th year electives course list

ELEC-4190: Digital Communications	<p><u>First Year:</u> Common to all Engineering Programs</p> <p><u>Second Year:</u> Students must have completed at least eight (8) of their 1st year courses before being allowed to register into the 2nd year courses including all pre-requisite courses required for registration into the 2nd year courses</p> <p><u>Third Year:</u> Students must have completed all the 1st year courses and at least ten (10) of their 2nd year courses (or have received permission from the advisor) before being allowed to register into the 3rd year courses including all pre-requisite courses required for registration into the 3rd year courses</p> <p><u>Fourth Year:</u> Students cannot register into any of the 4th year courses until all Electrical Engineering courses from 1st, 2nd and 3rd year have been completed</p>
ELEC-4330: Digital Integrated Circuit Design	
ELEC-4340: Automotive Electronics	
ELEC-4350: Microelectromechanical Systems	
ELEC-4360: Computer Communications	
ELEC-4370: Intelligent Computing	
ELEC-4380: Coding and Information Theory	
ELEC-4390: Multimedia Systems	
ELEC-4400: Wireless Communications	
ELEC-4440: Analog Integrated Circuit Design	
ELEC-4450: Power Electronics	
ELEC-4470: Computer Networks Security	
ELEC-4480: Digital Computer Architecture	
ELEC-4490: Sensor and Vision Systems	
ELEC-4500: Power Systems I	
ELEC-4600: Power Systems II	