ELECTRICAL ENGINEERING, ECEI STREAM, B.A.SC. (CLASS OF 2028)

Elective courses in years three and four are to be chosen from Electives Lists A and B, and by consulting suggested Streams and prerequisite paths. Your complete degree program must:

1. Exceed the minimum Accreditation Units (AU) set by ECE in each CEAB category.
2. Have at least 5 courses from Electives List A.
3. Have at least 5 four-hundred level elective courses.
4. Counting required core courses and elective courses in all four years, result in a total of no fewer than 157.5 credits for the complete program.

Available combinations of elective courses are subject to timetabling constraints.

Second Year CORE 2025-2026

Code	Title	Units
ELEC 221	Electric Circuits	4.25
ELEC 224	Continuous-Time Signals and Systems	3.75
ELEC 231	Mathematical Methods I for Electrical and Computer Engineering (Mathematical Methods I for Electrical and Computer Engineering)	3.50
ELEC 232	Mathematical Methods II for Electrical Engineering (Mathematical Methods II for Electrical Engineering)	3.50
ELEC 252	Electronics I	4.25
ELEC 271	Digital Systems	4.00
ELEC 274	Computer Architecture	4.00
ELEC 278	Fundamentals Of Information Structures	4.00
ELEC 280	Fundamentals of Electromagnetics	3.75
ELEC 290	Electrical and Computer Engineering Design and Practice	5.00
ELEC 292	Introduction to Data Science	3.00
Complementary Studies List A		3.00
Total Units		**46.00**

Third Year CORE 2026-2027

Code	Title	Units
ELEC 324	Discrete-Time Signals and Systems	4.00
ELEC 326	Probability & Random Processes	3.50
ELEC 353	Electronics II	4.25
ELEC 371	Microprocessor Interfacing and Embedded Systems	4.00
ELEC 372	Numerical Methods and Optimization	3.50
ELEC 381	Applications of Electromagnetics	3.75
ELEC 392	Engineering Design and Development (Engineering Design and Development)	3.50
ENPH 336	Solid State Devices	3.50
APSC 221	Economic and Business Practice	3.00
Technical Electives (choose 1)		3.00
Complementary Studies		3.00
Total Units		**39.00**

Fourth Year CORE 2027-2028

Code	Title	Units
ELEC 490	Electrical Engineering Project [1]	7.00
Technical Electives		19.85
Complementary Studies		3.00
Total Units		**29.85**

[1] With Departmental and instructor support, students may request to substitute APSC 480 (https://www.queensu.ca/academic-calendar/search/?P=APSC%20480) Multi-disciplinary Industry for ELEC 490 (https://www.queensu.ca/academic-calendar/search/?P=ELEC%20490) Electrical Engineering Project.

Electives

Electrical Engineering: Electives (https://www.queensu.ca/academic-calendar/engineering-applied-sciences/academic-plans/electrical-engineering/electrical-engineering-electives/)

Course Prerequisites

Normally, registration in a course offered by the ECE Department is allowed provided a mark of at least D- has been achieved in each of the prerequisites for the course. Students having one course prerequisite (numbered 200 or higher) with a mark of FR may still be able to register in a course offered by the Department provided their Engineering Cumulative GPA is at least 2.0 at the end of the previous session. Prerequisites are listed under the calendar description for each course.

Complementary Studies

Refer to the Complementary Studies section of this calendar for details regarding the requirements for all Engineering plans. For the Electrical Engineering Program, the Engineering Economics course is APSC 221 (https://www.queensu.ca/academic-calendar/search/?P=APSC%20221) Economic And

Business Practice. Communications units are included within the design courses ELEC 290 (https://www.queensu.ca/academic-calendar/search/?P=ELEC%20290) Electrical and Computer Engineering Design and Practice, ELEC 392 Engineering Design and Development, and ELEC 490 (https://www.queensu.ca/academic-calendar/search/?P=ELEC%20490) Electrical Engineering Project.