ELECTRICAL ENGINEERING, ECEI STREAM, B.A.SC. (CLASS OF 2027)

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 160.5 credits for the complete program.

Available combinations of elective courses are subject to timetabling constraints.

Second Year CORE 2024-2025

Code	Title	Units
ELEC 221	Electric Circuits	4.25
ELEC 224	Continuous-Time Signals and Systems	3.75
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
MTHE 228	Complex Analysis	3.50
MTHE 235 or MTHE 225	Diff Equations For Elec & Comp Ordinary Differential Equations	3.50
COMM 201	Introduction to Business for Entrepreneurs	3.00
Total Units		**46.00**

Third Year CORE 2025-2026

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 390	Principles of Design and Development	3.50
ENPH 336	Solid State Devices	3.25
COMM 301	Funding New Ventures	3.00
COMM 302	Launching New Ventures	3.00
Technical Electives (choose 1)		3.00
Complementary Studies List A		3.00
Total Units		**41.75**

Fourth Year CORE 2026-2027

Code	Title	Units
ELEC 490	Electrical Engineering Project [1]	7.00
COMM 405	New Business Development	3.00
Technical Electives		19.85
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

ECEi students are required to take a total of five Complementary Studies courses over 2nd, 3rd and 4th year: one elective Complementary Studies course from List A (Humanities and Social Sciences) and the required four courses COMM 201 (https://www.queensu.ca/academic-calendar/search/?P=COMM%20201) Introduction to Business for Entrepreneurs, COMM 301 (https://www.queensu.ca/academic-calendar/search/?P=COMM%20301) Funding New

Ventures, COMM 302 (https://www.queensu.ca/academic-calendar/search/?P=COMM%20302) Launching New Ventures, and COMM 405 (https://www.queensu.ca/academic-calendar/search/?P=COMM%20405) New Business Development.

Communications units are included within the design courses APSC 200 (https://www.queensu.ca/academic-calendar/search/?P=APSC%20200) Engineering Design & Practice II and APSC 293 (https://www.queensu.ca/academic-calendar/search/?P=APSC%20293) Engineering Communications, ELEC 390 (https://www.queensu.ca/academic-calendar/search/?P=ELEC%20390) Principles of Design and Development, and ELEC 498 (https://www.queensu.ca/academic-calendar/search/?P=ELEC%20498) Computer Engineering Project.