COMPUTER ENGINEERING, ECEI STREAM, B.A.SC. (CLASS OF 2025)

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. Satisfy the minimum Accreditation Units (AU) set by ECE in each CEAB category.
2. Have at least 5 four-hundred level elective courses.
3. Have at least 3 courses from Electives Lists A and B that satisfy the Department criteria for qualified accreditation units in the categories of engineering science and engineering design.
4. Have at least 3 courses from Elective List B.
5. 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 2022-2023

Code	Title	Units
APSC 200	Engineering Design & Practice II	4.00
APSC 293	Engineering Communications	1.00
ELEC 221	Electric Circuits	4.25
ELEC 252	Electronics I	4.25
ELEC 270	Discrete Mathematics with Computer Engineering App	3.50
ELEC 271	Digital Systems	4.00
ELEC 274	Computer Architecture	4.00
ELEC 278	Fundamentals Of Information Structures	4.00
ELEC 279	Introduction to Object Oriented Programming	4.00
ELEC 280	Fundamentals of Electromagnets	3.75
ELEC 299	Mechatronics Project	1.50
MTHE 225 or MTHE 237	Ordinary Differential Equations Differential Equations for Engineering Science	3.50
COMM 201	Introduction to Business for Entrepreneurs	3.00
Total Units		**44.75**

Third Year CORE 2023-2024

Code	Title	Units
ELEC 326	Probability & Random Processes	3.50
ELEC 371	Microprocessor Interfacing and Embedded Systems	4.00
ELEC 373	Computer Networks	3.50
ELEC 374	Digital Systems Engineering	4.25
ELEC 377	Operating Systems	4.00
ELEC 379	Algorithms with Engineering Applications	4.00
ELEC 390	Principles of Design and Development	3.50
CMPE 223 or ELEC 376	Software Specifications Software Development Methodology	3.00-3.50
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		**41.75-42.25**

Fourth Year CORE 2024-2025

Code	Title	Units
ELEC 498	Computer Engineering Project [1]	7.00
COMM 405	New Business Development	3.00
Technical Electives		19.60-21.10
Total Units		**29.60-31.10**

[1] With Departmental and instructor support, students may request to substitute APSC 480 Multi-disciplinary Industry for ELEC 498 Computer Engineering Project.

Electives

Computer Engineering: Electives (https://queensu-ca-public.courseleaf.com/engineering-applied-sciences/academic-plans/computer-engineering/computer-engineering-electives/)

Course Prerequisites

Normally, registration in a course offered by the 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 Introduction to Business for Entrepreneurs, COMM 301 Funding New Ventures, COMM 302 Launching New Ventures, and COMM 405 New Business Development.

Communications units are included within the design courses APSC 200 Engineering Design & Practice II and APSC 293 Engineering Communications, ELEC 390 Principles of Design and Development, and ELEC 498 Computer Engineering Project.