

2025-2026 Academic Year

ECE 4th Year Course Registration

June 2025



DEPARTMENT OF
ELECTRICAL AND
COMPUTER ENGINEERING



ECE Advisors

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Academic Calendar and Registration Dates

- June - 2025-2026 Academic Calendar is published
- 23 June – 2025-2026 Timetable is published
- mid July – course Pre-Load (students will be preloaded into ELEC 490/498 capstone course, plus COMM 405)
- 23 July – course selection opens, self-enrollment begins (check your enrollment appointment day/time on Solus)
- time to add electives.

Useful Links:

[Registration Guide](#)

[SOLUS Help](#)

[Student Wellness Services](#)

Online Resources

- **ECE web site**
 - [ECE Degree Planning Spreadsheets](#), Pre-requisite Charts, Course Information
 - [ECE Faculty](#)
 - [Booking an appointment with the advisor](#)
- **Academic Calendar 2025-20256**, [Academic Plans](#) and course information; FEAS Policies and Regulations;
- **Registrar & Financial Aid Services:**
 - [Tuition](#), [Graduation](#), [Sessional Dates](#) etc.
 - [Solus Tutorials](#);
- **Smith Engineering** – forms, academic considerations, accommodations, embedded counsellors, contacts etc.

Curriculum Updates

- Comp Eng – Only one List of Technical Electives (see the updated program graduation requirements)
- Comp Eng – revised selection of technical electives (see the details on your Academic Plan)
- Comp Eng - CMPE 452 deleted; CMPE 458 – not offered
- ELEC - not offered: ELEC 421, ELEC 446, ELEC 435, ELEC 436, ELEC 464, ELEC 481, ELEC 486
- MREN 348 Into to Robotics (W2026) counts toward a 4th year elective

Exclusions in ECE -

only one course counts towards the degree requirements:

1. ELEC 425 Machine Learning (List A TE) and CMPE 452 Neural Networks (List B TE);

4th Year CORE

REGULAR Stream

- ELEC 490/8 Capstone Project Course (Fall-Winter), 7 credits

INNOVATION STREAM:

ELEC 490/8 – Capstone project course (Fall-Winter), 7 credits

COMM 405 New Business Development - Fall

Notes:

- All fourth-year ECE students who have completed the necessary prerequisite courses will be automatically preloaded into the ELEC 490/498 design project course, depending on their program.
- Students can self-register in ELEC490/8, or contact your UG Assistant for help in case of a missing prerequisite.
- ELEC 490/8 group building activities and project assignments will begin in September.

Computer Engineering Graduation Requirements

- Satisfy the minimum Accreditation Units (AU) set by ECE in each CEAB category
- Have at least **5 four-hundred level** elective courses
- Have at least **3 courses** from the Electives List that satisfy the Department criteria for **qualified accreditation units** in the categories of engineering science and engineering design
- ~~Have at least **3 courses** from Elective **List B**~~
- Counting required core courses and elective courses in all four years, result in a total of no fewer than **157.5** (**160.5** for **ECEi**) credits for the complete program.

CE: Technical Electives offered by the ECE Department in 2025-2026

Fall 2025				Winter 2026			
ELEC 376	Software Development Methodology	F		ELEC 224	Cont.-Time Signals & Systems	W	P.Eng
ELEC 425	Machine Learning & Deep Learning	F	EIT	ELEC 372	Numerical Methods and Optimization for Electrical Engineers	W	P.Eng
ELEC 443	Linear Control Systems	F	P.Eng	ELEC 408	Biomedical Signal and Image Processing	W	
ELEC 471	Safety Critical Software Engineering	F		ELEC 431	Power Electronics	W	
ELEC 473	Cryptography and Network Security	F	EIT	ELEC 451	Digital Integrated Circuit Engineering	W	P.Eng
ELEC 475	Computer Vision with Deep Learning	F	P.Eng	ELEC 470	Computer System Architecture	W	P.Eng
MREN 318	Sensors and Electric Actuators	F		ELEC 472	AI	W	P.Eng
				ELEC 477	Distributed Systems	W	Eng. License
				SOFT 437	Performance Analysis	W	P.Eng
				MREN 348	Intro to Robotics	W	P.Eng

ELEC 376 and CMPE 223 are Optional Core; if both are completed – CMPE 223 counts toward a technical elective

CE: Technical Electives offered by the School of Computing in 2025-2026

Fall 2025			Winter 2026		
CMPE 204	Logic for Computing Science	F	CMPE 204	Logic for Computing Science	W
CMPE 223	Software Specifications	F	CMPE 223	Software Specifications	W
CMPE 251	Data Analytics	F	CMPE 322	Software Architecture	W
CMPE 327	Software Quality Assurance	F	CMPE 325	Human-Computer Interaction	W
CMPE 422	Formal Methods in Soft. Eng.	F	CMPE 332	Database Management Systems	W
CMPE 457	Image Processing & Comp. Vision	F	CMPE 351	Advanced Data Analytics	W
			CMPE 454	Comp. Graphics	W
			SOFT 423	S/W Requirements	W

Electrical Engineering Graduation Requirements

- Satisfy the minimum Accreditation Units (AU) set by ECE in each CEAB category
- Have at least **5 courses** from Electives **List A**
- Have at least **5 four-hundred** level **elective** courses
- Counting required core courses and elective courses in all four years, result in a total of no fewer than **157.5** (**160.5** for **ECEi**) credits for the complete program

EE: Technical Electives offered in 2025-2026

Fall 2025			Winter 2026		
ELEC 425	Machine Learning and Deep Learning	F	ELEC 279	Object-orient. Programming	W
ELEC 433	Energy and Pwer Systems	F	ELEC 333	Electric Machines	W
ELEC 443	Linear Control Systems	F	ELEC 373	Computer Networks	W
ELEC 473	Cryptography and Network Security	F	ELEC 374	Digital Systems Engineering	W
ELEC 475	Computer Vision with Deep Learning	F	ELEC 408	Biomedical Signal & Image Proc	W
ELEC 457	Analog Integrated Circuits & Systems	F	ELEC 431	Power Electronics	W
MREN 318	Sensors and Electric Actuators	F	ELEC 451	Digital Integrated Circuit Engineering	W
			ELEC 461	Digital Communications	W
			ELEC 470	Computer System Architecture	W
			ELEC 472	AI	W
			MREN 348	Intro to Robotics	W

Complementary Studies Program Requirement

Complementary Studies – not Innovation Stream

- Must have a total of **9 credits** (108 units) of CS:
 - **1 course (or 3 credits)** must be from **List A** (Humanities and Social Sciences)
 - Remaining 2 courses (or 6 credits) can be from List A or List B

STREAMS of Specialization:

- Suggested streams give a coherent set of courses in a particular area, e.g., mechatronics. Use interest and passion as your guide;
- Streams allow you to mix and match as you wish and provide larger number of courses to choose from;

Streams of Specialization for Elective Courses in Computer Engineering

Computer Hardware
Computer Systems
Software Engineering
Mechatronics
Artificial Intelligence

Streams of Specialization for Elective Courses in Electrical Engineering

Biomedical Engineering
Communications and Signal Processing
Communication Systems and Networks
Microelectronics and Photonics
Mechatronics
Power Electronics and Systems
Robotics and Control

Prerequisites

- Prerequisites: capture material necessary to do the course
 - If the professor thought you could do the course without knowing that material, it would not have been made a prerequisite
- Prerequisites only waived in exceptional circumstances. Process:
 - **the instructor of the course for which the waiver is required must approve the waiver in writing (sign the form or provide the approval over the email)**
 - Student then submits the approved prerequisite waiver request or signed form to the Undergraduate Program Assistant for the ECE Undergrad Chair consideration

Prerequisite Charts: [EE](#) and [CE](#)

FORMS: <https://smithengineering.queensu.ca/current-students/academics/forms-online.html>

Course Planning

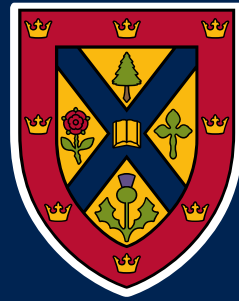
- Use your degree planning spreadsheet to verify that all program requirements will be met
- Follow Calendar & all preregistration instructions
 - ❑ Confirm core courses are preloaded
 - ❑ Select electives (technical and/or complementary studies)
 - ❑ Check course prerequisites and **exclusions**
 - ❑ Submit substitution requests for courses outside ECE that are not listed as official technical electives (CISC, MECH, MTHE)
 - ❑ AVOID **Negative Service Indicators** (SOLUS account, unpaid tuition). [Log on to SOLUS](#) to view your financial account to see if you have any outstanding debts. The University Registrar's Office can be reached at solus@queensu.ca about registration or payment.
- Respect deadlines to avoid difficulties (Add/Drop courses)

Internship or QUIP

- As an Engineering and Applied Science student, you are eligible to receive 3.5 academic credits for participating in the internship program.
- Your diploma will read: Bachelor of Applied Science, Major in Computer Engineering or Electrical Engineering with Professional Internship.
- Students are required to complete a work term report or seminar for evaluation at the end of their internship, as well as successful employer performance evaluations after four, eight and twelve months.
- Note, ELEC and CMPE programs accept **APSC 303 as a technical elective**. Credit may only be granted to students who have successfully fulfilled the necessary requirements to receive the Professional Internship designation.

Degree Planning Spreadsheet – helps to stay on track with your studies

- [Electrical Engineering](#)
- [Computer Engineering](#)



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