

Information Session

Class of 2028

2025-2026 Academic Year

ECE Advisors

- ECE UG Assistant (WLH-416)
 - Irina Pavich (irina.pavich@queensu.ca)
- EE Undergraduate Chair:
 - Prof. Il-Min Kim (eeugradchair@queensu.ca)
- CE Undergraduate Chair:
 - Prof. Jianbing Ni (ceugradchair@queensu.ca)
- UG Program Advisors <https://www.ece.queensu.ca/undergraduate/contacts.html>

Online Resources

- Academic Calendar 2025-2026, [Academic Plans](#) and course information; Smith Engineering Policies and Regulations;
- [Registrar & Financial Aid Services](#):
 - [Tuition](#), Graduation, [Sessional Dates](#) etc.
 - [Solus Tutorials](#);
- [Smith Engineering](#)
 - [FORMS](#): Substitution request, Incomplete Grade Request, Late Course Add/Drop requests, Waivers etc.;
 - Smith Engineering Student Services resources: academic considerations, accommodations, embedded counsellors, supplemental exam, awards etc.
- [ECE](#)
 - ECE Degree Planning Spreadsheets, Pre-requisite Charts, Course Information
 - [ECE Faculty](#)
 - [Booking an appointment with the advisor](#)

Our programs are subject to **Canadian Engineering Accreditation Board** requirements set at the federal level.

CEAB Prescribes some of the curriculum content, mandates number of accreditation units (AUs) and credits, and number of technical and complementary courses students need to take

For example, a course may be worth **4 credits** and have **48 AUs**

Accreditation Rules - Example

ELEC 278 Fundamentals of Information Structures F | 4

Lecture: 3

Lab: 0.5

Tutorial: 0.5

Fundamentals of Data Structures and Algorithms: arrays, linked lists, stacks, queues, deques, asymptotic notation, hash and scatter tables, recursion, trees and search trees, heaps and priority queues, sorting, and graphs. Advanced programming in the C language. Introduction to object oriented programming concepts in the context of data structures.

Academic Units:

Mathematics 12

Natural Sciences 0

Complementary Studies 0

Engineering Science 24

Engineering Design 12

PREREQUISITE(S): APSC 143 or APSC 142 or MNTC 313

EXCLUSION(S): CISC 235, MREN 178

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

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 Electives Lists that satisfy the Department criteria for qualified accreditation units in the categories of engineering science and engineering design
- 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.

Electrical Engineering 2nd Year Core Courses

Fall 2025	Winter 2026
ELEC 221 Electric Circuits	ELEC 224 Cont.-Time Signals and Systems*
ELEC 231 Mathematical Methods I for Electrical & Comp. Eng.	ELEC 232 Mathematical Methods II for Electrical Engineering*
ELEC 271 Digital Systems	ELEC 252 Electronics I
ELEC 278 Fundamentals of Info Structures	ELEC 274 Computer Architecture
ELEC 290 ECE Design and Practice	ELEC 280 Fundamentals of Electromagnetics
COMM 201 Intro. to Business for Entrepreneurs* OR Complementary Studies List A (Regular ECE Stream)	ELEC 292 Introduction to Data Science
<i>*Innovation Stream Only</i>	<i>*Courses specific to the Electrical Engineering Academic Plan</i>

Computer Engineering 2nd Year Core Courses

Fall 2025	Winter 2026
ELEC 221 Electric Circuits	ELEC 252 Electronics I
ELEC 231 Mathematical Methods I for Electrical & Comp. Eng.	ELEC 270 Discrete Mathematics with CE App*
ELEC 271 Digital Systems	ELEC 274 Computer Architecture
ELEC 278 Fundamentals of Info Structures	ELEC 279 Intro. to Project-Oriented Programming*
ELEC 290 ECE Design and Practice	ELEC 280 Fundamentals of Electromagnetics
COMM 201 Intro. to Business for Entrepreneurs* OR Complementary Studies List A (Regular ECE Stream)	ELEC 292 Introduction to Data Science
<i>*Innovation Stream Only</i>	<i>*Courses specific to the Computer Engineering Academic Plan</i>

Complementary Studies

EE and CE (Regular Stream):

- Must complete 3 courses (9 credits) of [complementary studies courses](#) throughout your program

*At least one out of three courses must be from Complementary Studies [List A](#).

- Typically take 1 CS course in each of 2nd, 3rd, 4th year, but whenever it can fit into schedule is fine (e.g., PSYC 100 is 6 credits and goes fall and winter).

List of Complementary Studies Courses can be found in the Academic Calendar:

<https://www.queensu.ca/academic-calendar/engineering-applied-sciences/complementary-studies/>

Complementary Studies – Innovation Stream

ECE Innovation Stream:

- Required Innovation Stream Courses: COMM 201, COMM 301, COMM 302, and COMM 405
- In addition to above, Must complete one course (3 credits) from complementary studies **List A**

List of eligible Complementary Studies Courses can be found in the Academic Calendar:

<https://www.queensu.ca/academic-calendar/engineering-applied-sciences/complementary-studies/>

Streams of Specialization

- In 3rd and 4th year of your program, you will be choosing **Technical Elective Courses**. These are technical engineering courses for your program that you get to choose from a list of engineering electives.
- EE, EEi, CE, and CEi programs have a **Streams of Specialization** list.
- Streams of Specialization are *unofficial* lists that serve as guides of which Technical Elective courses you can choose to take to specialize in a particular area (e.g. mechatronics, biomedical, etc.)

Examples of Streams in Electrical

Visit [ECE website](#) for courses

- Biomedical Engineering
- Communications & Signal Processing
- Communications Systems & Networks
- Electronics & Photonics
- Mechatronics
- Power Electronics & Systems
- Robotics and Control

Examples of Streams in Computer

Visit [ECE website](#) for courses

- Computer hardware
- Computer systems
- Software Engineering
- Mechatronics
- Artificial Intelligence

Design and Research Project Courses

ELEC 290 ECE Design and Practice

ELEC 392 Engineering Design and Development

- topics in applied design principles, testing, teamwork, communication; the course is based on data science topics.

ELEC 490/498 ECE Engineering Project (capstone design project)

- prerequisites: 3rd year core courses incl. ELEC 392
- instructors and project supervisors
- group of 3-4 to design/build/document

[ELEC 497 Research project](#) (available to 4th year students)

- For those with an interest in exploring in depth some technical area in a more independently-driven research study

Degree Planning

How to stay on top of your degree requirements

Degree Planning Spreadsheet

Download and use the Degree Planning Spreadsheet for your program and year to verify if you're on track to meet your degree requirements.

EE, EEi: <https://smithengineering.queensu.ca/ece/undergraduate/electrical-engineering/degree-planning.html>

CE, CEi: <https://smithengineering.queensu.ca/ece/undergraduate/computer-engineering/degree-planning.html>

Add/Drop Deadlines

September 15 - Last day **to add** F and FW courses

September 15 – Last day **to drop** F courses with full tuition credit

November 2 - Last day to drop F and FW courses without Faculty/School Permission

See Key Dates on the Registrar Website: [Key Dates | Registrar & Financial Aid Services \(queensu.ca\)](#)

Respect add/drop deadlines!

Late Add/Drop requests:

requires the approval of the department and the Operations Committee, and will only be permitted in exceptional circumstances.

Late withdrawals will be indicated on the student's transcript by the designation DR.

Student Responsibilities

- Keep on top of course material
- If you have any questions or difficulties, approach your instructor, TA, classmates, class representatives
- Adhere to relevant deadlines (course and university deadlines)
- You should be trying out homework problems *first* before contacting the instructor
- Respect your peers, your teaching assistants, your professors
- Proper behavior in class (no text/email during lecture)
- Proper email etiquette
 - ✓ Identify yourself: name, student ID, program, year, course
 - ✓ Address your professor/TA correctly
- You cannot distribute other people's work

When emailing Queen's Faculty and Staff, you MUST use your Queen's email and include your Student Number

To protect students' privacy and records

- **Inquiries from non-Queens emails will be dismissed**
- **Emails without student name and student number will be dismissed**

Academic Accommodations

A disability may include a temporary (e.g., concussion or broken arm) or permanent (e.g., learning disability) condition.

Academic Accommodations are issued by [Queen's Student Accessibility Services \(QSAS\)](#) to students who have an ongoing medical condition or other disabilities that affect their academics.

Supporting documentation – QSAS requires professional documentation from a specialist to determine what accommodations will be granted.

Submission process:

Use the VENTUS portal for accommodated students:

<https://ventus.queensu.ca/ventus/landing.php>

Contact:

Smith Engineering Program Advisor, Accommodations &

Considerations engineering.aac@queensu.ca

Academic Considerations

Academic consideration is meant to help you manage a short-term extenuating circumstance that is beyond your control and could affect your academics.

Examples:

- Requests for academic consideration up to 3 days
- Requests for academic consideration between 4 days and 3 months
- Requests for academic consideration during exam periods
- Excused Absence for a Significant Event

Find out more about types of Academic Consideration and required documents:

<https://www.queensu.ca/artsci/undergraduate/student-services/academic-consideration>

Course Substitutions

Sometimes a student can request to substitute a course in their program with

- Courses taken during the summer at another university.
- Courses taken while on exchange at another university.
- Courses that are not on the approved TECH lists.
- A course to replace a core course*.

(*NOTE: This form of substitution is rare and requires detailed information as to why the student is not taking the core course at their home university.)

Course Substitutions: Process

1. To submit your request, you will need the following information on the course you are planning to take:
 - Course syllabus
 - Total # of lecture/lab/tutorial hours
 - Course grading scheme
 - Reason why you would like to substitute one course with another
 - Completed Substitution Request Form
2. Instructor Signature: a) CORE/TECH Courses: The instructor of the course to be substituted will also need to sign the form as an indication that the course is a good substitute b) COMP Courses: No instructor signature required.
3. Undergraduate Chair signature
4. Smith Engineering Faculty Office final review

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 are only waived in exceptional circumstances
 - Submit to Undergraduate Program Assistant *the Prerequisite Waiver Form* which asks Undergrad Chair to waive prerequisite:

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

Before submitting the form, the instructor of the course for which the waiver is required must approve the waiver justification in writing (sign the form or provide the approval over email)

The Queen's Undergraduate Internship Program (QUIP)

- 12-16 month accredited paid work experience, students go after completing 2nd or 3rd year (after 3rd year is preferred). Your diploma will read: Bachelor of Applied Science, with Professional Internship.
- [QUIP Requirements, Fees, and Policies](#)

You will be enrolled in courses APSC 301, 302, 303 and 304 - Professional Internship. QUIP is academically linked: APSC 303 will count toward your program requirements as a technical elective at 3.5 credits.

For more information about QUIP, please visit the [Career Services QUIP page](#) or contact the QUIP team: quip@queensu.ca

For Engineering-specific advising and support, contact Corporate Relations: [Corporate Relations Career Education Team](#)

Registration

- Students are block enrolled into all core courses, students can self register in their complementary studies course
- No guarantee that desired combinations of electives are completely conflict-free

ECE Dept. makes requests to Registrar to help avoid conflicts, but no guarantee

- You must be flexible in 3rd-year and 4th-year

Support Resources

University is hard. Never hesitate to reach out for advice and support

Useful Links

Queen's Student Wellness Services: Medical, mental health, accessibility and health lifestyle appointments. Also offers crisis counselling.

- <https://www.queensu.ca/studentwellness/>
- Call 613-533-2506 or Visit in person 1stFloor Mitchell Hall

Engwell Hub:

- <https://engineering.queensu.ca/current-students/engwell/index.html>

Embedded Counsellors:

- [Personal Counselling – Queen's Engineering and Applied Science \(queensu.ca\)](#)

Extracurricular Life (How to get involved)

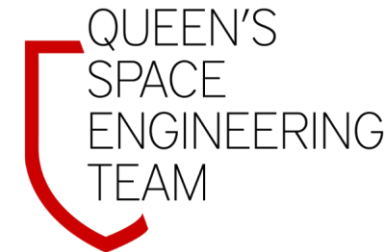
- [Engineering Society](#)

- Services (Clark Hall Pub, Tea Room, CEO, + More)
- Events (O-Week, Sci Formal, Fix & Clean + More)
- Conferences at schools across Canada (trip funded by EngSoc)
- Much more!



- [ECE-Affiliated Design Teams](#)

- aQuatomomous
- Formula SAE (Racing)
- Hyperloop
- Knights Robotics
- Relectric Car
- Space Engineering (QSET)
- Aero Design
- BioMechatronics (QBMeT)
- BioMedical Innovation (QBiT)
- Rocket Engineering (QRET)
- Solar Design
- VEX U Robotics



Attend the Design Team Fair in **September** (Date and Time TBD)

Faculty Regulations

[Policies and Governance](#) – rules and regulations of Smith Engineering at Queen's.

See full list of Faculty Policies and regulations in the [Academic Calendar](#)

- Reg. 2(e): course substitutions

need prior approval to verify equivalence

- Reg. 7: requirements for graduation

English Proficiency Test (EPT), 6 years, and a cumulative GPA of 1.6

- Reg. 9: honours standing at graduation

first class: GPA 3.5+

Academic Integrity and Conduct

[Queen's University Code of Conduct](#)

[Departure from Academic Integrity](#)

Welcome to the ECE department!



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