

Computer Engineering

Get to know **COMPUTER ENGINEERING**

The information and communication technology of our knowledge-based society places computer engineers at the hub of a computing revolution that is constantly changing the way people live and work. In this program, you will study artificial Intelligence, quantum computing, computer vision, computer architecture, safety critical software engineering, cryptography and network security, machine learning and deep learning, operation systems, computer networks, and algorithms. You may choose to specialize in computer hardware, computer systems, software engineering, or mechatronics streams of specialization, and complement your core knowledge with advanced topics in electrical and computer engineering.

Degree **OPTIONS**

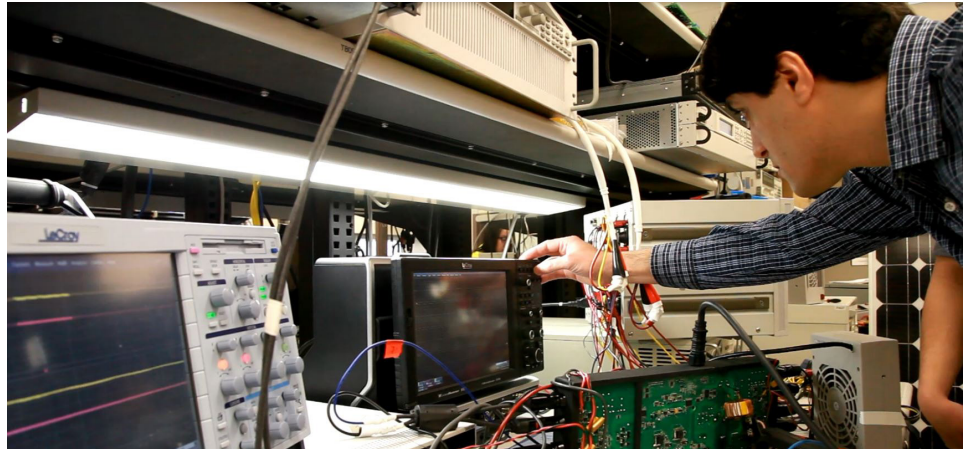
Bachelor of Applied Science in Engineering

Bachelor of Applied Science in Engineering with Professional Internship

Specialization in Artificial Intelligence / Computer Hardware / Computer Systems / Software Engineering / Mechatronics

Queen's **ADMISSIONS**

Students apply to Queen's Engineering (QE) through the OUAC (Ontario University Application Centre) website. Secondary school prerequisites include five 4U courses, English 4U, Calculus and Vectors 4U, Advanced Functions 4U, Chemistry 4U, and Physics 4U. Applicants outside of Ontario may have additional requirements.



"Our undergraduate faculty-to-student ratio is among the highest in the country and translates to a very direct and personal educational experience for our students."

A Common **START**

Queen's is unique in offering a common first year along with an open discipline choice. When you do choose your program, you don't have to worry about caps or quotas. Provided you pass all of your first year courses, you are guaranteed a place in your engineering program of choice. Queen's also offers Section 900, a special extended program for students struggling with first year courses. Take things at a slower pace and recover in time for second year.

Course **HIGHLIGHTS**

Computer Engineering students have the opportunity to take a wide range of technical courses to help prepare them for the many possible career destinations available. Such courses include:

- Computer Vision
- Artificial Intelligence
- Machine Learning
- Advanced User Interface Design
- Advanced Database Systems
- Software Engineering
- Computer System Architecture
- Quantum Computing

Computer Eng **DIRECT ENTRY**

Consider Computer Engineering Direct Entry, an undergraduate program if you are interested in pursuing a career in computer engineering from the start of your undergraduate studies. Whether you aim to work in artificial intelligence, software, hardware, embedded systems, or emerging technologies such as quantum computing, generative artificial intelligence, robotics, or GPUs, this program provides a strong foundation in both theoretical and applied aspects of computer engineering, preparing you for a wide range of roles in industry or further academic study.

You can receive a differentiated curriculum designed to give you an early start in your discipline. In your first year, you will take two programming courses. You will learn about probability and statistics earlier in the program, which is foundational for fields like artificial intelligence and machine learning. This specialized curriculum provides greater flexibility in choosing technical electives and pursuing internship opportunities in later years.

Computer Engineering MAJOR MAP

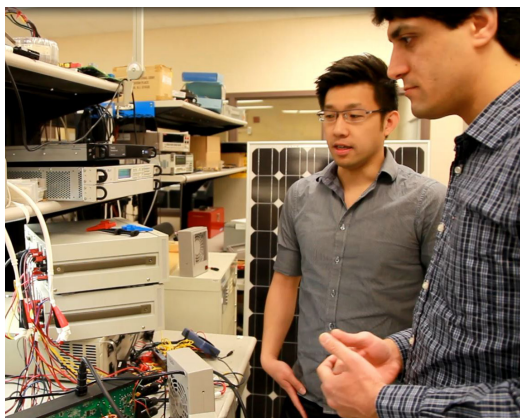
BACHELOR OF APPLIED SCIENCE | BACHELOR OF APPLIED SCIENCE WITH PROFESSIONAL INTERNSHIP



How to use this map

Use the 5 rows of the map to explore possibilities and plan for success in the five overlapping areas of career and academics. The map just offers suggestions – you don't have to do it all! To make your own custom map, use the [My Major Map](#) tool.

Computer Engineering



Get started thinking about the future now – where do you want to go after your degree? Having tentative goals (like careers or grad school) while working through your degree can help with short-term decisions about courses and experiences, but also help you keep motivated for success.

Get the help you need

Queen's provides you with a broad range of support services from your first point of contact with the university through to graduation. At Queen's, you are never alone. We have many offices dedicated to helping you learn, think and do.

Ranging from help with academics and careers, to physical, emotional, or spiritual resources – our welcoming living and learning environment offers the programs and services you need to be successful, both academically and personally. Queen's wants you to succeed! Check out the [Student Affairs website](#) for available resources.



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QUIP

QUEEN'S UNDERGRADUATE
INTERNSHIP PROGRAM

START DATES

May, September,
or January

POSITIONS

are paid and
full-time

WORK TERMS

are 12-16 months
long

PROGRAM OVERVIEW

- Graduate with a "Professional Internship" degree
- Learn about current advances, practices and technologies in business and industry.
- Test drive a career, earn a competitive salary, and get real world experience.

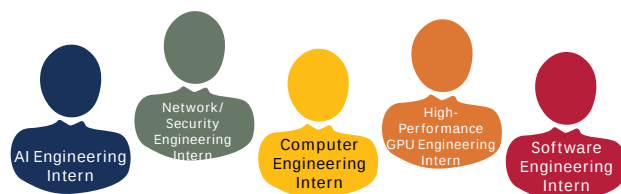
ELIGIBILITY

- Complete 1st year before you register
- Complete 2nd or 3rd year before your internship
- Minimum GPA of 1.9
- Return to Queen's after your internship to finish your degree

WHY QUIP?

- Gain a year of career-related work experience.
- Build network connections.
- Receive support from Queen's staff in the job search and during the internship.

Sample Past Internships



For more information, contact quip@queensu.ca or visit the [Program Website](#).

Why study in Kingston?

Since 1841, our community has been more than a collection of bright minds – Queen's has attracted students with an ambitious spirit. Queen's has the highest retention rates, the highest graduation rates, and one of the highest employment rates among recent graduates. We are a research-intensive university focused on the undergraduate experience. The BBC has identified Kingston as one of the GREATEST UNIVERSITY TOWNS in the world – and it is often identified as the safest city in Canada. It is a university city at the core; just a quick drive to Toronto, Montreal, Ottawa and even New York. At a university with more clubs per capita than any other university in Canada, and in a city with more restaurants per capita than any other city in North America, you will have the experience of a lifetime at Queen's – and graduate with a degree that is globally recognized among the best.

We're closer than you think.

