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.

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, and Queen’s wants you to succeed! Check out the Student Affairs website for available resources.

Why study in Kingston?
For 175 years, 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 us as one of the GREATEST UNIVERSITY TOWNS in the world – and is often awarded the safest city in Canada.

We’re closer than you think
For more information, contact quip@queensu.ca or visit the Program Website.

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 circuits, electronics, digital systems, microprocessors, computer architecture, data structures, algorithms, computer networks, operating systems, and software specification and development. 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 Computer Hardware / Computer Systems / Software Engineering / Mechatronics

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 Requirements
- Computer System Architecture

That is a degree from Queen’s.

eo.ece.queensu.ca

“I want to do it all! To make your own custom map, use the My Major Map tool.”
### 2018-2019

#### Computer Engineering

**MAJOR MAP**

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

#### 1ST YEAR

- **Queen's Engineering first year is common – courses include:** Physics, Chemistry, Calculus, Algebra, Graphics, Computing and Earth Systems Engineering.
- Also APSC100, the entry level course in our Engineering Design and Practice Sequence (EDPS), focusing on problem solving, experimentation principles and finishing off with a team-based engineering project.
- Discipline selection will take place in February!

#### 2ND YEAR

- You will take the second EDPS course – APSC200, plus one Complementary Studies course. For CIE students, the Complementary Studies course required is Introduction to Business for Entrepreneurs.
- You will also take the Electrical and Computer Engineering Design Course. You will also need to take 2 Technical Electives, plus one Complementary Studies course. CIE students take two predetermined Complementary Studies courses.

#### 3RD YEAR

- You will also need to choose approximately 7–8 Technical Electives (totaling 22.5 units), plus one Complementary Studies course. You may also take a Research Project course (ELEC 497).
- For CIE, the Complementary Studies course is Pitching and Launching your Venture.

#### 4TH OR FINAL YEAR

- **All Computer Engineering students follow up their ELEC 390 ECE Design course with the Computer Engineering Project course (ELEC 494).** CIE students follow up their Entrepreneurial ECE Design course with Entrepreneurial Computer Engineering Project.
- Investigate requirements for full-time jobs or other opportunities related to careers of interest.
- Assess what experience you’re lacking and fill in gaps with volunteering, clubs, or internships – check out Career Services workshops for help.

#### Employability skills

Your time at Queen’s will give you valuable skills to boost your employability, including:

- Understanding of computer systems, computer hardware, electronics, and software engineering
- Knowledge of research techniques and methods of data analysis
- Analytical and logical thinking
- Problem solving
- Conduct scientific research and summarize findings
- Proficiency in mathematics – solve mathematical problems and analyze quantitative information
- Oral and written communication – explain technical information to others in reports and presentations
- Work independently and in a team on a project
- Time and resource management

Where could I go after graduation?

- Aerospace software
- Ambitious intelligence
- AI software
- Autonomous control systems
- Banking Automation Systems
- Biomedical Engineering
- Computer architecture
- Computer vision and optical processing
- Cyber security
- Database engineering
- Game development
- Integrated circuit design
- Medical informatics
- Mechatronics
- Natural language processing
- Wearable technology

Taking time to explore career options, build experience, and network can help you have a smoother transition to the world of work after graduation. *Every career may require additional training. Careers listed here are only suggestions.*

---

Visit careers.queensu.ca/majormaps for the online version with links!