Why GRADUATE STUDIES in ELECTRICAL & COMPUTER ENGINEERING?

As an MEng student in the important field of Electrical and Computer Engineering (ECE), you can play a vital role in future developments in such areas as microchip design, bioelectronics, artificial intelligence, machine vision, IoT, autonomous vehicle & robots, speech and language processing, wireless and optical communications, nanoelectronics, photonics, power electronics and systems, green energy, cybersecurity, supercomputing, software engineering, and thousands of other areas. Almost every aspect of modern life is impacted by electrical and computer engineering.

The MEng program is a course work based professional program that suits students who are interested in acquiring advanced engineering knowledge and skills to enhance employment opportunities as a technical specialist in industry. Through an industry internship option, the program offers the student an opportunity to connect knowledge with current industry practice.

Why QUEEN’S?

As an MEng student in ECE at Queen’s you are part of one of the most research intensive universities in Canada. Our research program is internationally renowned with a wide range of research activities in all of the major specialization areas of electrical and computer engineering.

Queen’s ECE offers a number of cross-disciplinary opportunities in collaboration with the departments of Mathematics & Statistics, Physics & Engineering Physics, Computing, Mechanical Engineering, and the School of Kinesiology and Health Studies.

Our students come from all over the world. At Queen’s, graduate students from all disciplines learn and discover in a close-knit intellectual community.

Program STRUCTURE

MEng (1 year): Complete 8 term length courses pre-approved by the department, and seminars.

MEng with Industry/Internship option (3 semesters): Complete a semester-long paid internship.

MEng with Academic Project option (3 semesters): Complete a semester-long project supervised by faculty in Department.

STUDY Areas

- Biomedical and Intelligent Systems
- Communications and Signal Processing
- Computer and Software Engineering
- Microelectronics, Electromagnetics, and Photonics
- Power Electronics

Visit the Electrical and Computer Engineering website to read about program options.
GETTING STARTED

- Start with key priorities like completing your coursework.
- Attend the Departmental Speaker Series (ELEC 891).
- Take the APS 801 Master of Engineering Foundations course.

INTERMEDIATE STAGE

- Complete your coursework.
- Find your way through the academic process with help from departmental and School of Graduate Studies and Postdoctoral Affairs professional development workshops, the department Grad Chair, and the SGSPA website.

WRAPPING UP

- Finish your coursework and optional project/internship, and ensure you have enough credits to graduate.

ACHIEVE YOUR ACADEMIC GOALS

- Participate in innovation activities, such as the Queen's Innovation Connector.
- Attend an "Engineering Internship and Other Program Options" information session to learn about the program options.

MAXIMIZE LEARNING IMPACT

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BUILD SKILLS AND EXPERIENCE

- Serve on departmental, faculty, or university committees. Talk to the Graduate Electrical & Computer Engineering (GECE) Student Society for tips on getting involved.
- See workshops from School of Graduate Studies and Postdoctoral Affairs professional development.

ENGAGE WITH YOUR COMMUNITY

- Explore how you can connect with your community through experiential opportunities on- and off-campus.
- Consider volunteering with different community organizations, such as the Engineering Society Design Teams.

LAUNCH YOUR CAREER

- Finding a career that fits starts with knowing yourself. Get help by taking a Career Services workshop or meeting with a career educator and coach.
- Tune into IEEE messages and publications targeting student members and career building. Learn about the jobs and careers of other ECE grads.
- Start reading publications with University Affairs and the Chronicle of Higher Education. Browse non-academic labour market websites.

INTERMEDIATE STAGE

- Start keeping an eportfolio of your skills, experiences, and competencies.
- Consider positions in student services, the SGPS, or media outlets like the Queen's Journal, CFRC, and the SGSPA Blog. Look in the AMS Clubs Directory for more ideas.

WRAPPING UP

- Set up a meeting with the School of Graduate Studies and Postdoctoral Affairs for a Grad Chair to discuss your research interests.
- Consider putting an article in The Conversation.

WHAT WILL I LEARN?

A graduate degree in Electrical and Computer Engineering can equip you with valuable and versatile skills, such as:
- Knowledge and technical skills
- Effective communication skills in multiple forms for diverse audiences
- Information management: prioritize, organize, and synthesize large amounts of information
- Time management: meet deadlines and manage responsibilities despite competing demands
- Project management: develop ideas, gather information, analyze, critically appraise findings, draw and act on conclusions
- Creativity and innovation
- Perseverance
- Independence and experience as a collaborative worker
- Awareness, an understanding of sound ethical practices, social responsibility, responsible research, and cultural sensitivity
- Professionalism in all aspects of work, research, and interactions
- Leadership: initiative and vision, leading people and discussion

WHERE CAN I GO?

A Master's degree in Electrical and Computer Engineering can take your career in many directions. Some of our MEng students choose to continue their academic career with an MASc or PhD. Our Master's students are equipped with a strong foundation for careers in numerous sectors, such as:
- Startups in all sectors, such as wearable devices, intelligent apps
- Services such as financial, pension, actuarial, intellectual properties
- Tech companies, such as Qualcomm, Ciena, Microsoft, Google, IBM, Cisco Systems, General Dynamics, Nvidia, Intel, Amazon, and Samsung

Taking time to explore career options, build experience, and network can help you have a smooth transition to the world of work after graduation.

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 Grad Map tool.
Application FAQs

What do I need to know to APPLY?

ACADEMIC REQUIREMENTS
• Honours Bachelor degree in Engineering or closely related field.
• Grade requirements: Minimum cumulative average of 75% or B from Canadian or US Universities, or 80% for international students.

ADDITIONAL REQUIREMENTS
• Curriculum Vitae.
• English Proficiency Requirements as listed on the ECE graduate website.

KEY DATES & DEADLINES
• Application due: January 31 (international), March 1 (domestic).
• Notification of acceptance: usually before the end of April for international students, end of May for domestic students.

Before you start your application, please review the Graduate studies application process.

What about FUNDING?

M.Eng. student in a course work program do not receive financial support.

Students who receive permission to enrol in our Industrial Internship Option can receive funding as interns (ELEC 895) from the industry partner.

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