Why GRADUATE STUDIES in ELECTRICAL & COMPUTER ENGINEERING?

As a 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, machine intelligence, autonomous vehicles & robots, next-generation Internet, fibre optics, communications & wireless networks, network security, power engineering, green energy, 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 a 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, Computing, Mechanical Engineering, Mining, the School of Kinesiology and Health Studies, as well as a collaborative graduate program in Computational Science and Engineering.

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

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

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

- Achieve your academic goals
  - Start with key priorities like completing your coursework.
  - Attend the Departmental Speaker Series (ELEC 891).

- Maximize learning impact
  - 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.

- 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 professional development workshops from Expanding Horizons.
  - Participate in workshops through the MEng Industrial Internship program to gain job search skills and knowledge of the Canadian context.

- 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 counselor. Check out books like So What Are You Going to do With That? for advice on various career options.
  - Tune into IEEE messages and publications targeting student members.
  - Start reading publications like University Affairs and the Chronicle of Higher Education. Browse non-academic labour market websites.
  - Participate in innovation activities, such as the Queen’s Innovation Connector.
  - Attend the MEng Industrial Internship program to gain job search skills and knowledge of the Canadian context.

INTERMEDIATE STAGE

- Achieve your academic goals
  - Complete your coursework.
  - Find your way through the academic process with help from departmental and Expanding Horizons professional development workshops, the department Grad Chair and the SGS Habitat.

- Maximize learning impact
  - Start keeping an eportfolio of your skills, experiences and competencies.

- Build skills and experience
  - Consider positions in student services, the SGS, or media outlets like the Queen’s Journal, CFRC, and the SGS Blog. Look in the AMS Clubs Directory for more ideas.
  - Apply and participate in the hiring process for internship positions with 1-on-1 support from the MEng coordinator.

- Engage with your community
  - Participate in your graduate and professional community through activities such as graduate student outreach programs, organizing conferences, and research groups.
  - Prepare for work or studies in a multi-cultural environment by taking the Intercultural Awareness Training Certificate hosted by OJIC and FOISC.
  - If you are an international student interested in staying in Canada, consider speaking with an International Student Advisor.

- Launch your career
  - Explore different careers of interest by reading alumni profiles on the SGS website, and using Queen’sConnect on LinkedIn to connect with Queen’s alumni, or find alumni in various careers through Ask an Alum.

WRAPPING UP

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

- Maximize learning impact
  - Set up a meeting with the School of Graduate Studies for a Grad Chat to discuss your research interests.
  - Consider putting an article in The Conversation.

- Build skills and experience
  - Practice articulating the skills you have been developing in settings outside the university, such as casual conversation, networking, and interviews. Get help from a Career Services workshop.
  - Check out opportunities for extra training through CTL, Expanding Horizons, Mitacs, or other sources to boost your skills.
  - Investigate internships from Mitacs and other sources.
  - Apply the knowledge gained from coursework in workplace with a MEng Industrial Internship.

- Engage with your community
  - Do some targeted networking with people working in careers of interest. Get help from Career Services with job searching, or interviews.
  - Investigate internships from Mitacs and other sources to boost your skills.
  - Consider putting an article in The Conversation.

- Launch your career
  - Participate in hiring committees and attend job talks. Research careers of interest. Craft your CV or Resume and job application materials.
  - Start focusing on areas of interest. Research organizations of interest and start putting together your resume for potential positions of interest. Get help from Career Services with job searching, resumes, or interviews.

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:

- Tech companies, such as Qualcomm, Intel, Microsoft, Google, IBM, Cisco
- System engineering firms, such as General Dynamics Electric boats, Boeing, and Raytheon
- Venture capital firms, such as Spark Capital and True Ventures
- Technology startups, such as Cruise, Airbnb, and Twitter
- Government agencies, such as the Department of Defense and the National Security Agency
- Research institutions, such as the National Institutes of Health and the National Science Foundation
- Consulting firms, such as McKinsey and Company and The Boston Consulting Group
- Academia, such as teaching and research positions at universities

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
- Honesty: always work with an understanding of sound ethical practices
- Professionalism in all aspects of work, research, and interactions
- Leadership: initiative and vision leading people and discussion

Visit careers.queensu.ca/gradmaps for the online version with links!
Application FAQs

What do I need to know to APPLY?

ACADEMIC REQUIREMENTS
- Honours Bachelor degree in Engineering (any) or Science (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 enroll in our Industrial Internship Option can receive funding as interns (ELEC 895) from the industry partner.