

Electrical & Computer Engineering

MASc Map

Applying to and Navigating Graduate Studies

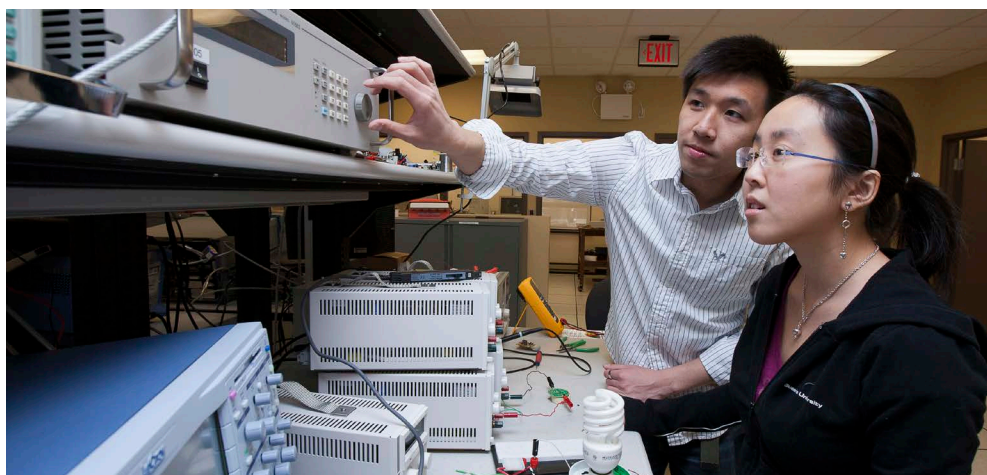
Why Graduate Studies in Electrical & Computer Engineering?

As an MASc student in the important field of Electrical and Computer Engineering (ECE), you can play a vital role in future developments in such fields as microchip design, bioelectronics, biomedical and human-machine systems, 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.

Graduate students and their work are an important part of an ongoing research process that provides the community with ways of understanding natural, cultural, imaginative, social, and technological phenomena.

Why Queen's?

As an MASc 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. In addition to the general MASc program, Queen's ECE offers a Master of Applied Science with a Field of Study in Artificial Intelligence, as well as collaborative graduate programs in Biomedical Engineering, and Master's



"As a graduate student at Queen's, you're part of a small, tightly-knit community and you have the opportunity to connect with the faculty and students in your department in a way that is simply not possible at other universities." — Dustin Dunwell, MASc (Eng)

in Applied Sustainability. It also has 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

MASc (2 years): 4 courses and seminars, plus a research thesis.

Research Areas

- Robotics, Intelligent Systems, and Biomedical Engineering

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

We encourage you to identify areas of research interest by visiting the [Electrical and Computer Engineering website](#) to read about research groups and faculty profiles.

When you find a faculty member with similar research interests to yours, contact them and tell them about your interest, and related experience. Add the faculty member(s)' name(s) to your admission application in the applicable field.



Electrical & Computer Engineering MAsc Map

MASTER OF APPLIED SCIENCE (MAsc)



Knowledge & Workplace Skills

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

Career Possibilities

A Master's degree in Electrical and Computer Engineering can take your career in many directions. Many of our MAsc students choose to continue their academic inquiry with a 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. To make your own custom map, use the My Grad Map tool: [careers.queensu.ca/gradmaps](#).

Graduate Studies FAQs

How do I make the most of my time at Queen's?

Use the Grad Map to plan for success in five overlapping areas of your career and academic life. Everyone's journey is different - the ideas on the maps are just suggestions to help you explore possibilities. For more support with your professional development, take advantage of the SGSPA professional development framework and the new Professional Development Plan (PDP) process to set customized goals to help you get career ready when you graduate.

Where can I get help?

Queen's provides you with a broad range of support services from your first point of contact with the university through to graduation. Ranging from help with academics and careers, to physical, emotional, or spiritual resources – our welcoming environment offers the programs and services you need to be successful, both academically and personally. Check out the [SGSPA website](#) for available resources.

What is the community like?

Queen's offers graduate students from every discipline a close-knit intellectual community where they can learn, discover, and build lasting connections. With more than 130 graduate programs across 50+ departments and research centres, students benefit from world-class scholars, prize-winning professional development, generous funding packages, and life in the historic waterfront city of Kingston. The campus sits at the heart of Kingston, just a 10-minute walk from downtown's shops, restaurants, and waterfront, and is deeply integrated with the local community. For more on Kingston's history and culture, see Queen's University's Discover Kingston page.

Application FAQs

What do I need to know to Apply?

ACADEMIC REQUIREMENTS

- 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

- Statement of Interest/Statement of Research.
- Curriculum Vitae.
- English Proficiency Requirements as listed on the ECE graduate website.
- If English is not a first language, nor was the language of instruction in undergraduate studies, prospective students must meet English language proficiency requirements in writing, speaking, reading, and listening as part of the application process, and before final acceptance is granted, as per School of Graduate Studies and Postdoctoral Affairs' regulations.

KEY DATES & DEADLINES

- **Application due:**
Fall Semester Start: January 31 (international), March 1 (domestic)
Winter Semester Start: August 15th
- **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?

The current minimum funding guarantee for MASc students is \$27,540 for domestic students and \$34,704 for international students per year throughout years 1-2. Students are usually funded through a combination of graduate research fellowships, teaching assistantships, and/or scholarships.

Apply for external funding from OGS, NSERC, and other sources. For information about fees and tuition, please check the Registrar and Financial Aid Services website for the most up-to-date information. For more information on awards and scholarships, consult the School of Graduate Studies and Postdoctoral Affairs' website.



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