Electrical & Computer Engineering MASc Map

Applying to and Navigating Graduate Studies

GRAD MAP FOR MASc STUDENTS

Why GRADUATE STUDIES in ELECTRICAL & COMPUTER ENGINEERING?

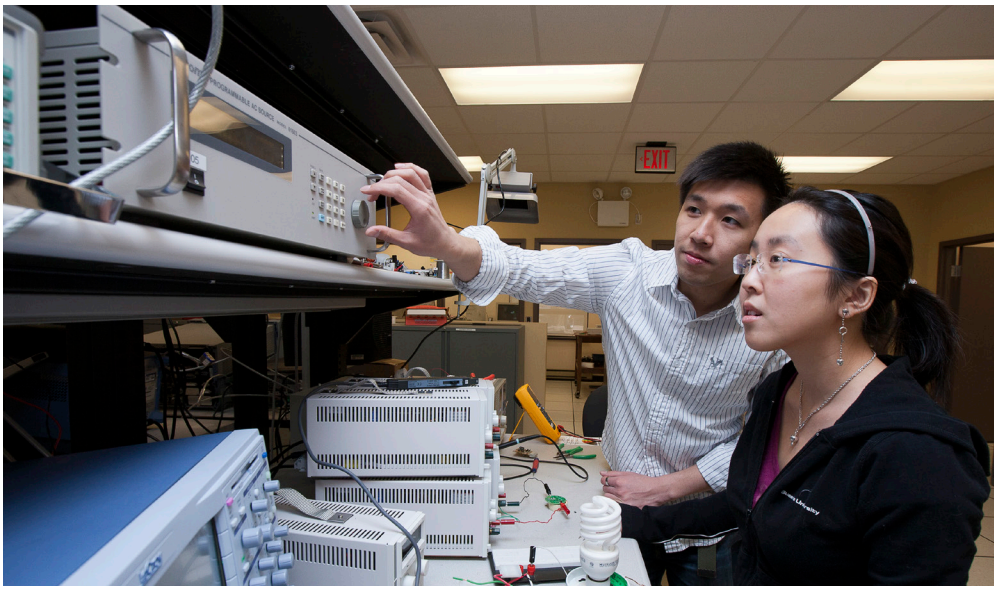
As an MASc student in the important field of Electrical and Computer Engineering (ECE), you can play a vital role in future developments in such areas as microchip design, bioelectronics, artificial intelligence, machine vision, IoT, autonomous vehicle & robots, speech and language processing, wireless 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.

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 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.

"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)

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.

Queen's University GRADUATE STUDIES AND POSTDOCTORAL AFFAIRS

queensu.ca/grad-postdoc

2025-2026

Electrical & Computer Engineering MASc Map

MASTER OF APPLIED SCIENCE (MASc)

Queen's UNIVERSITY

	GETTING STARTED	INTERMEDIATE STAGE	WRAPPING UP
ACHIEVE YOUR ACADEMIC GOALS	• Start with key priorities like developing your relationship with your supervisor and completing your coursework. • Consider how your course papers can contribute to your MASc thesis research. • Start your research as soon as possible, aiming to get traction by the end of your first year. • Attend the Departmental Speaker Series (ELEC 891).	• Complete your coursework; continue to do your research and progressively write up your Master's research thesis. • Find your way through the academic process with help from departmental and School of Graduate Studies and Postdoctoral Affairs (SGSPA) professional development workshops, the department Grad Chair, and the SGSPA website.	• Present your research to ECE graduate students and faculty. • Complete and defend your Master's research thesis.
MAXIMIZE RESEARCH IMPACT	• Start to think about the audiences for your research. • Look into applying for NSERC, OGS, and other scholarships. Winning them will boost your academic career. • Participate in innovation activities, such as the Queen's Innovation Connector.	• Submit your research for presentation at a research conference such as an IEEE sponsored conference. • Consider participating in the 3 Minute Thesis (3MT) or GRADflix competition. • Expand your research audience through social media such as Twitter or a blog.	• Consider publication options for your research. • Attend a major conference in your field, such as an IEEE conference. • Consider being interviewed on the SGSPA radio show Grad Chat to talk about your research. • Consider putting an article in The Conversation.
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. • Use Research Assistant and Teaching Assistant positions to develop your research or teaching skills. • See workshops from School of Graduate Studies and Postdoctoral Affairs professional development.	• Start keeping an eportfolio of your skills, experiences, and competencies. • For help with teaching, get support from the Centre for Teaching and Learning. Enrol in SGS902 or the PUTL Certificate. • 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.	• 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, School of Graduate Studies and Postdoctoral Affairs professional development, Mitacs, or other sources to boost your skills. • Investigate internships from MITACS and other sources.
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.	• 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 QUIC and FDISC. • If you are an international student interested in staying in Canada, consider speaking with an International Student Advisor.	• Do some targeted networking with people working in careers of interest, through LinkedIn, the Queen's Alumni Association, professional associations, and at conferences. • Consider joining professional associations. Talk to your supervisor for advice.
LAUNCH YOUR CAREER	• Finding a career that fits starts with knowing yourself. Tune into IEEE messages and publications targeting student members and career building. Learn about the jobs and careers of other ECE grads. • Get help by taking a Career Services workshop or meeting with a career educator and coach. • Start reading publications like University Affairs and the Chronicle of Higher Education. Browse non-academic labour market websites.	• Explore different careers of interest by using LinkedIn to connect with Queen's alumni. Check out Career Cruising for more information. • If you are considering a PhD, explore programs of interest reach out to faculty, and apply to PhD programs and external scholarships. Check admission test deadlines if needed for further studies.	• 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, and interviews. • Find impactful work that aligns with your values using the Queen's Career Guide to the UN Sustainable Development Goals

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?

At Queen's, graduate students from all disciplines learn and discover in a close-knit intellectual community. You will find friends, peers and support among the graduate students enrolled in Queen's more than 130 graduate programs within 50+ departments & research centres. With the world's best scholars, prize-winning professional development opportunities, excellent funding packages and life in the affordable, historic waterfront city of Kingston, Queen's offers a wonderful environment for graduate studies. Queen's is an integral part of the Kingston community, with the campus nestled in the core of the city, only a 10-minute walk to downtown with its shopping, dining and waterfront. For more about 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.

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 $27,000 for domestic and 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 more information, see the School of Graduate Studies and Postdoctoral Affairs' information on awards and scholarships.

SMITH ENGINEERING
Queen's University

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