Application FAQs

What do I need to know to APPLY?

ACADEMIC REQUIREMENTS
- Master of Applied Science or Master of Science
- Grades Required: minimum cumulative average of 75% or 8 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: 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?

Minimum funding guarantee for PhD students is $23,000 (domestic) and $30,000 (international) per year throughout years 1-4. Students are usually funded through a combination of research assistantships, teaching assistantships, and/or scholarships. Funding for international students offsets their higher tuition fees. You are encouraged to apply for external funding from OGS, NSERC and other sources. Queen’s will automatically issue a one time $10,000 award to incoming PhD students who have won federal government tri-council awards. For more information, see the School of Graduate Studies’ information on awards and scholarships.

Why GRADUATE STUDIES in ELECTRICAL & COMPUTER ENGINEERING?

As a PhD 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.

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. Check out whygradstudies.ca for more reasons to choose graduate studies in engineering.

Why QUEEN’S?

As a PhD student in ECE at Queen’s you are part of a group of top 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 the collaborative graduate program in Biomedical 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

PhD (4 years): 4 courses and seminars, thesis background and proposal exams, and thesis defense.
2019-2020

Electrical & Computer Engineering

PhD Map *

DOCTOR OF PHILOSOPHY (PhD)

ACHIEVE YOUR ACADEMIC GOALS

- Key priorities include your relationship with your supervisor, forming your committee, coursework, and comprehensive exams.
- Meet early with your supervisor to set expectations and discuss roles, responsibilities, program requirements, resources, research/occupational goals, timelines, and any required accommodation plans.
- Look to Student Academic Success Services and Expanding Horizons for supports and workshops.
- Attend the Departmental Speaker Series (ELEC 891).

MAXIMIZE RESEARCH IMPACT

- Think about audiences for your research.
- Apply to NSERC, OGS, and other funding.
- Apply for the Graduate Dean’s Travel Grant for Doctoral Field Research.
- Consider targeting your research outputs for innovation ventures: check out Queen’s Innovation Connector.

BUILD SKILLS AND EXPERIENCE

- Serve on faculty or university committees. Talk to the Graduate Electrical & Computer Engineering (GECE) student society for tips on getting involved.
- Consider positions in student services, the SGPS, or media outlets like the Queen’s Journal, CFRC, and the SGS Blog. Look in the AMS Club Directory.
- Use Teaching Assistant and Research Assistant positions to develop your skills and experience.

ENGAGE WITH YOUR COMMUNITY

- Consider volunteering with different community organizations, such as an Engineering Society Design Team.
- Participate in your graduate and professional community through activities such as graduate student outreach programs, organizing conferences, and research groups.

LAUNCH YOUR CAREER

- Tune into IEEE messages and publications targeting student members and career building. Learn about the jobs and careers of other ECE graduates.
- Take a Career Services workshop or meet with a career counsellor for help.
- Start reading publications like University Affairs and the Chronicle of Higher Education. Browse non-academic labour market websites.
- Stay on the lookout for special events like School of Graduate Studies Career Week. Explore your career pathways.

- Write and defend your thesis proposal.
- Embark on your substantive research.
- Set up regular meetings with your supervisor to discuss progress and obstacles to timely completion.
- Find your way through the academic process with help from Expanding Horizons professional development workshops, and the SGS Habitat.
- If an industry internship is of interest, consult your supervisor. Seek experiential/professional development opportunities.

- Present your work at IEEE and other research conferences as often as possible.
- Expand your research exchange through social media.
- Consider publishing elements of your research in (e.g., IEEE, ACM) journals. Learn from the Expanding Horizons Publishing workshop.

- Continue to present at conferences.
- Consider participating in the 3 Minute Thesis (3MT) competition.
- Consider patent filing, e.g., through Partek Innovations.
- Set up a meeting with the School of Graduate Studies for a Grad Chat to discuss your research interests.

- Find opportunities for extra training through CTL, Expanding Horizons, Mitacs, or other sources to boost your skills. Investigate internships from Mitacs and other sources.
- Take part in the various international, multidisciplinary opportunities, and collaborate with other departments, such as Mechanical, Math and Eng, Mining Engineering, School of Computing, and ECE at RMC.

- 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.
- Prepare for work or studies in a multi-cultural environment by taking the Intercultural Awareness Training Certificate hosted by QUCC and FDIDSC.

- Participate in hiring committees and attend job talks. Research academic careers of interest. Craft your CV and job application materials.
- Explore different careers of interest by reading alumni profiles on the SGS website, and using Queen’sConnects on LinkedIn to connect with Queen’s alumni, or find alumni in various careers through “Ask an Alumni” for more information check out Career Cruising.
- Investigate requirements for professional positions or other opportunities related to careers of interest.

- Develop connections with faculty outside of your department. Pursue interviews for faculty positions and apply for post-doc fellowships and positions.
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- If considering jobs abroad, research possible immigration regulations. If you are an international student interested in staying in Canada, consider speaking with an International Student Advisor.

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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 formats 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.
- Entrepreneurship.
- Professionalism: in all aspects of work, research, and interactions.
- Leadership: initiative and vision leading people and discussion.

WHERE CAN I GO?

A PhD in Electrical and Computer Engineering can take your career in many directions. In Canada, less than 40% of all PhDs will work in post-secondary education. Graduates from the PhD program have found careers with:

- Universities as professors.
- Tech companies, such as Qualcomm, Ciena, Microsoft, Google, IBM, Cisco Systems, General Dynamics, Nvidia, Intel, and Samsung.
- Startups in all sectors, such as wearable devices, intelligent apps.
- Services such as financial, pension, actuarial, intellectual properties.

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

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

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* This map is intended to provide suggestions for activities and careers, but everyone’s abilities, experiences, and constraints are different. Build your own Grad Map using our online My Grad Map tool.