How do I **USE THIS MAP?**

Whether you are considering or have embarked on graduate studies at Queen’s, use this map to plan for success in five overlapping areas of your career and academic life. The map helps you explore possibilities, set goals and track your individual accomplishments. Everyone’s journey is different – the guide offers options for finding your way at Queen’s and setting the foundation for your future. To make your own customized map, use the online [My Grad Map](#) tool.

**Why GRADUATE STUDIES in COMPUTING?**

The School of Computing is active in research on a broad range of topics, with an strong research record. Research areas include: Biomedical Computing, Cloud Computing, Databases, Data Mining, Mobile Networks, Software Engineering, Human-Machine Learning, Algorithms, Computational Linguistics, Theoretical Computer Science, Computational Geometry, Graph Theory, Artificial Intelligence, Parallel Systems, and Programming Languages. We are finding methods to make data more secure, software more reliable, and computers more intelligent.

**Why QUEEN’S?**

*“The cutting-edge research, world-renowned supervisors, unparalleled social experience, and a devotion to school life […] result in nothing short of awesome.”*  
— Eric Rapos, PhD student

The Queen’s School of Computing offers a graduate program that is unique in its quality, diversity, innovation and reach. Our faculty and students are engaged in research projects that span the spectrum of traditional computer science, while at the same time exploring areas never visited before. Some of us are discovering properties of certain computers that are radically different from the ones we have today, in the sense that a bit is the spin of an atom, or a register is a strand of DNA. Others are building organic interfaces for humans to communicate with computers. At Queen’s you will find a School reputed for its academic excellence and the wonderful atmosphere it enjoys.

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.

**Why KINGSTON?**

Described by students as both “quaint” and “eclectic,” Kingston is big enough to provide all the conveniences of modern life, and small enough for students, staff, and faculty to feel instantly comfortable and at home. 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.

**Program STRUCTURE**

PhD (4 years): course work, demonstration of a reading knowledge of an appropriate second language, thesis or major research paper.

**RESEARCH Areas**

- Theory
- Software
- Databases and Cloud Computing
- Biomedical Computing
- Data Mining
- Mobile Computer Networking
- Game Development and Human Computer Interaction

Visit [www.cs.queensu.com](http://www.cs.queensu.com) for more on the School of Computing.
**Computing**

**DOCTOR OF PHILOSOPHY (PH.D.)**

### ACHIEVE YOUR ACADEMIC GOALS

- **YEAR I**
  - Key priorities include your relationship with your supervisor, forming your committee, coursework, field exams, and language exam.
  - Look to **Student Academic Success Services** for a variety of supports.
  - Prepare your topical proposal.
- **YEAR II**
  - Write and defend your thesis proposal.
  - Embark on your substantive research.
  - Find your way through the academic process with the help of **Expanding Horizons**.
- **YEAR III**
  - Continue to research and write your dissertation.
  - Continue participating in the **SGS Dissertation Boot Camp**.
  - Continue to attend conferences and connect with scholars in your field and with community partners.
- **YEAR IV & TRANSITIONING**
  - Complete and defend your dissertation.
  - Continue to pursue publication options for your research.
  - Complete the Annual Research Progress Report (2 of 2).

### MAXIMIZE RESEARCH IMPACT

- **YEAR I**
  - Think about audiences for your research.
  - Complete **ROMEO online module** on research ethics if doing research with living people or sensitive topics.
  - Apply to NSERC, OGS, and other funding.
  - Attend conferences in your field. Hundreds of conferences exist in Computing.
- **YEAR II**
  - Attend or present at a graduate conference such as the Queen’s Graduate Computing Society Conference.
  - Expand your research audience through social media such as Twitter or a blog.
  - Apply for the Graduate Dean’s Travel Grant for Doctoral Field Research.
- **YEAR III**
  - Continue to present at conferences.
  - Consider participating in the **3 Minute Thesis (3MT) competition**.
  - Contact the Queen’s Media Centre for guidance on speaking to news outlets about your work.
  - List yourself on the Arts and Science University Research website.
- **YEAR IV & TRANSITIONING**
  - Practice articulating the skills you have been developing in settings outside the university, such as casual conversation, networking, and interviews.
  - Get help with the **Skills and Experience workshop**.
  - Take advantage of the state-of-the-art research facilities, which feature NMR, mass spectrometry, X-ray diffractometer, a laser lab, and more.

### BUILD SKILLS AND EXPERIENCE

- **YEAR I**
  - Serve on departmental, faculty or university committee. Talk to the **Queen’s Graduate Computing Society** about getting involved.
  - Consider positions in student services, the **SGPS** or media outlets like the **Queen’s Journal** or **CFRC**.
  - Use a Teaching Assistant or Research Assistant position to develop your skills and experience.
- **YEAR II**
  - Hone skills for non-academic employment by continuing involvement on committees and in the community.
  - Start keeping an eportfolio of your skills, experiences and competencies.
  - For help with teaching, get support from the **Centre for Teaching and Learning**.
  - Enroll in **SGS903** or the **PUTL certificate** for more professional development in teaching and learning.
- **YEAR III**
  - Start focusing on non-academic areas of interest.
  - Build connections with faculty outside of your department. Pursue interviews for faculty positions and apply for post-doc fellowships and positions.
  - Apply to jobs or make plans for other adventures. Get help from Career Services with **job searching, resumes, or interviews**.
  - 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**.

### ENGAGE WITH YOUR COMMUNITY

- **YEAR I**
  - Consider volunteering with different community organizations.
  - Participate in your graduate and professional community through activities such as graduate student outreach programs, organizing conferences, and research groups like **Material Matters**.
- **YEAR II**
  - Do some targeted networking with people working in careers of interest, through Queen’sConnects on LinkedIn, the Queen’s Alumni Association, professional associations, and at conferences. Check out Career Services’ networking workshops.
  - Consider joining professional associations like the **Association for Computing Machinery (ACM)** and **IEEE**.
  - Join groups on LinkedIn reflecting specific careers or topics of interest.
- **YEAR III**
  - Participate in hiring committees and attend job talks.
  - Research academic careers of interest. Craft your CV and job application materials.
  - Start focusing on non-academic areas of interest.
  - Research organizations of interest and start putting together your resume for potential positions of interest.
  - Check out the free online modules at **MyGradSkills** to help you plan your career.
  - Build connections with faculty outside of your department. Pursue interview possibilities for faculty positions and apply for post-doc fellowships and positions.
- **YEAR IV & TRANSITIONING**
  - Complete and defend your dissertation.
  - Continue to pursue publication options for your research.
  - Complete the Annual Research Progress Report (2 of 2).

### LAUNCH YOUR CAREER

- **YEAR I**
  - Finding career fit starts with knowing yourself! Take the **Career Services Career Planning workshop** or meet with a career counselor for help. Check out books like **So What Are You Going to Do With That?** for advice on various career options.
  - Start reading publications like **University Affairs and the Chronicle of Higher Education** (also non-academic labour market websites).
  - Start the lookout for special events like **Graduate Student Career Week** to explore your career pathways.
- **YEAR II**
  - Start building your teaching portfolio including student evaluations, and seeking mentorship.
  - Explore different careers of interest by reading alumni profiles on the SGS website, and using Queen’sConnects on LinkedIn to connect with Queen alumni, or find alumni in various careers through **Find an Alum** for more information check our **Career Counselling**.
  - Investigate requirements for professional positions or other opportunities related to careers of interest.
- **YEAR III**
  - Complete and defend your dissertation.
  - Continue to pursue publication options for your research.
  - Complete the Annual Research Progress Report (2 of 2).

### EMPLOYABILITY SKILLS

- **Knowledge and technical skills** in area of specialization.
- **Communication** effective and clear in written, oral and multimedia forms, for diverse audiences.
- **Information management** prioritize, organize and synthesize large amounts of information.
- **Time management** meet deadlines and responsibilities despite competing demands.
- **Project management** develop ideas, gather information, analyze, critically appraise findings, draw and act on conclusions.
- **Creativity and innovation** to address complex, multifaceted challenges.
- **Perseverance** to work through challenges to achieve desired outcome.
- **Independence and experience as a collaborative worker**.
- **Awareness and 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 discussions**.
Ph.D. Map FAQs

What do I need to know to apply?

ACADEMIC REQUIREMENTS

• MSc in Computing Science or a closely-related field.
• Grade requirements: minimum first class standing (A average).

ADDITIONAL REQUIREMENTS

• Statement of research interests.
• If English is not a native language, prospective students must meet the TOEFL requirements in writing, speaking, reading, and listening.

KEY DATES & DEADLINES

• Application deadline: January 15th for both September and January admissions.
• Notification of acceptance: between February and June.

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

How do I find a supervisor?

We encourage you to identify an area of research interest and contact a potential supervisor before applying.

Visit the School of Computing website to read faculty profiles and learn more about faculty members’ research areas. When you find a faculty member with similar research interests to yours, contact him/her and tell them about your interest in graduate work and related experience.

What about funding?

The minimum funding guarantee for Computing PhD students is $21,500 per year, throughout years 1-4. The funding package may be comprised of graduate awards and teaching assistantships.

We encourage all students to apply for external funding from OGS, NSERC and other sources. Queen’s will automatically issue a $10,000 award to winners of federal government tri-council awards for PhD studies. For more information, see the School of Graduate Studies’ information on awards and scholarships.

Where Can a Graduate Degree Take Me?

A PhD in Computing can take your career in many directions. In Canada, less than 40% of all PhDs will work in post-secondary education – the majority will work in industry, government, or non-profits.

• Management positions in public, private and non-profit organizations
• Systems Software Developer
• Telecommunications/Networks Engineer
• Biomedical Engineer/Bioinformatics specialist
• Special Effects/Graphics Specialist
• Computer Systems/Database Manager
• Operations Research Specialist
• Systems Analyst/Operating Systems Programmer
• Electronic Data Processing Auditor

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

Ph.D. Career Outcomes in Canada


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