Application FAQs

What do I need to know to APPLY?

ACADEMIC REQUIREMENTS
- Honours undergraduate degree in Science or Applied Science and Engineering.
- Grade requirements: Minimum second class standing in undergraduate degree.

ADDITIONAL REQUIREMENTS
- If English is not a native language, prospective students must meet the English language proficiency requirements in writing, speaking, reading, and listening. The School of Graduate Studies requires the following minimum scores: TOEFL (paper based): 550, (internet): 20/30; Reading (22/30), Listening (20/30), for a total of 88/120 (applicants must have the minimum score in each test as well as the minimum overall score), or (3) IELTS: 7.0 (academic module overall band score), or (4) PTE Academics: 65.

KEY DATES & DEADLINES
- Application due: February 15th.
- Notification of acceptance: 4 weeks after the full application has been received.

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

What about FUNDING?

MSc students in Physics receive minimum funding of $26,300 per year for the two years of the program. This basic level funding consists of graduate awards, school support, external scholarships, internal fellowships and bursaries, teaching assistantships, and research grants. Apply for external funding from OGS, NSERC and other sources. Queen's will automatically issue a $5,000 top-up to Masters winners of federal government tri-council awards. For more information, see the School of Graduate Studies’ information on awards and scholarships.

Why GRADUATE STUDIES IN PHYSICS, ENGINEERING PHYSICS & ASTRONOMY?

The Master’s degree in Physics provides you with training in theory, computation, statistical modelling, and experimental methods as you pursue problems in fundamental and applied research. Physicists design mathematical models to describe complex phenomena and test these models by making observations, conducting experiments, or running numerical simulations. The skills obtained are highly sought after and transferable to a wide range of fields. The degree leads to careers in academia and government-funded research centres as well as the private sector fields of finance, medicine, technology, and data analytics, to name just a few.

Why QUEEN’S?

Queen’s has one of the most active and dynamic physics departments in Canada. The Department is home to the McDonald Institute, a national research centre in particle astrophysics. Named after eminent Queen’s professor and 2015 Nobel laureate Art McDonald, the Institute is closely linked to activities at SNOLAB where experiments search for dark matter and probe fundamental properties of neutrinos. Closely related is the Astrophysics group whose members at Queen’s and the nearby Royal Military College study galaxies, the extragalactic Universe, black holes and dark matter through theory, simulation, and observations at some of the world’s largest observatories. Research within the applied and engineering physics group seeks to bring new physics understanding to important problems for society, including lighting technologies, solar energy, laser manufacturing and non-destructive testing while the Condensed Matter and Optics group focuses on nanophotonics and quantum optics.

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

Visiting the Department of Physics, Engineering Physics & Astronomy 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.
Physics, Engineering Physics & Astronomy MSc MAP

**GETTING STARTED**

- Start with key priorities like developing your relationship with your supervisor, forming your committee, and doing 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.

**INTERMEDIATE STAGE**

- Complete your coursework; begin to research and write your thesis.
- Attend or present at a graduate conference such as the *High Performing Computing Symposium*.
- Consider participating in the *3 Minute Thesis (3MT)* competition.
- Expand your research audience through social media such as Twitter or a blog.
- Set up a meeting with the School of Graduate Studies for a *Grad Chat* to discuss your research interests.
- Start keeping an eportfolio of your skills, experiences and competencies.
- Use a Research Assistant or Teaching Assistant position to develop your communication skills.
- Participate in hiring committees and attend job talks. Start focusing on your audience for your research.
- 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*.

**WRAPPING UP**

- Complete and defend your thesis.
- Consider publication options for your research.
- Attend a major conference in your field, such as the Canadian Association of Physics Annual Congress, the Canadian Astronomical Society Conference, or the Canadian Astronomical Society Annual Meeting.
- 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*.
- Do some targeted networking with people working in careers of interest. Research organizations of interest and start putting together your CV or resume for potential positions of interest. Get help from Career Services with *job searching, resumes, or interviews*.
- Participate in hiring committees and attend job talks. Start focusing on areas of interest. Research organizations of interest and start putting together your CV or resume for potential positions of interest. Get help from Career Services with *job searching, resumes, or interviews*.

**WHAT WILL I LEARN?**

A graduate degree in Physics, Engineering Physics & Astronomy can equip you with valuable and versatile skills, such as:

- Knowledge and technical skills
- Effective communication skills
- Information management skills
- Time management skills
- Project management skills
- Creativity and Innovation
- Leadership skills
- Participation in the academic process

**WHERE CAN I GO?**

A Master’s degree in Physics, Engineering Physics & Astronomy can take you in many directions. Many of our MSc students choose to continue their academic inquiry with a PhD. Our Master’s students are equipped with a strong foundation for careers in:

- Academia and research
- Consulting
- Medical technologies: radiation physics, x-ray physics
- Renewable energy
- Technology sector

Visit careers.queensu.ca/gradmaps for the online version with links! © Career Services, Queen’s University, 2018-2019