Physics

Physics at Queen’s combines high-calibre research with an intermediate-scale learning setting, enabling attention and care towards undergraduate teaching as well as exposure to a broad range of topics and expertise. Our students will learn in an engaging environment with the opportunity to conduct interdisciplinary research in state-of-the-art laboratories, and work on projects involving international collaborators such as the experiments in dark matter and neutrinos happening below the surface of the Earth at the Sudbury Neutrino Observatory.

TOP 5 Reasons To Study Physics And Astronomy

1. The department is one of Canada’s leading teaching and research institutes in Physics and Astronomy.
2. Award-winning physics educators such as 3M National Teaching Fellow James Fraser.
3. Our internship program (QUIP) offers a wide range of careers to explore and companies to learn from.
4. Brand new astroparticle physics institute named after Queen’s Nobel Prize Laureate Art McDonald.
5. 25+ summer research assistant positions offered by the department to students every summer.

Alumni Story

“For me, the community within the Physics Department was by far the best aspect of studying Physics at Queen’s. The engaging instructors, knowledgeable technologists, helpful administrative and support staff, and my collaborative peers all contributed to my learning in the most positive way.”

-Kate Fenwick, BScH ’17

TOP ALUMNI JOBS

- 11% of alumni work in GOVERNMENT
- 18% of alumni work in TECHNOLOGY
- 18% of alumni work in BUSINESS & LAW
- 31% of alumni work in EDUCATION & RESEARCH

2022-23 Plan Thresholds

Thresholds are made on a competitive basis and are updated annually. To see the thresholds for all programs as well as the latest information, please visit quartsci.com/planselection


That is a degree from Queen’s.
Physics MAJOR MAP
BACHELOR OF SCIENCE (HONOURS): SPECIALIZATION, MAJOR, MINOR

1ST YEAR
- In first year you will have the chance to explore the foundations of Physics in biology, chemistry, math and geology along with some electives. Attend Majors Night in the Winter term to learn more about Plan options.
- Want to make sure your academics are where you want them to be? Visit SASS (Student Academic Support Services) and the Writing Centre for some help.

2ND YEAR
- Start going deeper into the discipline of Physics, while considering a minor and/or certificate such as Global Action and Engagement. Attend Degree 2.0 in the Fall term to learn more about Certificates and internship opportunities.
- Look into summer jobs by talking to the department or Career Services about work through SWIP or Work Study.
- Consider entrepreneurial opportunities via programs like the Queen's Innovation Connector Summer Initiative (QICS).

3RD YEAR
- A chance to start grouping courses in areas of interest, or to keep it more general and explore many areas of Physics. Meet with an Academic Advisor to make sure you are on track and have planned out your courses for next year.
- Consider applying to do a 12-16 month QUIP internship between your third and fourth year.
- Do targeted networking with alumni working in careers of interest by joining the LinkedIn group Queen's Connects. Check out Career Services networking workshops.
- Get involved with the Departmental Student Council (DSC). Connect with professors at socials or attend departmental public lectures.
- Start or continue volunteering with organizations such as Women in Science and Engineering, AMS Clubs Directory page for more ideas.

4TH OR FINAL YEAR
- In fourth year you will have the chance to participate in research-based courses that can lead to Graduate School or your future career path. Make sure to finish up all your courses for your major and your optional minor and/or certificate(s).
- Investigate requirements for full-time jobs or other opportunities related to careers of interest. Assess what experience you're lacking and fill in gaps with volunteering, clubs, or internships – check out the Career Services skills workshop for help.
- The Canadian Undergraduate Physics Conference is hosted by and for undergrads. Consider joining professional associations like the Canadian Association of Physicists (CAP) or the Canadian Astronomical Society (CASCA).

GET THE COURSES YOU NEED
- Join teams or clubs on campus such as Queen's Astronomy Club, Queen's University Experimental Sustainability Team (QUEST), Queen's Space Engineering Team (QSET) or Queen's Solar Design Team.
- See the AMS Clubs Directory or the Queen's Get Involved page for more ideas.

GET RELEVANT EXPERIENCE
- Volunteer on or off-campus with different community organizations such as Science Rendezvous or Let's Talk Science. Consider joining an intramural sport or an athletics team. Off-campus community organizations welcome Queen's students – see what's out there!
- Get involved with the Departmental Student Council (DSC). Connect with professors at socials or attend departmental public lectures.
- Start or continue volunteering with organizations such as Women in Science and Engineering, Queen's Innovation Connector Summer Initiative (QICS).

GET CONNECTED WITH THE COMMUNITY
- Prepare for work or studies in a multi-cultural environment by taking QUC's Intercultural Competency Certificate, and research possible immigration regulations.
- Speak to a QUC advisor to get involved in their programs, events, and training opportunities.

GET THINKING GLOBALLY
- Is an exchange your future? Start thinking about where you would like to study abroad. Apply in January for a third year exchange through the International Programs Office.
- Build your intercultural competence by getting involved with other cultures or by practicing or improving your language skills.

GET READY AFTER GRADUATION
- Grappling with program decisions? Go to Majors Night or get some help wondering about career options from Career Services.
- Build your transferable skills in time management, organization, writing and more with Student Academic Success Services.

What will I learn?
- A degree in Physics can equip you with:
  - Knowledge of physics theories and mathematical models
  - Proficiency in mathematics
  - Facility for quantitative mathematical and computational analysis
  - Experience with laboratory equipment
  - Design experiments and develop and write research proposals
  - Review scientific literature
  - Draw conclusions from data and evaluate sources of error
  - Explain technical information clearly in writing and verbal communication
  - Use statistical software
  - Adopt a systematic, analytical approach to problems

Where can I go?
- A degree in Physics can take your career in many directions. Many students choose to continue their academic inquiry with a Master's. Our students are equipped with a strong foundation for careers in:
  - Aerospace
  - Astrophysics
  - Computer simulations
  - Forensic science
  - Geophysics
  - Imaging
  - Nanoscience
  - Photonics
  - Planetary science
  - Radiology
  - Remote sensing
  - Robotics
  - Space science
  - Technology industry

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.
- The map just offers suggestions – you don’t have to do it all. To make your own custom map, use the My Major Map tool.

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Get started thinking about the future now – where do you want to go after your degree? Having tentative goals (like careers or grad school) while working through your degree can help with short-term decisions about courses and experiences, but also help you keep motivated for success.

Get the help you need

Queen's provides you with a broad range of support services from your first point of contact with the university through to graduation. At Queen's, you are never alone. We have many offices dedicated to helping you learn, think and do.

Ranging from help with academics and careers, to physical, emotional, or spiritual resources – our welcoming living and learning environment offers the programs and services you need to be successful, both academically and personally. Queen's wants you to succeed! Check out the Student Affairs website for available resources.

Why study in Kingston?

For 175 years, our community has been more than a collection of bright minds – Queen's has attracted students with an ambitious spirit. Queen's has the highest retention rates, the highest graduation rates, and one of the highest employment rates among recent graduates. We are a research intensive university focused on the undergraduate experience. The BBC has identified Kingston as one of the GREATEST UNIVERSITY TOWNS in the world – and it is often awarded the safest city in Canada. It is a university city at the core; just a quick drive to Toronto, Montreal, Ottawa and even New York. A university with more clubs per capita than any other university in Canada, and a city with more restaurants per capita than any other city in North America – you will have the experience of a lifetime at Queen's – and graduate with a degree that is globally recognized among the best.

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**Physicists**

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