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.

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**2018-19 thresholds**

**2.7 cGPA**

**PHYS-P-BSH Specialization (Science) Bachelor of Science (Honours)**

**GET THE COURSES YOU NEED**

**Specialization, Bachelor of Science (Honours)**

**Sample Year by Year**

**1ST YEAR**

- PHYS 104/6.0 or PHYS 106/6.0
- MATH 111/6.0 or MATH 110/6.0
- 6.0 units from MATH 120/6.0, MATH 121/6.0, MATH 123/3.0 and MATH 124/3.0
- CHEM 112/6.0
- 6.0 units of electives

**2ND YEAR**

- PHYS 206/3.0
- PHYS 212/3.0
- PHYS 213/3.0
- PHYS 239/3.0
- PHYS 242/3.0
- PHYS 250/3.0
- MATH 211/3.0 or MATH 280/3.0
- MATH 225/3.0 or MATH 231/3.0
- 6.0 units of electives

**3RD YEAR**

- PHYS 316/3.0
- PHYS 317/3.0
- PHYS 321/3.0
- PHYS 344/3.0
- PHYS 345/3.0
- PHYS 350/6.0
- PHYS 372/3.0
- 6.0 units of electives

**4TH YEAR**

- PHYS 432/3.0
- PHYS 433/3.0
- PHYS 490/3.0
- PHYS 590/6.0
- PHYS 444/3.0 or PHYS 472/3.0
- PHYS 480/3.0
- 6.0 units from PHYS at the 400 level or above
- 3.0 units of electives

Note that degree requirements are revised regularly. The most current requirements, including course lists and options, are found in the Academic Calendar at: [QUartsci.com/academic-calendar](http://QUartsci.com/academic-calendar)
In first year you will have the chance to explore the foundations of Physics in biology, chemistry, geography and geology along with some electives.

See the back page for specific courses to consider.

Attend Majors Night in the Winter term to learn more about Plan options.

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.

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 (WISE).

Prepare for work or studies in a multi-cultural environment by taking QUIP's Intercultural Competency Certificate and research possible immigration regulations.

Speak to a QUIP advisor to get involved in their programs, events, and training opportunities.

Is an exchange in 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.

Physics research is often international and collaborative. Pursue summer research with faculty members to explore those global connections.

Explore different careers of interest by reading books in the Career Services Career Advising and Resource Area, such as Alternative Careers in Science. For more information check out Career Cruising or by finding and connecting with alumni on LinkedIn.

Start focusing on areas of interest. Research education requirements for careers of interest. If needed, prepare to take any required tests (like the LSAT or GMAT) and get help thinking about Grad School from Career Service.

Consider applying to do a 12-16 month QUIP internship between your third and fourth year.

Investigate off-campus summer jobs involving research such as at SNOLAB. Apply for NSERC, USRA, or directly to individual faculty members and research groups in Physics and Astronomy. Many Physics students volunteer with the on-campus Observatory in Ellis Hall.

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.

Check out Inquiry@Queen's to present your past summer research work.

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 Undergraduate Physics Inquiry (CUP). Attend the departmental colloquium to learn about current research.

International students interested in staying in Canada can speak with an International Student Advisor.

Apply to jobs or future education, or make plans for other adventures. Get help from Career Services with job searching, resumes, interviews, Grad School applications, or other decisions.

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

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