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. You will be trained in observation and experimentation, in mathematics and model building. You will develop the confidence to tackle new and intellectually demanding problems, placing you at the leading edge of research and development in science and technology.
MATHEMATICAL PHYSICS SPECIALIZATION MAP

1ST YEAR
- GET THE COURSES YOU NEED
  - In first year you will have the chance to explore the foundations of Physics in biology, chemistry, physics and math 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.

2ND YEAR
- GET RELEVANT EXPERIENCE
  - Start looking into summer jobs by talking to the department or Career Services about work through IPEP or WorkStudy.
  - Consider entrepreneurial opportunities via programs like the Queen’s Innovation Connector Summer Initiative (QICSI).

3RD YEAR
- GET CONNECTED WITH THE COMMUNITY
  - 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).

4TH OR FINAL YEAR
- GET THINKING GLOBALY
  - 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.

- GET READY FOR LIFE AFTER GRADUATION
  - Grappling with program decisions? Go to Majors Night or get some help wondering about career options.
  - 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 CareerCruising or by finding and connecting with alumni on LinkedIn.

- START FOCUSING ON AREAS OF INTEREST.
  - 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 A 12-16 MONTH QUIP INTERNSHIP
  - 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.

What will I learn?
- A degree in Physics will equip you with valuable and versatile skills, such as:
  - 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 written 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

- Additional areas of interest for Physics graduates include:
  - Remote sensing
  - Planetary science
  - Nanoscience
  - Photonics
  - Imaging
  - Astroparticle physics
  - Forensic science
  - Medical physics
  - Engineering physics

- Majors Night is hosted by and for undergrads.

- The Canadian Undergraduate Physics Conference is hosted by and for undergrads.

- The National 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).

- 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.

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