PHYSICS, ENGINEERING PHYSICS AND ASTRONOMY

Departmental Notes

Subject Code for Astronomy: ASTR
Subject Code for Physics: PHYS
World Wide Web Address: www.queensu.ca/physics/home (http://www.queensu.ca/physics/home/)

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Chair for Engineering Physics: Jun Gao (jungao@queensu.ca)
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Overview

Through studying Physics at Queen's, you will be trained in observation and experimentation, in applied mathematics and model building, and will develop the confidence to tackle new and intellectually demanding problems. This will place you at the leading edge of research and development in science and technology. This program deals with the properties of matter and energy, from everyday concepts such as force, heat and electricity, to the abstract ideas of relativity and quantum mechanics. The Department of Physics, Engineering Physics and Astronomy also offers a Specialization Plan in Astrophysics (https://queensu-ca-public.courseleaf.com/arts-science/schools-departments-programs/physics-engineering-astronomy/astrophysics-specialization-science-bs-honours/), and jointly with the Department of Mathematics and Statistics, a Specialization Plan in Mathematical Physics (https://queensu-ca-public.courseleaf.com/arts-science/schools-departments-programs/physics-engineering-astronomy/mathematical-physics-specialization-science-bs-honours/).

Advice to Students

Astronomy and Astrophysics

Astronomy courses at Queen's are offered by the Department of Physics, Engineering Physics and Astronomy, which has a research group active in astronomy and astrophysics. Students intending to specialize in astronomy or astrophysics at the graduate level should consider the Astrophysics Specialization Plan (https://queensu-ca-public.courseleaf.com/arts-science/schools-departments-programs/physics-engineering-astronomy/astrophysics-specialization-science-bs-honours/). Students wishing to include a course in astronomy as an elective should refer to ASTR 101 Astronomy I: Solar System, ASTR 102 Astronomy II: Stars, Galaxies, and the Universe and PHYS 216 Introduction to Astrophysics.

First Courses in Physics

PHYS 104 Fundamental Physics and PHYS 106 General Physics are intended for students in the physical and mathematical sciences. Both are calculus-based courses. A grade of at least B- in either of these courses is recommended for entry into PHYS 206 Dynamics, PHYS 239 Electromagnetism, and PHYS 242 Relativity and Quanta, which are required courses for most Physics Plans.

PHYS 117 Introductory Physics is designed for students in the biological and life sciences. 4U physics is recommended but not required; neither is a previous or concurrent calculus course, although some 4U or equivalent mathematics is required. PHYS 118 Basic Physics has similar content to PHYS 117 Introductory Physics, but has no lab component and is offered online only.


Students with an A standing in both PHYS 117 Introductory Physics and, C in MATH 120 Differential and Integral Calculus or MATH 121 Differential and Integral Calculus may be admitted to a Physics Plan (with PHYS 117 Introductory Physics then satisfying the first-year physics core requirement), but only after consultation with, and approval from, the Department.
Ancillary Fees

Please note that in some courses you may be asked to purchase a lab or course manual containing material(s) specific to the lab/course content. Prices generally range from $15 to $25 per manual and are sold through Physics Stores.