



## Department of Physics

The Hampton University Department of Physics offers an undergraduate program leading to a Bachelor of Science degree and a graduate program leading to a Masters of Science and/ or a Doctor of Philosophy degree. The Physics Department offers classroom courses and labs that combine science and mathematics and prepare students for professional careers in physics, nanoscience, medicine, communications, environmental studies, transportation, engineering, and much more.

The physics department's primary goal is to educate science majors through engaging classroom instruction and a thriving learning environment. Physics majors matriculate in a comprehensive and thorough course of study, which prepares them for competitive admissions to graduate schools, medical schools and employment in industry, education and government. Financial support is provided to most students who are engaged in research.

For more information, contact:

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# Is a Physics Degree right for You?

Physics is a natural science that involves the study of matter and its motion through space and time, along with related concepts such as energy and force. More broadly, it is the general analysis of nature, conducted in order to understand how the universe behaves.

Physics intersects with many interdisciplinary areas of research such as nanoscience, biophysics and quantum chemistry. New ideas in physics often explain the fundamental mechanisms of other sciences, while opening new avenues of research in areas such as mathematics and engineering.

The study of physics provides a broad training in skills and educational foundations that are valuable to have as individual characteristics. For most professions, a physics degree displays the ability to grasp concepts quickly, determination to find coherent answers, along with highly evolved problem solving, analytical, mathematical and IT skills.



# Why Study Physics?



As physics majors, students can:

- Participate in developing new and innovative technology;
- Gain a better understanding of how the universe behaves;
- Make medical breakthroughs applicable to cancer treatment;
- Investigate new technologies and applications.

# Summer Research Internship

Physics majors participate in summer research programs across the country with different universities and research facilities. Students usually receive free travel, room and board and a stipend payment. Opportunities are plentiful and the experience and knowledge gained is extremely valuable.

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# Physics Research

Students that pursue a physics degree have vast opportunities to participate in cutting-edge research with world-renowned faculty and scientists at world-class facilities, such as NASA Langley Research Center in Hampton, Va, Jefferson Lab in Newport News, Va, CERN in Switzerland, Fermi Lab in Illinois, DESY (Deutsches Elektronen-Synchrotron) in Hamburg, Germany, JPARC in Japan, (Hampton University Proton Therapy Institute), the Center for Advanced Medical Instrumentation on campus, the National Superconducting Cyclotron Facility in Michigan, and the Advanced Center for Laser Science and Spectroscopy on campus. Areas of research include:

- High Energy Physics
- Intermediate Energy Nuclear Physics
- Medical Physics
- Optical Science
- Nanoscience
- Accelerator Physics

