

PHYSICS

From Study to Skills

The physics major offers two tracks for physics undergraduates. The first option is the traditional one and is intended for those interested in experimental, theoretical, and computational physics, and those who will be going on to graduate school. The second option emphasizes the application of computers to physics. A combination of skills in both physics and computer science is a valuable training for industrial employment.

A physics degree opens up a rich diversity of options to the graduating student. Approximately one-half of physics graduates go on to graduate school. Those not going on to graduate school enter employment in physics or such related fields as electronics, computers, engineering, or education.

Related Fields: Business, Computer Science, Economics, Education, Engineering, Mathematics, Statistics

Skills and Abilities

Analytical Thinking- Students will practice complex problem solving, apply mathematics to the physical world, follow complex reasoning, perform quantitative analysis, interpret information, consider problems with a broad perspective, apply theoretical approaches, develop critical thinking skills, design experiments, and learn computer literacy.

Mathematical Skills- Students will learn the language of mathematics, computational skills, the ability to generate solutions, mathematical skills and modeling; and develop logical reasoning, understanding of programming, and a foundation for data analysis.

Communication Skills- Students will practice technical writing skills, conveying complex information, creating logical arguments, explaining results using appropriate technical language, and the ability to contribute to a team.

Internships

Rutgers-Camden Physics students are encouraged to apply for internships. Some examples of opportunities in various fields are:

Non- Governmental Organizations- The Franklin Institute, OptiMiser LLC

Technology- Milspray Military Technology

Basic Research- Summer Research in Molecular Biophysics, Princeton University

Government- U.S. Department of Energy

Education- Woodrow Wilson Teaching Fellowship

What Careers Are Available For Physics Majors

The following are samples of first jobs of Rutgers-Camden Physics majors:

Environmental Specialist, NJ Department of
Environmental Protection
Helicopter Production Engineer, Avionics
Lab Technician, Allied Signal
Physics Instructor, Camden Charter Academy
Process Engineer, Kulite Semiconductor
Project Engineer, Lowe Paper Company

Quality Engineer, Frigidaire Corporation
Research Engineer, Universal Display
Corporation
Systems Engineer, Compulink Management
Center
Teacher, New Brunswick School District
Technical Consultant, Hamamatsu

Graduate School Options

While many Physics majors choose to go directly into the workplace after graduation, others will decide to pursue a graduate degree. Rutgers-Camden Physics majors have earned Master's and Doctorate level degrees in Physics in addition to degrees outside of Physics. Here are just some of the programs that the Rutgers-Camden students went onto after they received their undergraduate degree:

Clemson University, Physics
Dartmouth College, Computers & Technology
Drexel University, Physics
Rutgers University, Ceramic Engineering
University of Pennsylvania, Physics

Resources

Consider joining a professional organization such as:

American Institute of Physics

www.aip.org

American Physical Society

www.aps.org

American Association of Physics Teachers

www.aapt.org

American Astronomical Society

www.aas.org

American Association of Physicists in Medicine

www.aapm.org

Consider joining STEM Scholars or Q-STEP.

Assist a faculty member with their research.

Visit Raptor Link for internship opportunities.

Connect with professionals in fields that interest you on LinkedIn.

Career Center:

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326 Penn Street
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