In the Department of Physics, we provide options for students to pursue their doctoral degree. Our program focuses on experimental research and theory, covering topics from the smallest objects in the universe to the structure of the universe itself.

Our program was ranked 13th in the country in the most recent National Research Council study. Our world-class faculty members work on cutting-edge research at the forefront of physics and are renowned in their fields, counting among them many Fellows of the American Physical Society, members of the National Academy of Science, winners of prestigious awards and fellowships, and editors of scientific journals. Our faculty are also leaders in the Laser Interferometer Gravitational-Wave Observatory (LIGO) and Astrophysical Multimessenger Observatory Network (AMON) collaborations.

We encourage and help our graduate students to take advantage of their own professional opportunities, including fellowships and other awards and funding. The physics department shares information on post-Ph.D. student outcomes with all of our graduate students at regular intervals. These include postdoctoral appointments at some of the world’s leading universities and national labs, opportunities for junior faculty members, such as assistant professor appointments, at other colleges and universities, and employment in a wide variety of technical fields.

Follow the Eberly College of Science
Penn State physics faculty work in a wide range of research areas, including theory and experiment in the following:

- Atomic, molecular, and optical physics
- Biological physics (including neuroscience)
- Condensed matter
- Elementary particle physics
- Gravitational physics and cosmology
- Particle astrophysics

FELLOWSHIP AND ASSISTANTSHIP OPPORTUNITIES

All incoming graduate students are eligible for University, college, and governmental fellowships, departmental teaching and research assistantships, and other forms of financial aid. The Eberly College of Science’s assistantships and fellowships include a stipend, tuition waiver, and subsidized health, dental, and vision insurance.

Students who are making progress toward their degrees have historically been supported throughout their entire graduate career through these opportunities.

RESEARCH FACILITIES

Graduate students participate in research using world-class experimental facilities, including individual faculty labs and user facilities such as those comprising Penn State’s Materials Research Institute:

- Materials Characterization Lab
- Nanofabrication Lab
- Materials Computation Center
- Two-Dimensional Crystal Consortium Materials Innovation Platform

Faculty, postdocs, and graduate students also have access to extensive computing resources for use in theoretical and data analysis projects.

A DIVERSE COMMUNITY OF SCHOLARS

The diverse representation of a population of scientifically trained leaders and innovators is one of the ways we are addressing the challenge of enhancing the global community of scholars. Through our faculty, staff, and students, the Eberly College of Science remains committed to the goal of excellence through diversity.