

Physics Department

Contact Us

Math & Science Center, Room N201, 400 Dowman Dr
Atlanta, GA 30322
404.727.0873
pevans@physics.emory.edu
<http://www.physics.emory.edu/undergraduate/>

Description

Undergraduate physics majors and physics/astronomy majors may pursue either a bachelor of arts or bachelor of science degree. Although the BA and BS programs have different objectives, both emphasize the basic principles of physics and their applications, an analytical approach to problem solving including the use of mathematical methods, and direct experience with physics laboratory and research techniques. The instructional facilities of the Department of Physics, housed in the new Mathematics and Science Center, include general and advanced physics laboratories; optics, analog and digital electronics, and microprocessor laboratories; and two observational astronomy facilities. One facility is a ten-station rooftop observing deck with small reflecting telescopes used for introductory astronomy. The other primary facility is the Emory observatory, which houses a research-grade, twenty-four-inch Cassegrain telescope for use in advanced astrophysics and astronomy courses. Faculty research laboratories and computer equipment are available to students engaged in research projects in condensed matter physics, biophysics, and nonlinear dynamics. Other specialized teaching facilities for physics and astronomy include a one-hundred-and-eighty seat lecture demonstration theater, a sixty-seat Zeiss Planetarium classroom, and a sixteen-station computational physics classroom/laboratory. The graduate school offers the master of science and doctor of philosophy degrees in physics.

Concentrations

Majors are offered in the area(s) of: **Physics; Physics; Physics (Applied); Physics and Astronomy; Physics and Astronomy**. For details, see the Major page for each area. Minors are offered in the area(s) of: **Physics; Astronomy**. For details, see the Minor page for each area.

Faculty

Chair/Director: Kurt Warncke
Director of Undergraduate Studies: Keith Berland

Core Faculty

Keith Berland; Thomas Bing; Stefan Boettcher; Jed Brody; Horace Dale III; Fereydoon Family; Laura Finzi; Hilary Hentschel; Ilya Nemenman; P Rao; Ivan Rasnik; Connie Roth; Kurt Warncke; Eric R. Weeks; Richard Williamon

Associated Faculty

John Malko

Adjunct Faculty

Yi Jiang; Troy Lionberger; Sunil Naik

Emeriti Faculty

Raymond Duvarney

Courses

Core Subjects

This department offers courses in the following subject(s): **Physics**. For a list of specific courses in each subject area, see the course descriptions page for that subject.

Programs

Honors Program

See "Honors Program" under the curriculum section of the catalog and consult the department for further details. Chapters of Sigma Pi Sigma, the national physics honor society, and the Society of Physics Students offer recognition and sponsored activities.

Study Abroad

Several students each year participate in study abroad programs, typically for one semester. The Director of Undergraduate Studies works with students to fit such programs into their four-year-plan.

Advising

For advising, set up an appointment with the Director of Undergraduate Studies. You do not need to be majoring or minoring in physics to meet with the DUS.

Independent Research and Study

Many physics majors participate in research, although this is not a requirement. Research can be done for academic credit (Phys 499R). This class can be repeated multiple times, and can count as an elective toward the major or minor (although only as one elective, even if taken multiple times). Research can also be done for pay; this is typically arranged between the supervising faculty member and the student. The most typical case is to do research for credit during the academic year and for pay during the summer. Students who meet the appropriate GPA requirements can opt to do a research honors thesis during their senior year. For more information about participating in research or doing an honors thesis, consult with the Director of Undergraduate Studies.