

What is Physics?

The word Physics is derived from the Greek and Latin words meaning "of nature". As we enter a new century physicists aim to understand a wide variety of phenomena observed in nature. Below we list some of the questions which members of our department are studying. Some of them you would normally associate with physics, while others may surprise you.

Astrophysics

- What is the dark matter in the universe and do we have an open or a closed universe?
- Can we detect gravity waves?

Biophysics

- How do proteins fold and how can some diseases caused by errors in protein folding be prevented?
- How can we grow plants in a weightless environment like on the space shuttle?

Chemical Physics

- What is the structure of large chemical and biological molecules?
- Starting from quantum mechanics, how does one model chemical reactions?

Condensed Matter Physics

- How does matter behave on the nanoscale and how do we use nanotechnology in electronics, optics, and biotechnology?
- What happens to matter at extremely low temperatures and in high magnetic fields?

High Energy Physics

- What are the ultimate constituents of matter?
- Is there a more unified theory beyond the standard model of elementary particle physics?

What do I do with a Physics Major?

The best answer to this question is to see what our physics majors do after graduation. Many of our physics majors do go on to graduate school in Physics, including the top ten graduate schools in the country. However, the majority of our graduates go on to study and work in fields outside of Physics, which is a testament to the versatility of a Physics major. Through Physics, students learn how to approach any technical problem.

Recent Graduates Chose the Following:

Graduate School

Astronomy
Chemistry
Mathematics
Physics
Statistics

Engineering Graduate School

Aerospace
Biomedical
Materials Science
Mechanical

Professional Programs

Medical School
Law School

Employment

Banking
Computer Programming
Teaching in Secondary School
Private & Government Laboratories



Sara Gamble balances a lock-in amplifier for a low temperature (-452°F) experiment.



Josh Alwood making an intermetallic compound using an arc-melter.

Undergraduate Physics Program at the University of Florida

A Home Within A Large University

Although the University of Florida has over 40,000 students, the average class size for physics majors is around 25 students. The teachers are able to give the kind of personalized instruction that you would normally associate with a much smaller school. There is an undergraduate lounge where physics majors can go between classes and a special computer room which is only accessible to physics majors and graduate students.

Many students socialize in the student run Society of Physics Students, which sponsors parties, field trips, movies, demonstration shows, and other fun activities.

Undergraduate Research

In exit interviews of graduating seniors last year the majority of students had done some research while an undergraduate. Some did research with a faculty member during the Fall and Spring semesters, while others participated in special summer research programs both at U.F. and elsewhere across the country. Undergraduate research gives students first hand experience in what real research is like whether it be in Physics, other science disciplines or engineering.

A First Rate Curriculum

The physics courses taught and the text books used at UF are the same as one will find at the best universities in the nation. Thus, students mastering our curriculum will be competitive with physics majors anywhere. Our best students who go on to physics graduate work get accepted into the premiere schools and do well there. Twice within the last ten years one of our students has won the national award for best research as an undergraduate.

Curriculum and Degrees

The department offers two undergraduate degrees, the Bachelor of Science (B.S.) and Bachelors of Arts (B.A.) degrees in Physics. The B.S. degree is intended for students who wish to pursue advanced study in Physics or a related discipline. The B.A. degree requires fewer physics courses and provides extra flexibility in scheduling non-physics courses such as those required for preparation for medical school.

A Physics Minor is also offered for students in other majors who enjoy taking physics courses. Many of our students do actually pursue dual degrees or majors in other departments such as Mathematics, Chemistry, Engineering, as well as more creative combinations such as Classics, Philosophy, and Spanish.

The B.S. degree requires approximately 40 credits of Physics courses, the B.A. degree 32 credits, and the Physics minor 17 credits.

Students take an introductory physics sequence followed by intermediate and advanced work in the following five areas: Mechanics, Electricity & Magnetism, Thermal Physics, Quantum Mechanics, and Experimental Physics.



James Maloney, Stephen Hicks, and other physics majors performing demonstrations at Homecoming.

Contact Information

Web

If you would like to learn more about the Undergraduate Physics Major at the University of Florida, please visit our web site at <http://www.phys.ufl.edu/academics/undergraduate>

E-Mail

You may contact a Physics advisor by sending an e-mail to advising@phys.ufl.edu

Phone

If you would like to arrange an appointment with an advisor or just come visit the department for a tour, please call our Student Services Office at 352-392-8818.

Address

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Department of Physics
Undergraduate Program
Post Office Box 118440
Gainesville, FL 32611-8440

Location

The New Physics Bldg. is on the South- East corner of Gale Lemerand Drive and Museum Road. A picture of the building is shown on the front of this brochure.

UF UNIVERSITY of
FLORIDA

Physics

UNDERGRADUATE PROGRAM



The New Physics Building