

UNDERGRADUATE STUDIES IN

PHYSICS

AT THE OHIO STATE UNIVERSITY



THE OHIO STATE
UNIVERSITY

COLLEGE OF ARTS
AND SCIENCES



The Department of Physics at The Ohio State University is one of the university's largest and most diverse departments. The department occupies the recently built Physics Research Building as well as instructional space in Smith Laboratory, the former home of the department. The department currently has 54 faculty and approximately 60 postdoctoral researchers and research scientists, 190 graduate students and 400 undergraduate majors.

The Department of Physics offers two undergraduate degree programs – a BS in Physics which is a traditional physics program and a BS in Engineering Physics which is an interdisciplinary program between the Department of Physics and the College of Engineering. By the time students graduate from one of our programs, they have:

- Completed upper-level courses in Newtonian Mechanics, Quantum Mechanics, Electromagnetism and physics laboratory techniques, as well as electives in areas that help prepare them for their post-graduation plans.
- Participated in undergraduate research or an internship. 70-80% of each graduating class has participated in undergraduate research or an internship with a company. As a student in our program, you will receive information about research and internship options during your first semester on campus.
- Multiple career and post-graduation options available to them. In 2022, 40% of graduates went to graduate school for physics, astronomy or engineering at the University of Maryland, NYU, Boston College, Texas A&M and Purdue; 52% went on to full-time employment at Johns Hopkins Applied Physics Lab, Honda, Goldman Sachs, Donyati Software, Mathworks, Screen Machine Industries, Booz Allen Hamilton and Osborn Engineering, with average starting salary of \$79k; and 8% pursued other options like military service, medical school or teaching.

Undergraduate degree programs

PHYSICS MAJOR

College of Arts and Sciences

The physics major program was established at Ohio State in 1929. Students choose from one of four tracks based on their post-graduation plans. All tracks lead to a Bachelor of Science in Physics which allows a student a wide range of opportunities including employment in industry or a national lab or advanced study in disciplines such as physics, astronomy, math, engineering and business. This degree comes from the College of Arts and Sciences. Track options within the physics major are:

1. *Advanced Physics*: for students planning to attend graduate school for physics or astronomy.
2. *Applied Physics*: for students who plan to work full-time after graduation or wish to pursue graduate work in business, engineering, law, or another area of science. This option is considered a personalized track.
3. *Life Sciences*: for students who plan to attend medical school after graduating.
4. *Physics Education*: for those planning to teach physics at the high school level.

ENGINEERING PHYSICS MAJOR

College of Engineering

The BS in Engineering Physics, established at Ohio State in 1923, allows students with a wide range of technical interests to study extensively in both physics and one of eight areas of engineering. A Bachelor of Science in Engineering Physics allows students to begin graduate work in either physics or engineering or begin full time employment as a physicist or engineer in industry or a national lab. This degree comes from the College of Engineering and is a good match for students with interests in both physics and engineering.

In addition to the required physics courses, engineering physics majors focus on one of the below areas of engineering.

- Aerospace Engineering
- Chemical Engineering
- Computer Science & Engineering
- Electrical Engineering
- Integrated Systems Engineering
- Materials Science & Engineering
- Mechanical Engineering
- Nuclear Engineering

A student will not need to decide on a specific track or engineering concentration until the end of their freshman year. An academic advisor in the Department of Physics can provide more detailed information regarding the requirements for each degree program.



visit physics.osu.edu for more information

“This has been a very enlightening experience here at Ohio State. The education I received, I feel, has provided me with a great opportunity to be well prepared for the frontier science work force.”

BRANDON CLAY '19
Physics

“The undergraduate physics community at Ohio State really sets students up for success. I loved my time being part of it.”

SHELBY OWENS '18
Engineering Physics

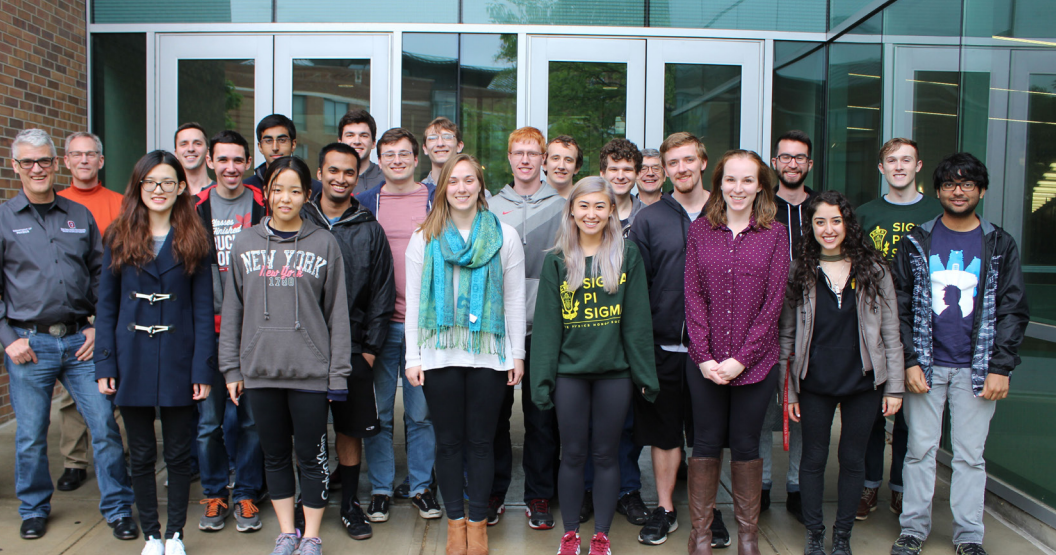
“I really appreciate how involved my professors have been – I feel like they all genuinely care about my learning and my success (and seem happy to chat with me in the hallways)!”

MARISA MULAC '13
Engineering Physics

Undergraduate research opportunities

Undergraduate students in the Department of Physics are encouraged to participate in undergraduate research. During sophomore year, students will take Physics 2095, a one credit hour seminar class designed to help students explore research, internship, and career options.

Undergraduate students can choose to participate in any area of physics research, including astrophysics, atomic and molecular physics, biophysics, condensed matter physics, high energy physics, nuclear physics, particle physics, physics education, and quantum and information science. Depending on their interests, students can participate in research projects in other departments such as chemistry, astronomy, math, medicine and engineering. In 2022, 84% of engineering physics graduates and 65% of physics graduates reported participation in at least one research or internship program.



Events in the Department of Physics

PHYSICS WINTER PARTY

Department of Physics faculty, staff, and students are invited to the annual physics winter party which includes free food, live music and contests.

ANNUAL SMITH LECTURE

The Alpheus Smith Lecture series has brought leading-edge work of prominent physicists to the community since 1960. Recent speakers include Sylvester James Gates, Joseph Incandela, Daniel Kleppner, and Nobel Laureates, Joachim Frank, Adam Riess, Donna Strickland, Kip Thorne and David Wineland. The Alpheus Smith Lecture is free and open to the public.

PHYSICS SOCIAL MIXERS

The Physics Undergraduate Studies Office hosts these social events twice a month in the Physics Research Building. This event is open to undergraduate physics and engineering physics majors and physics minors. We serve cookies, fruit and hot beverages. Games are also available.

PHYSICS COLLOQUIUM

The Department of Physics invites leading scientists to the Ohio State campus to speak about their research. This is a weekly event open to everyone in the Department of Physics and is a wonderful opportunity for undergraduate students to learn about advanced topics in physics and meet others in the field.

UNDERGRADUATE AWARDS CEREMONY

The Physics Undergraduate Studies Office hosts an annual award ceremony to recognize and encourage high academic achievement among undergraduate physics and engineering physics majors. Scholarship winners are announced at this event.

PHYSICS SPRING PICNIC

Physics faculty, staff and students gather annually for the spring picnic which includes free food, faculty and staff award announcements, and a good time!

“It is an honor to serve as chair of one of the top physics departments in the country. Our department has a wonderful community of world-class faculty, staff, postdocs, graduate and undergraduate students that are working together to make cutting edge discoveries in a wide range of physics research and to educate the next generation of scientific leaders.”

MICHAEL POIRIER
Department Chair



Connect with the department

Department of Physics
Physics Research Building
191 W. Woodruff Avenue
Columbus, OH 43210



physics.osu.edu/undergrad



physics@osu.edu



[@OSUPhysics](https://twitter.com/OSUPhysics)



[@PhysicsatTheOSU](https://www.facebook.com/PhysicsatTheOSU)



[@osuphysics](https://www.instagram.com/osuphysics)