PHYSICS

The Physics Department at UNO is a vibrant program well-known for offering quality education, diverse research activities, and broad community outreach programs.

The variety of options students have in the physics program makes our graduates well prepared to thrive in modern industries. Additionally, about a third of physics graduates are accepted into top graduate degree programs where they can pursue a master's or doctoral degree in physics, physics education, engineering, chemistry, astrophysics, biophysics and medical physics. Our curriculum is flexible and provides students with a number of options to better prepare them for the career of their choice.

In addition to our Bachelors of Science program we offer concentrations in Biomedical Physics and Physics Education. The Physics Department emphasizes involving its physics majors in undergraduate research as well as the education process. Working closely with the faculty provides students a valuable experience. Beyond-the-classroom learning opportunities engage students and create a sense of community. Research projects are available in the following areas: astrophysics, biophysics, medical physics, computational physics, quantum computing, materials for energy applications, solid-state physics, and physics education.

Other Information

All coursework taken for the Physics major or minor must be completed with a grade of "C-" or better.

Physics majors must also take the two assessment tests (Major Field Test and Local Test) and complete the exit interview.

Apart from PHYS 1154, PHYS 1164, and PHYS 1950, no 1000-level courses may count toward the major requirements in physics. However, they do count as electives for various other college degrees.

Physics majors should strive to take as many of the courses in modern physics (PHYS 4210, PHYS 4220, PHYS 4230) and electronics (PHYS 3500) as their program will permit.

The **senior project** must be approved and the department chair notified at least eight months prior to graduation as a Physics major and the student must register for either PHYS 4950 or PHYS 4960.

Upper division courses (3000-level or higher) will assume that students have at least some experience with, and ability to use, computers for solving physics problems.

Physics is also offered as a concentration in the Division of Continuing Studies.

Contact

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Website (http://www.physics.unomaha.edu/)

Degrees Offered

- Physics, Bachelor of Arts (http://catalog.unomaha.edu/undergraduate/college-arts-sciences/physics/physics-ba/)
- Physics, Bachelor of Science (http://catalog.unomaha.edu/undergraduate/college-arts-sciences/physics/physics-bs/)
- Physics, Bachelor of Science with a Concentration in Biomedical Physics (http://catalog.unomaha.edu/undergraduate/college-arts-sciences/physics/concentration-biomedical-physics/)
- Physics, Bachelor of Science with a Concentration in Physics Education (http://catalog.unomaha.edu/undergraduate/college-arts-sciences/physics/concentration-education/)

Minors Offered

- Physics Minor (http://catalog.unomaha.edu/undergraduate/college-arts-sciences/physics/physics-minor/)

Physics is one of the broadest scientific disciplines. Most students develop expertise with a great variety of hands-on experiences with instrumentation, fabrication, analytical techniques and computer modeling. These practical skills make physicists attractive to employers in physics, engineering, financial and computer science fields.

Particular skills include: research and problem solving, fluency in using scientific equipment, refined mathematical skills, programming, modeling and simulation, and quality control protocol.

"Soft skills" are also vital to successful career. Soft skills you would be trained in at the university include: cultivating strategic written and oral communication skills, learning to work well on a team, and being a good listener.

Some common jobs for those who have a bachelor's degree in physics include:

- Design or process engineer
- Software engineer
- Applications engineer
- Inside sales engineer
- Research analyst
- Lab technician
- IT developer (administrator, consultant)
- Programmer
- High school science teacher
- Accelerator operator
- Data analyst
- Systems analyst
- Technical specialist.

If students choose to continue and receive a graduate degree the 10 most common jobs are

- Research scientist (at tech companies, national laboratories or universities)
- Professor, physics teacher
- Data scientist
- Lab manager
- Medical physicist
- Aerospace engineer
- Astronomer
- Environmental scientist
- Geophysicist.