



Physics

Curricula

The curricula in engineering and traditional physics provide a grounding in fundamental physics along with training in problem-solving and critical thinking while also providing exposure to engineering disciplines, particularly mechanical and electrical engineering.

Physics students develop the skills essential for graduate school, industry, government service, and teaching. Advanced physics classes are small, and a major's academic adviser is a senior faculty member. A study/tutorial room is also available.

The Department of Physics operates the campus observatory and sponsors the Orion Astronomy Club. There is a chapter of *Sigma Pi Sigma*, the National Physics Honor Society.

Requirements

For the B.S. in Engineering Physics

Area of Study	credits
Physics.....	32
Engineering.....	9
Mathematics.....	18
Chemistry.....	8
Foreign Language.....	3
General Education.....	32
General Electives.....	18

For the B.S. in Traditional Physics

Area of Study	credits
Physics.....	32
Engineering.....	3
Mathematics.....	18
Chemistry.....	8
Foreign Language.....	3
General Education.....	32
General Electives.....	24

In addition, physics majors have the opportunity to solidify their physical understanding by teaching

others as tutors and/or as teaching aides in the introductory physics lab class.

Internships

Physics majors are encouraged to participate in the **National Science Foundation Research Experiences for Undergraduates Program (REU)** or in alternative engineering-oriented internship experiences with industries or government agencies.

There are opportunities to participate in computational physics projects with department faculty. Students may receive academic credit for one such experience through Physics 312, Internship in Applied Physics. Students participate in one or two internships during the summers between the sophomore, junior, and senior years. Often, students make contacts that lead directly to employment or admission to a graduate program.

Career Outlook

Training in physics leads to many career opportunities that are associated with the broad technical/scientific education one receives in studying physics. The world we live in is shaped by physical laws, whether it be:

- computer technology (solid state physics);
- space exploration (classical mechanics, electrostatics, solid state physics);
- medical physics (electromagnetics, mathematical physics, nuclear and atomic physics, ultrasonics);
- communications (optics, electromagnetics, solid state physics);
- aeronautics (classical mechanics, thermodynamics);
- manufacturing (classical mechanics, thermodynamics).

The career paths taken by recent graduates of the Department of Physics attest to the flexibility of the Physics/Engineering Physics degree. In recent times, graduates of the Department of Physics have typically gone on to graduate study in physics; civil,



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www.sbu.edu/physics • Dr. James Pientka, Chair • jpientka@sbu.edu • (716) 375-2007

electrical, mechanical, or optical engineering; secondary education; medicine, medical physics, or biomedical engineering.

Graduates of the Department of Physics have been admitted to graduate study at Harvard, Columbia, Johns Hopkins, the University of Rochester, Syracuse University, Lehigh University, SUNY Buffalo, the University of Missouri, the University of Arkansas, the University of Dayton, the University of

New Hampshire, Drexel University, Kansas State University and the University of Florida, Texas Tech University, Ohio State University, among others.

Those who did not pursue advanced physics or engineering degrees have made careers in secondary education, the armed forces, avionics, software engineering, mechanical engineering, construction management, and civil engineering.