About the Program

Considering a major in physics or engineering? Excellent choice! At Slippery Rock University we offer several programs that lead to a range of career options in rapidly growing industries.

Why physics? Physics helps us to understand how the world around us works, from tiny subatomic particles to massive galaxies, cell phones to jet engines, DNA to MRI scanners and tornadoes to earthquakes. So, if you have a passion for understanding how things work and enjoy hands-on scientific experiments, then a physics degree is for you. Studying physics at SRU will provide you with quantitative, analytical and problemsolving skills that will open doors to many career options.

Why pre-engineering? If you are interested in applying your creativity and scientific abilities to solving real world problems as engineers, SRU offers dual degree engineering programs in cooperation with Pennsylvania State University, West Virginia University, University of Pittsburgh and Youngstown State University. Under these cooperative programs, you spend three years at SRU completing the pre-engineering course requirements and then transfer to one of the engineering schools to complete the engineering program of your choice.

Overview of physics and pre-engineering programs

The department prides itself on the quality of its teaching, while also providing numerous opportunities for one-on-one interaction with a diverse group of faculty. Our goal and commitment is to prepare you to be competitive in the 21st-century workplace.

The physics major is designed to provide a broad background in physics for individuals planning careers in physics and related technical fields, including those who plan to pursue graduate studies in physics.

The pre-engineering, dual-degree cooperative programs enables a student to pursue a career in Engineering while experiencing the broader scope of a Slippery Rock University education. These cooperative programs of study lead to two baccalaureate degrees, one in physics awarded by SRU, and one in an area of engineering from one of the four participating engineering schools. Students can choose from aerospace, civil, computer, electrical, environmental or mechanical engineering, to name a few.

Career Opportunities

Physics graduates: A bachelor’s degree in physics can lead to a variety of career opportunities, that includes, pursuing a graduate degree in physics or related field, a career as a high school physics teacher, or a career in the high-tech industry.

Engineering graduates: Most recent engineering graduates are reaping the benefits of a flourishing job market in this growing field. Engineering occupations are expected to grow by more than 10 percent in the next 10 years, according to the U.S. Bureau of Labor Statistics.
Undergraduates who have participated in research projects are better prepared for the regimen of a graduate program or typical entry-level positions in the private sector. SRU physics and pre-engineering majors have the opportunity to be involved in faculty/student research projects in the areas of liquid crystals, nanotechnology, material science, computational physics and astrophysics.

The newly renovated Vincent Science Center is home to the physics and pre-engineering department at SRU and is complete with state-of-the-art undergraduate laboratories and other resources. The facility includes eight teaching labs, and four lecture rooms, all with modern equipment. It also includes the following six facilities:

- Computational Physics Research Lab
- Optics/Advanced Physics Lab
- Light Scattering Research Lab
- Liquid Crystal and Nanoscience Research Lab
- Machine Shop
- Planetarium