PHYSICS, B.S.

A Bachelor of Science degree provides a strong foundation in the central areas of physics, such as Newtonian mechanics, electricity and magnetism, statistical physics and quantum mechanics. This degree path is flexible, allowing students to tailor their course of study to their unique interests by choosing from specialized experimental courses or by designing a research program in consultation with faculty researchers.

Many of our students go on to pursue graduate studies or careers in physics or astronomy. A physics degree also prepares students for careers in other sciences, making it an ideal choice for a double major. The degree also provides the educational background students need to enter professional schools, such as medicine and law. Through a suitable selection of electives, students may also be prepared to enter USC's teacher education program that leads to a master's degree and teacher certification.

Engineering Physics Concentration

Our interdisciplinary engineering physics program bridges physics and engineering. This program, which culminates in a Bachelor of Science in Physics with a concentration in Engineering, is designed for physics students interested in learning more about the applications of physics and for engineering students interested in exploring the fundamental sciences. Through this interdisciplinary program, students master foundational physics and the practical pursuits of engineering.

Undergraduates in this program have a choice of two tracks: electrical and mechanical. These applied tracks add a coherent program of engineering courses to basic physics degree requirements. While immersed in the culture of engineering, students learn to solve the practical problems that engineers typically encounter. Graduates are uniquely positioned to enter a variety of careers or to pursue graduate studies in physics or engineering.

Learning Outcomes

- 1. Students will demonstrate an understanding of the physical phenomena and the use of scientific methods and theories.
- Students will demonstrate their ability to communicate effectively through written reports, which exhibit their ability to comprehend, analyze, and interrogate critically.
- Students will demonstrate their ability to communicate effectively through oral presentations, which exhibit their ability to comprehend, analyze, interrogate critically and present their work to others.
- 4. Students will demonstrate effective use of computers and other technology.