This major is intended for students with dual interests in physics and computer science who wish to complete the essential courses for both majors within four years. It prepares students for a career in a computer-related field and/or science research. The foundation provided prepares students for further study in graduate and for careers as scientists or engineers who will participate in the creation of the science and technology of the future.

**BACHELOR OF SCIENCE (BS) REQUIREMENTS**

**Thirteen Lower Division Courses**
- Fundamentals of Physics I — Mechanics and Thermodynamics
- Fundamentals of Physics II — Electricity and Magnetism
- Freshman Colloquium (Recommended)
- Introduction to Programming
- Data Structures and Object Oriented Design
- Discrete Methods in Computer Science
- Introduction to Algorithms and Theory of Computing
- Calculus I, II, and III
- Linear Algebra and Linear Differential Equations
- Mathematics of Physics and Engineering I

**Nine Upper Division Courses**
- Mechanics
- Electricity and Magnetism A & B
- Introduction to Quantum Mechanics A & B
- Introduction to Operating Systems
- Computer Organization and Architecture
- Mathematics of Physics and Engineering II
- Senior Project

**EXPERIENTIAL OPPORTUNITIES**

- **Society of Physics Students:** SPS seeks to create a tight-knit community of those interested in physics & astronomy and to provide opportunities for students to attend lectures and take field trips to sites including the NASA Jet Propulsion Laboratory.

- **Women in Physics at USC:** WIP organizes a two-day conference for undergraduate women in physics to promote an increased awareness of current research and career options in physics, greater familiarity with the graduate school experience, and resources for applying to and being successful in graduate school.

- **Senior Project:** Students construct an original project applying computer technology (in either hardware or software) to produce a result useful in the physics classroom or laboratory.

For additional information, including all major requirements, please consult the USC Catalogue or http://dornsife.usc.edu/physics/physics-computer-science/