

PROGRAM OF STUDY

Associate in Science in Physics for Transfer

Physics is the study of our natural surroundings, from the tiniest elementary particle to the entire universe. Physics provides a broad range of knowledge and powerful skills which are useful in practically every discipline. The program at Cabrillo emphasizes topics that affect our everyday lives: forces, motion, gravity, waves, sound, electricity, magnetism, light, and heat. The excitement of atoms, nuclei, relativity, and the cosmos is also included.

A physics major degree generally transfers to a four-year institution to complete a bachelor's degree. Physics graduates at the bachelor's level are qualified for a variety of technical positions with government or industry, and they are also well prepared to enter a graduate program in any other science or in engineering. Physics majors are welcomed into professional programs such as law, business, or medicine. Teaching at the high school or two-year college level is an option if a master's degree is obtained. A physicist generally obtains the Ph.D. Degree, which may lead to experimental or theoretical research and/or teaching at the university level or basic research in government or industry.

Cabrillo offers options for degrees in Physics. The first option listed below is an Associate in Science in Physics for Transfer (A.S.-T), which is intended for students who plan to complete a bachelor's degree in a similar major at a CSU campus. Students completing these degrees are guaranteed admission to the CSU system, but not to a particular campus or major. See Associate Degree for Transfer information in the Cabrillo College Catalog. **IGETC for CSU is required for the Physics A.S.-T degree.**

The following is required for all A.A.-T or A.S.-T degrees:

- Completion of 60 CSU-transferable semester units.
- Minimum grade-point average (GPA) of at least 2.0 in all CSU-transferable coursework. While a minimum of 2.0 is required for admission, some majors may require a higher GPA.
- Completion of a minimum of 18 semester units in the major with a letter grade of "C" or better, or a "P" if the course is taken on a "pass/no pass" basis.
- Certified completion of the California State University General Education-Breadth pattern (CSU GE Breadth) or the Intersegmental General Education Transfer Curriculum (IGETC) pattern.

High School Preparation: physics, chemistry, four years of college preparatory mathematics. Cabrillo offers courses that are equivalent to this preparation. The major will require more than two years at the community college level if high school preparation is not complete.

Learning Outcomes

The Cabrillo College Core Competencies (with an emphasis in the study of Physics):

1. Communication: Reading, Writing, Listening, Speaking and/or Conversing
2. Critical Thinking and Information Competency: Analysis, Computation, Research, Problem Solving
3. Global Awareness: An appreciation of Scientific Processes, Global Systems and Civics, and Artistic Variety.
4. Personal Responsibility and Professional Development: Self-Management and Self-Awareness, Social and Physical Wellness, Workplace Skills

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Completion IGETC (for CSU) General Education Requirements

NOTE: IGETC for CSU is required for this degree

GE Units

37 - 39

Core Courses

		Units
PHYS 4A	Physics for Scientists and Engineers I	5
PHYS 4B *	Physics for Scientists and Engineers II	5
PHYS 4C **	Physics for Scientists and Engineers III	5
MATH 5A	Analytic Geometry and Calculus I	5
MATH 5B	Analytic Geometry and Calculus II	5
MATH 5C	Analytic Geometry and Calculus III	5

Note: All courses are also general education courses.

Units

Total Units

60

*Fall only;
**Spring only