



PHYSICS/ASTROPHYSICS

Transfer Requirements

The following requirements for the major are subject to change without notice. To assure that this information is current, you should consult with the Physics counselor, or review articulation agreements via the Internet at WWW.ASSIST.ORG You may also consult the Articulation Officer for specific articulation agreements.

CAREER OPPORTUNITIES: Physics is a branch of science that is concerned with the behavior of non-living things. The traditional major branches are mechanics, heat, optics, acoustics and electrodynamics. New branches have developed: astrophysics, biophysics, chemical physics, geophysics, low temperature physics, plasma physics, quantum optics and radiological health physics. Experimental work in these areas is applied in such fields as communications, electronics, energy conversion, lasers, medical instrumentation, metallurgy, nuclear power, space exploration and defense related programs. Preparation for some of these specialties may involve course work in a related discipline such as biology, geology, business management or economics. A well-trained physicist is likely to find employment in a variety of occupations. With a bachelor's degree, opportunities exist in high school teaching, science-oriented public relations, radio logic health journalism and business. A master's degree is necessary for community college teaching and other positions in industry. A Ph.D. is required for university teaching, research, and development.

****NOTE: In many instances, the entire physics sequence must be completed at the same community college for transfer credit. Please check www.assist.org to see how each physics course is credited at the university you wish to attend.**

AS-T in Physics

Required Core: Physics 1A, 1C; Physics 1B or 1D; Math 190, 191, 220 Total Units: 26

CALIFORNIA STATE UNIVERSITY, DOMINGUEZ HILLS

B.S. Physics: General Physics Option: Chemistry 1A, 1B; Math 190, 191, 220; Physics 1A, 1B, 1C, 1D (Note: chemistry and physics courses are approved as a sequence only.) CIS 16 (prerequisite CIS 13) or Computer Science 3* (prerequisite CS 1)

B.S. Physics: Physical Science Option: Chemistry 1A, 1B; Geology 1, 2, 3, 4; Math 190, 191, 220; Physics 1A, 1B, 1C and 1D (Note: physics courses are approved as a sequence only.); CIS 13 or 16 or Computer Science 3* (prerequisite CS 1)

B.S. Physics: Electrical Engineering Option: Chemistry 1A, 1B; Math 190, 191, 220; Physics 1A, 1B, 1C, 1D; Computer Science 3

Note: Students transferring from a community college should have completed: 1) Three semesters of calculus (through differential and integral calculus of several variables) 2) Two semesters of calculus-based physics and one semester of general chemistry 3) Modern Physics- Those students who have not had an introduction to modern physics and/or mathematical physics, must take PHY 134 and PHY 306 as soon as possible upon arrival at CSUDH

CALIFORNIA STATE UNIVERSITY, FULLERTON

Chemistry 1A, 1B; Math 190, 191, and 220; Physics 1A, 1B, 1C, and 1D

CALIFORNIA STATE UNIVERSITY, LONG BEACH

Biology 10 or Biology 101 or Chemistry 1A and 1B or Biology 8 and 11 (Biology not required for the B.A. in Physics); Physics 1A, 1B, 1C, and 1D; Math 190, 191, 220, 270

CALIFORNIA STATE UNIVERSITY, LOS ANGELES

B.S. Physics: Physics 1A, 1C; Chemistry 1A and 1B; Math 190, 191, 220, 270

Option in Biophysics: Add: Biology 101-102, Chemistry 7A

B.A. Physics: Physics 1A, 1C; Chemistry 1A and 1B; Math 190, 191, 220, and 270

Option in General Programming: Option in Astrophysics

CALIFORNIA STATE UNIVERSITY, NORTHRIDGE

B.A. and B.S. Physics: Chemistry 1A; Math 190, 191, 220, and 270; Physics 1A, 1C, and 1D;
Options: Astrophysics

UNIVERSITY OF CALIFORNIA, BERKELEY

B.A. Physics: Math 190, 191, 220, and 270; Physics 1A, 1B, 1C, and 1D (must be taken as a series); Highly Recommended: Chemistry 1A and 1B; those not familiar with a computer programming language are urged to include an introductory course in Computer Science.

B.A. Astrophysics: Astronomy 25; Math 190, 191, 220, and 270; Physics 1A, 1B, 1C, 1D

Note: Students **must** complete IGETC or L & S Requirements in Reading and Composition, Foreign Language, and Quantitative Reasoning by the end of the spring semester prior to fall transfer.

UNIVERSITY OF CALIFORNIA, DAVIS

A.B. Physics: Physics 1A, 1B, 1C and 1D; Math 190, 191, 220, and 270

B.S. Physics: Physics 1A, 1B, 1C and 1D; Math 190, 191, 220, and 270; Computer Science 1 or 3; Chemistry 1A, 1B

B.S. Astrophysics emphasis: Physics 1A, 1B, 1C and 1D; Math 190, 191, 220 and 270; Computer Science 30

*It is strongly recommended that students complete English Composition and Math admission requirements by the term prior to enrollment.

UNIVERSITY OF CALIFORNIA, IRVINE

B. S. Physics: Physics 1A, 1B, 1C and 1D; Computer Science 1, 3, or 30; Math 190, 191, 220, and 270

UNIVERSITY OF CALIFORNIA, LOS ANGELES

**For all options, students must complete a minimum of 1.5 years of calculus (through multivariable calculus) and the entire articulated sequence of physics (mechanics, electricity, and magnetism) by the end of spring term prior to transfer.

B.A. Physics: Physics 1A, 1C, 1D; Chemistry 1A; Math 190, 191, 220, 270

B.S. Physics: Physics 1A, 1C, 1D; Chemistry 1A; Math 190, 191, 220 and 270

B.S. Astrophysics: Physics 1A, 1C, 1D; Math 190, 191, 220, 270; Chemistry 1A; Computer Science 1

UNIVERSITY OF CALIFORNIA, RIVERSIDE

B.A. or B.S. Physics: Physics 1A, 1B, 1C, 1D; Math 190, 191, 220, 270; Chemistry 1A and 1B; Computer Science 1 or 3; strongly recommended: Biology 102

Biophysics option: add Biology 101 and 102; Chemistry 7A and 7B

***Note:** IGETC is not accepted for majors housed in the College of Natural and Agricultural Sciences. Courses taken for IGETC will be applied to the College's breadth pattern as appropriate. Transfer students who wish to supplement their math and science preparation with humanities or social science courses are encouraged to follow the College of Natural and Agricultural Sciences breadth pattern as outlined under the UCR "GE Breadth" area in ASSIST.

UNIVERSITY OF CALIFORNIA, SAN DIEGO

B.A. Physics: Physics 1A, 1B, 1C, 1D; Math 190, 191, 220, 270; two courses from Chemistry 1A and 1B or Biology 101, 102

B.S. Physics: Physics 1A, 1B, 1C, 1D; Chemistry 1A; Math 190, 191, 220, 270

Option in Earth Science: add Chemistry 1B; Option in Materials Physics: add Chemistry 1B; CS 1 or 30; Option in

Astrophysics: no additional requirements; Option in Biophysics: add Chemistry 1B; Biology 101, 102; Option in

Computational Physics: no additional requirements; Option in Secondary Education: Physics 1A, 1B, 1C, 1D;

Chemistry 1A, 1B; Math 190, 191, 220, 270

UNIVERSITY OF CALIFORNIA, SANTA BARBARA

B.A. and B.S. Physics: Physics 1A, 1B, 1C, and 1D; Math 190, 191, 220, and 270; Chemistry 1A and 1B

*Computer Science 3 offered in the fall semester only; Computer Science 30 is offered

UNIVERSITY OF CALIFORNIA, SANTA CRUZ

B. S. Physics: Math 190, 191, 220; Physics 1A, 1B, 1C, 1D

B.S. Astrophysics: Math 190, 191, 220; Physics 1A, 1B, 1C, 1D

B.S. Physics Education: Math 150, 190, 191, 220, 270; Physics 1A, 1B, 1C, 1D

UNIVERSITY OF SOUTHERN CALIFORNIA

B.A. and B.S. Physics: Math 190, 191, 220 and 270; Physics 1A, 1B, 1C and 1D; Chemistry 1A and 1B

B.S. Physics/Computer Science: Math 190, 191, 220, 270; Physics 1A, 1B, 1C

***Computer Science 3 offered in the fall semester only; Computer Science 30 is offered**