



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 (CSUDH) (20223-2024)

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

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

BS Physics: Electrical Engineering Option: Chemistry 1A, 1B (Note: chemistry courses are approved as a sequence only); Math 190, 191, 220; Computer Science 3 (prerequisite CS 1) Physics 1A, 1B, 1C, 1D (Note: physics courses are approved as a sequence only.)

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 (CSUF) (2022-2023)

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

CALIFORNIA STATE UNIVERSITY, LONG BEACH (CSULB) (2023-2024)

BS Physics: Biology 10 or Biology 120 or Chemistry 1A or Biology 8 and 11; Physics 1A, 1B, 1C, 1D; Math 190, 191, 220, 270

BS Physics Option in Materials Science: Chemistry 1A; Physics 1A, 1B, 1C, 1D; Math 190, 191, 220, 270

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

NOTE: Major specific admissions requirements, please visit: <https://www.csulb.edu/admissions/transfer-admission-eligibility>

CALIFORNIA STATE UNIVERSITY, LOS ANGELES (CSULA) (2023-2024)

BS Physics: Physics 1A, 1C; Chemistry 1A; Math 190, 191, 220, 270

Option in Biophysics: Add- Biology 110, 120

General Option- Advanced Topic Electives: Add- Engineering 9, 11; Chemistry 1B, Geology 1, 3

BA Physics: Physics 1A, 1C; Chemistry 1A; Math 190, 191, 220, 270

Option in Astrophysics: no additional coursework

NOTE: Major specific admissions requirements, please visit: <https://www.calstatela.edu/admissions/major-specific-criteria>

CALIFORNIA STATE UNIVERSITY, NORTHRIDGE (CSUN) (2023-2024)

BA and BS Physics: Computer Science 1; Math 190, 191, 220, 270; Physics 1A, 1C, 1D;

Option in Astrophysics: no additional coursework

UNIVERSITY OF CALIFORNIA, BERKELEY (UCB) (2023-2024)

BA Physics: Math 190, 191, 220, 270; Physics 1A, 1B, 1C, 1D (must be taken as a series); those not familiar with a python programming language are urged to take a course.

BA Astrophysics: Astronomy 25; Math 190, 191, 220, 270; Physics 1A, 1B, 1C, 1D; those not familiar with a computer programming language are urged to include an introductory course in Computer Science. Python is recommended programming language to learn.

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 (UCD) (2022-2023)

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

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

BS Astrophysics emphasis: No additional requirements

BS Applied Physics: Physics 1A, 1B, 1C, 1D; Math 190, 191, 220, 270;

Chemical Physics Concentration: add Chemistry 1A, 1B

Computational Physics Concentration: Computer Science 1, 2, 30

Physical Electronics Concentration: Engineering 11/12

Geophysics, Materials Science, and Physical Oceanography Concentrations: no additional coursework

NOTE: Selective major requirements, please visit:

<https://www.ucdavis.edu/admissions/undergraduate/transfer/selective-major-requirements/>

UNIVERSITY OF CALIFORNIA, IRVINE (UCI) (2023-2024)

BS Physics: Physics 1A, 1B, 1C, 1D; Computer Science 1, 2, 3, 14, 17, or 30; Math 190, 191, 220, 270

BS Applied Physics: Physics 1A, 1B, 1C, 1D; Computer Science 1, 3, 17 or 30; Math 190, 191, 220, 270; Chemistry 1B (prerequisite CHEM 1A)

NOTE: Major specific admissions requirements, please visit:

<https://www.admissions.uci.edu/apply/transfer/requirements.php>

UNIVERSITY OF CALIFORNIA, LOS ANGELES (UCLA) (2023-2024)

BA Physics: Physics 1A, 1C, 1D; Chemistry 1A; Computer Science 1; Math 190, 191, 220, 270

BS Physics: Physics 1A, 1C, 1D; Chemistry 1A; Computer Science 1; Math 190, 191, 220, 270

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

UCLA Transfer Admission Guide: http://www.admission.ucla.edu/Prospect/Adm_tr/tradms.htm

UNIVERSITY OF CALIFORNIA, RIVERSIDE (UCR) (2023-2024)

BA or BS Physics: Physics 1A, 1B, 1C; Math 190, 191

*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.

NOTE: Major specific admissions requirements, please visit: <https://admissions.ucr.edu/transfer/majors-preparation-guide>

UNIVERSITY OF CALIFORNIA, SAN DIEGO (UCSD) (2022-2023)

BA Physics: Physics 1A, 1B, 1C, 1D; Math 190, 191, 220, 270; one course from Computer Science 2, 3, or 17

BS Physics: Physics 1A, 1B, 1C, 1D; Math 190, 191, 220, 270; one course from Computer Science 2, 3, or 17

Option in Earth Science: No additional requirements; Option in Materials Physics: add Chemistry 1A, 1B;

Option in Astrophysics: no additional requirements; Option in Biophysics: add Chemistry 1A, 1B, 7A;

Biology 110, 120; Option in Computational Physics: no additional requirements; Option in Secondary Education: no additional requirements.

NOTE: Major specific admissions requirements, please visit: <https://admissions.ucsd.edu/transfer/transfer-major-preparation.html>

UNIVERSITY OF CALIFORNIA, SANTA BARBARA (UCSB) (2023-2024)

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

Note: UCSB Selective Majors: <https://admissions.ext-prod.sa.ucsb.edu/selective-majors>

UNIVERSITY OF CALIFORNIA, SANTA CRUZ (UCSC) (2023-2024)

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

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

BS Applied Physics: Math 190, 191, 220; Physics 1A, 1B, 1C, 1D; Chemistry 1A, 1B; Computer Science 14

UNIVERSITY OF SOUTHERN CALIFORNIA (2023-2024)

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

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

NOTE: USC Transfer Planning Guide: <https://camel2.usc.edu/TPG/>