PHYSICS 2.0

Associate Degree for Transfer
*A Degree with a Guarantee.*SM

Student Transfer Achievement Reform (STAR) Act (SB1440)

Associate in Science
Transfer Preparation* (Major Code:01686)

Physicists apply the fundamental principles of nature to understand the behavior of matter and energy from the smallest particles to the largest cosmic structures. Areas of study in physics include classical mechanics, electromagnetism, optics, thermodynamics, quantum mechanics, and relativity, as well as specialized fields such as astrophysics, atomic and nuclear physics, condensed matter physics, and biophysics.

Program Student Learning Outcome

- Develop mathematical skills, acquire physics knowledge, and practice applying these skills and knowledge in physical situations.

The following is required for all AA-T or AS-T degrees:

- Completion of minimum 60 semester or 90 quarter units of transferable degree applicable courses.
- Minimum overall grade point average (GPA) of at least 2.0 in all transferable coursework, including a minimum "C" grade (or "Pass") required in each course for Cal-GETC.
- Minimum 18 semester or 27 quarter units in major or area of emphasis with a minimum grade of “C” (or “Pass”) for each course in the major.
- Completion of the *California General Education Transfer Curriculum* (Cal-GETC) (https://catalog.swccd.edu/certificates-certifications-degrees-csuuc-requirements/intersegmental-general-education-transfer-curriculum-igetc/) pattern.

SDSU Note: San Diego State University (SDSU) accepts this ADT for transferring into Physics BS (General) and Physics (Modern Optics) BS majors. Check SDSU Transfer Pathways (https://admissions.sdsu.edu/transfers/transfer-pathways/) and consult with an academic counselor.

Required Core

Code	Title	Units
PHYS 270	PRINCIPLES OF PHYSICS I	4
PHYS 271	PRINCIPLES OF PHYSICS LABORATORY I	1
PHYS 272	PRINCIPLES OF PHYSICS II	4
PHYS 273	PRINCIPLES OF PHYSICS LABORATORY II	1
PHYS 274	PRINCIPLES OF PHYSICS III	4
PHYS 275	PRINCIPLES OF PHYSICS LABORATORY III	1
MATH 130	INTRODUCTION TO COMPUTER PROGRAMMING	4
MATH C2210	CALCULUS I: EARLY TRANSCENDENTALS	5
MATH C2220	CALCULUS II: EARLY TRANSCENDENTALS	4
MATH 252	ANALYTIC GEOMETRY AND CALCULUS III	4
MATH 253	INTRODUCTION TO DIFFERENTIAL EQUATIONS	3
MATH 254	INTRODUCTION TO LINEAR ALGEBRA	3
Total Units		**38**

Physicists work in education and research, government, laboratories, industry and technology sectors, contributing to advances in energy, materials science, medicine, computing, and aerospace. The physics curriculum emphasizes a strong foundation in mathematics and scientific reasoning. Students are encouraged to follow the recommended course sequence, as many physics and mathematics courses build upon one another. General Education courses satisfying Cal-GETC requirements should be added each semester. Students interested in a career in astrophysics or cosmology should consider taking ASTR 201 or ASTR 205 as an elective.

* Students planning to transfer to a four-year college or university should complete courses specific to the transfer institution of choice. University requirements vary from institution to institution and are subject to change. Therefore, it is important to verify transfer major preparation and general education requirements through consultation with a counselor in either the Counseling Center or Career and Transfer Connections. See catalog Transfer Courses Information (https://catalog.swccd.edu/student-success-support-program/student-services-and-college-services/other-services/transfer-courses/) section for further information.