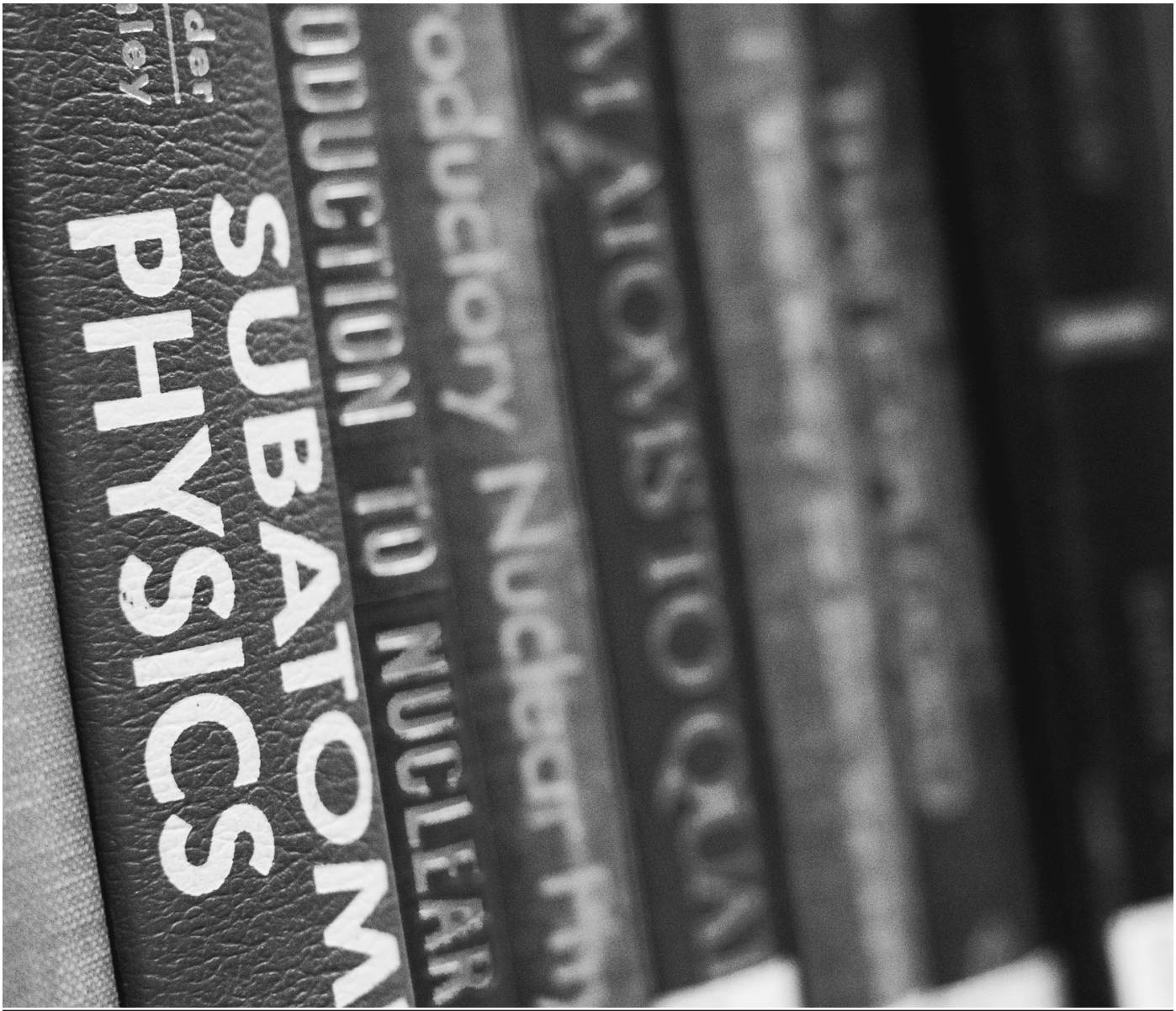

Physics

Degree
Physics, Associate in Science for Transfer

Physics
Associate in Science Degree for Transfer

The goal of the program is to help students better understand the physical world and its analysis using both qualitative and quantitative reasoning based on mathematical techniques. The coursework prepares students to think critically and apply reasoning skills to analyze real world situations.

Students will be able to successfully transfer to any institution of higher learning armed with the foundation needed to pursue a baccalaureate degree in physics and will be prepared for careers as physicists in fields such as research, industry and education. Students will complete comprehensive curriculum to meet degree and transfer needs. This new degree builds upon the existing degree's emphases in mathematical modeling, reasoning and critical thinking skills. In addition, it will guarantee transfer to a California State University in the physics major (or a similar or equivalent program).

The Associate in Science degree in Physics for Transfer is designed to prepare students to begin upper division course work in pursuit of a bachelor's degree (or ultimately a graduate degree) in physics upon transfer to a four-year college or university. Earning this degree should allow the student to become acquainted with the basic knowledge of physics contained in a calculus-based introductory physics sequence and the mathematics that supports that level of competency. The student will demonstrate proficiency in communication, critical thinking, quantitative problem solving, and laboratory science skills. This degree represents a step in a path preparing students for careers in any of the many branches of physics, physics education, and other technical fields, such as some engineering disciplines in which physics is an integral part.

Program Learning Outcomes
Upon successful completion, the student will:
- demonstrate a knowledge of and recognize the processes that explain physical phenomena.
- apply the methodologies of science when approaching a physics problem.
- apply logical quantitative and qualitative reasoning in solving physics problems or analyzing arguments.

Requirements for AA-T or AS-T degrees
The completion of 60 semester units that are eligible for transfer to the California State University, including the following:
- The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University – Breadth Requirements.
- A minimum of 18 semester units in a major area of emphasis, as determined by the district.
- The obtainment of a minimum grade point average of 2.0.
- The completion of all courses required for the major with a 'C' or better. A 'P' (Pass) grade is not acceptable for courses in the major.

Students transferring to a CSU campus that does accept the AS-T will be required to complete no more than 60 units after transfer to earn a bachelor's degree (unless the major is a designated "high-unit" major).

This degree may not be the best option for students intending to transfer to a particular CSU campus or to university or college that is not part of the CSU system. Students should consult with a counselor when planning to complete the degree for more information on university admission and transfer requirements. This degree eliminates the additional Bakersfield College graduation requirements.

Total Units: 24
Required Courses

Course #	Name	Units
PHYS B4A	Mechanics and Wave Motion	4.0
PHYS B4B	Heat, Electricity, Magnetism	4.0
PHYS B4C	Optics and Modern Physics	4.0
MATH B6A	Analytic Geometry/Calculus I	4.0
MATH B6B	Analytic Geometry/Calculus II	4.0
MATH B6C	Calculus III	4.0

Category	**Units**
Units in Major	24
CSU GE Breadth	37-39
Possible double counting of GE's	7
Degree Total	60