

# PHYSICS - ASSOCIATE IN SCIENCE FOR TRANSFER

The goal of the Associate in Science in Physics for Transfer (AS-T) degree is to provide a lower-division science foundation for those interested in pursuing physics as a major field of study. The study of physics encompasses all interactions and energy exchanges observed among natural systems. It explains the behavior of the smallest particles in the atom, quantifies and predicts power consumption of household appliances, and explains the movements of big complex systems such as planets, stars, galaxies, and the universe in large scale. The completion of courses in general physics provides a foundation that will expand the student's worldview, bringing appreciation and understanding of nature's main processes.

**Note: High School Preparation:** Courses in physics, chemistry, four years of high school mathematics are required. If this preparation is not complete, Evergreen Valley College offers courses to meet this preparation. If the preparation is not complete, it may take more than two years to complete the AS-T degree.

**To be awarded the Associate Degree for Transfer, students must have the following:**

- Completion of 60 CSU transferable semester units.
- A minimum of at least 2.0 GPA in CSU transferable courses (note that a higher GPA may be required in some institutions).
- Completion of at least 18 units in the major with a grade of "C" or better. A "P" (Pass) grade is also an acceptable grade for courses in the major if the course is taken on a Pass/No Pass basis.
- Certified completion of the Intersegmental General Education Transfer Curriculum (IGETC) for CSU requirements.

**Please Note:** No more than 60 semester units are required for this degree and no additional requirements will be imposed by Evergreen Valley College.

## Program Learning Outcomes

- Identify all of the physical quantities in a problem, and define the steps to model and solve real world problems.
- Use inductive and deductive reasoning to analyze evidence to arrive at logical conclusions.
- Demonstrate proficiency in assembly of experimental apparatuses to conduct and analyze measurements of physical phenomena.
- Assess experimental uncertainty to aid in making meaningful comparisons between experiment and theory.

## Major Requirements

Course	Title	Units
PHYS 007A	Calculus-Based General Physics for Scientists and Engineers - I	4
PHYS 007B	Calculus-Based General Physics for Scientists and Engineers - II	4
PHYS 007C	Calculus-Based General Physics for Scientists and Engineers - III	4
MATH 071 or MATH 066	Calculus I With Analytic Geometry Calculus I Late Transcendentals for STEM	5
MATH 072 or MATH 067	Calculus II With Analytic Geometry Calculus II Late Transcendentals for STEM	5
MATH 073	Multivariable Calculus	5

## Total Requirements

Course	Title	Units
Major Requirements		25-27
CSU GE Breadth or IGETC for CSU <sup>1</sup>		37-39
Transferable Electives (as needed to reach 60 units)		
<b>Total Units</b>		<b>60</b>

<sup>1</sup> Some GE courses may be double-counted within the major and will reduce the number of units. General electives may be needed to reach 60 units. Please consult with a counselor to determine which courses are applicable.