

# PROGRAM OF STUDY

## Physics Associate in Science Degree for Transfer

Physics is the study of the relationship between mass and energy and provides a broad range of knowledge and problem solving skills that are useful in many disciplines. The program at Reedley College emphasizes topics that are encountered in our everyday lives: linear and rotational motion in two and three dimensions, forces, gravity, fluids, waves, sound, heat, electricity, magnetism and light. The following topics are also briefly introduced: special relativity, atoms, introduction to quantum mechanics and the cosmos are also included.

A physics major degree generally transfers to a four-year institution to complete a bachelor's degree. Physics graduates at the bachelors' level are qualified for a variety of technical positions with government or industry, and they are also well prepared to enter a graduate program in any other science or in engineering. Physics majors are welcomed into professional programs such as law, business, or medicine. Teaching at the high school level with a bachelor's degree or at a two- year college with a masters' degree are additional career options for the physics major. For the physicist who obtains the Ph.D., experimental or theoretical research and/or teaching at the university level or basic research in government or industry are options for gainful employment.

Many four-year colleges and universities offer bachelors degrees in physics. There are some systems and institutions that offer the advanced degrees in physics. Requirements vary from system to system and from campus to campus for each level of degree. The advice of a counselor and consultation of institutional catalogs for specific information is highly recommended.

High School Preparation: Physics, chemistry, four years of college preparatory mathematics and English. Reedley College offers courses that are equivalent to this preparation. The major will require more than two years at the community college level if high school preparation is not complete.

### Program Learning Outcome:

Apply algebra, trigonometry, and/or first-year calculus to solve physical problems within the topics covered in class.

To obtain the Associate in Science Degree in Physics for Transfer, students must complete the following requirements with a minimum grade point average (GPA) of 2.0:

- The Physics major requirements below.
- The California State University General Education – Breath (CSUGE) or the Intersegmental General Education Transfer Curriculum (IGETC) requirements.
- Any needed transferable electives to reach a total of 60 CSU transferable units.

<b>Required Core - 12 units</b>		<b>Units</b>
PHYS4A	PHYSICS FOR SCIENTISTS AND ENGINEERS	4
PHYS4B	PHYSICS FOR SCIENTISTS AND ENGINEERS	4
PHYS4C	PHYSICS FOR SCIENTISTS AND ENGINEERS	4
<b>Select one course from the following - 13 units</b>		<b>Units</b>
MATH5A	MATH ANALYSIS I	5
MATH5B	MATH ANALYSIS II	4
MATH6	MATH ANALYSIS III	4
<b>CSU General Education or IGETC - 39-41 units</b>		<b>Units</b>
<b>CSU Electives to reach 60 units total</b>		<b>Units</b>
<b>Total Units</b>		<b>60</b>

Effective Term: Fall 2012