

PHYSICS (For Transfer)

DEGREES, CERTIFICATES AND AWARDS

Associate in Science Degree in Physics for Transfer (AS-T)

DESCRIPTION

Physics, a natural science, is the scientific study of matter and energy and of the interaction between the two. The Associate Degree in Physics for Transfer provides students with an understanding of the physical world, both conceptually and in the language of mathematics. The degree prepares students for preprofessional careers and for curriculum at four-year institutions leading to a baccalaureate degree in areas such as physics, astrophysics, geophysics, mathematics, and engineering. Physics majors develop strong mathematical, analytical, and laboratory skills, and a solid understanding of the fundamental physical laws that govern the universe.

The Associate in Science for Transfer (AS-T) is intended for students who plan to complete a Bachelor's Degree in a similar major at a CSU campus. Students completing this degree (AS-T) are guaranteed admission to the CSU system, but not to a particular campus or major.

PROGRAM LEARNING OUTCOMES

1. Apply the principles of mechanics, electromagnetism, thermodynamics, waves, optic, and modern physics to theoretical problems as well as to experimental applications.
2. Demonstrate laboratory skills including how to take and analyze data, keep an organized lab book, and write a lab report.
3. Apply mathematics through multivariable calculus to solve physics problems.

ASSOCIATE DEGREE PROGRAM (For Transfer)

The Associate in Arts for Transfer (AA-T) or the Associate in Science for Transfer (AS-T) degree is intended for students who plan to complete a bachelor's degree in a similar major at a CSU campus. Students completing these degrees (AA-T or AS-T) are guaranteed admission to the CSU system, but not to a particular campus or major. In order to earn one of these degrees, students must complete 60 semester units of CSU transferable coursework with a minimum GPA of 2.0. Students transferring to a CSU campus that does accept the AA-T or 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 this degree for more information on university admission and transfer requirements.

CAREER OPPORTUNITIES

Of the career opportunities identified many will usually require the completion of degree requirements at 4-year colleges and universities.

- Physics
- Astrophysics
- Geophysics
- Mathematics
- Engineering

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree at Imperial Valley College may not be the same as those required for completing the major at a transfer institution offering a bachelor's degree. Students who plan to transfer to a four-year college or university should schedule an appointment with an IVC Counselor to develop a student education plan (SEP) before beginning their program.

Transfer Resources:

www.ASSIST.org – CSU and UC Articulation Agreements and Majors Search Engine

www.CSUMentor.edu – CSU System Information

www.universityofcalifornia.edu/admissions/index.html - UC System Information

www.aiccu.edu – California Independent Colleges and Universities, Association of

<http://wiche.edu/wue> - Western Undergraduate Exchange Programs

FINANCIAL AID

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that IVC offers a full array of financial aid programs – grants, work study, scholarships, and fee waivers (we do not participate in the federal loan programs). These programs are available to both full and part time students who are seeking a degree or certificate. For those who qualify, financial aid is available to help with tuition, fees, books and supplies, food, housing, transportation, and childcare. Please log onto our website for additional information: www.imperial.edu/students/financial-aid-and-scholarships/

PHYSICS (For Transfer)

ASSOCIATE DEGREE PROGRAM

PHYSICS

Associate in Science Degree in Physics for Transfer (AS-T) – 24.0 units

ALL COURSES FOR THIS MAJOR MUST BE COMPLETED WITH A MINIMUM GRADE OF "C" OR BETTER.

REQUIREMENTS FOR THE DEGREE

- I. **Units/GPA** – Must complete 60 CSU transferable semester units with a minimum grade point average (GPA) of at least 2.0 in all CSU transferable coursework. *NOTE: While a minimum of 2.0 is required for admission, some institutions and majors may require a higher GPA. Please consult with a counselor for more information.*
- II. **General Education** – Must complete one of the following general education transfer patterns:
 - A. California State University General Education Breadth Pattern (CSU GE-B) – 39 units minimum
 - B. Intersegmental General Education Transfer Curriculum (IGETC) – 37 units minimum
- III. **Twenty-four (24) units required for the major**
Required for the Major (24.0 units)

PHYS	200	General Physics I	4.0
PHYS	202	General Physics II	4.0
PHYS	204	General Physics III	4.0
MATH	192	Analytic Geometry and Calculus I	4.0
MATH	194	Analytic Geometry and Calculus II	4.0
MATH	210	Multivariable Calculus	4.0

Total Major Units	24.0
CSU GE-B or IGETC Pattern	37.0-39.0
Electives (as needed to reach 60 CSU transferable units)	
Total Maximum Units:	60.0