

Physics

(See also [Astronomy](#) and [Chemistry](#))

PHYS 114 SURVEY OF CHEMISTRY AND PHYSICS

Equivalent to CHEM 114. A conceptual survey of physical science (physics and chemistry) intended for non-science majors at the General Education level. A general discussion of the scientific method and techniques are followed by physics, chemistry, and integrated topics. The laboratory portion covers a hands-on exploration of phenomena discussed in lecture. The physics component of the course discusses motion, force, energy, electricity and magnetism, waves and light. The chemistry component of the course focuses on chemicals and reactions common in everyday life. Concepts relating to the nature and interactions of atoms, ions, and molecules are presented. Students also learn to use and evaluate information presented on product labels, in advertisements, and online. *Letter Grade Only. Degree Credit.*

Units: 4

Hours/semester: 48-54 Lecture; 48-54 Lab; 96-108 Homework

Prerequisites: Successful completion of Elementary Algebra or equivalent, or placement by other measures as applicable.

AA/AS Degree Requirements: Area B1, B3

Transfer Credit: CSU (CSU GE Area B1, B3), UC* (IGETC Area 5A*)

C-ID: PHYS 140

PHYS 210 GENERAL PHYSICS I

This course is the first in a two-semester algebra based series designed to provide a basic foundation in the fundamentals of physics. Topics include the nature of physics, mechanics, elasticity and simple harmonic motion, waves and sound, fluids, heat and temperature, and the kinetic theory of gases. This course meets general education requirements for a Physical Science. *Letter Grade Only. Degree Credit.*

Units: 4

Hours/semester: 48-54 Lecture; 48-54 Lab; 96-108 Homework

Prerequisites: MATH 130

AA/AS Degree Requirements: Area B1, B3; Math Competency

Transfer Credit: CSU (CSU GE Area B1, B3), UC* (IGETC Area 5A, 5C)

C-ID: PHYS 105; PHYS 100S (requires PHYS 210 & 220)

PHYS 220 GENERAL PHYSICS II

This course is the second in a two-semester algebra based series designed to provide a basic foundation in the fundamentals of physics. Topics include electricity and magnetism, electromagnetic waves, optics, the special theory of relativity, atomic physics, and nuclear physics. *Letter Grade Only. Degree Credit.*

Units: 4

Hours/semester: 48-54 Lecture; 48-54 Lab; 96-108 Homework

Prerequisites: PHYS 210

AA/AS Degree Requirements: Area B1, B3

Transfer Credit: CSU (CSU GE Area B1, B3), UC* (IGETC Area 5A, 5C)

C-ID: PHYS 110; PHYS 100S (requires PHYS 210 & 220)

PHYS 250 PHYSICS WITH CALCULUS I

This course is the first in a three-semester calculus based series designed to provide a thorough foundation in the fundamentals of physics to students majoring in engineering or the sciences. Topics include classical mechanics, fluids, and wave motion. *Letter Grade Only. Degree Credit.*

Units: 4

Hours/semester: 48-54 Lecture; 48-54 Lab; 96-108 Homework

Prerequisites: Completion of, or concurrent enrollment in, MATH 252

Recommended: Eligibility for ENGL 100.

AA/AS Degree Requirements: Area B1, B3

Transfer Credit: CSU (CSU GE Area B1, B3), UC* (IGETC Area 5A, 5C)

C-ID: PHYS 205; PHYS 200S (requires PHYS 250, 260 & 270)

PHYS 260 PHYSICS WITH CALCULUS II

This course is the second in a three-semester calculus based series designed to provide a thorough foundation in the fundamentals of physics to students majoring in engineering or the sciences. Topics include electricity, magnetism and electro-magnetic waves. *Letter Grade Only. Degree Credit.*

Units: 4

Hours/semester: 48-54 Lecture; 48-54 Lab; 96-108 Homework



Prerequisites: PHYS 250 and Completion of, or concurrent enrollment in, MATH 253

AA/AS Degree Requirements: Area B1, B3; Math Competency

Transfer Credit: CSU (CSU GE Area B1, B3), UC* (IGETC Area 5A, 5C)

C-ID: PHYS 210; PHYS 200S (requires PHYS 250, 260 & 270)

PHYS 270 PHYSICS WITH CALCULUS III

This course is the third in a three-semester calculus based series designed to provide a thorough foundation in the fundamentals of physics to students majoring in engineering or the sciences. Topics include thermodynamics, geometrical and physical optics, and modern physics. *Letter Grade Only. Degree Credit.*

Units: 4

Hours/semester: 48-54 Lecture; 48-54 Lab; 96-108 Homework

Prerequisites: PHYS 250 and completion of, or concurrent enrollment in MATH 253

AA/AS Degree Requirements: Area B1, B3; Math Competency

Transfer Credit: CSU (CSU GE Area B1, B3), UC* (IGETC Area 5A, 5C)

C-ID: PHYS 215; PHYS 200S (requires PHYS 250, 260 & 270)

PHYS 405 APPLIED RADIOGRAPHIC PHYSICS

Introduction to the basic ideas about matter, energy, electricity, magnetism, and electromagnetic radiation, with emphasis on X-ray phenomena. Applications to the interaction of radiation with matter and X-ray circuits are included. This course is required for students pursuing careers as Radiologic Technologists. *Letter Grade Only. Degree Credit.*

Units: 3

Hours/semester: 48-54 Lecture; 96-108 Homework

Prerequisites: Successful completion of Elementary Algebra or equivalent, or placement by other measures as applicable, and CHEM 192 or CHEM 410 or equivalent.

AA/AS Degree Requirements: Area B1

Transfer Credit: CSU (CSU GE Area B1)

