

PHYSICS (PHYC)

110 INTRODUCTORY PHYSICS 4 UNITS

3 hours lecture, 3 hours laboratory

Simple treatment of basic physics principles and phenomena with an emphasis on relating them to events and processes of everyday living. Study of the description and cause of various kinds of motion, conservation laws, hot and cold bodies with heat exchange, sound in music and hearing, light and color perception, electricity and some of its practical uses, observation of atomic particles from radiation sources, and other subjects. There is no math prerequisite; the main emphasis is on understanding the concepts rather than doing many mathematical manipulations.

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

130 FUNDAMENTALS OF PHYSICS 4 UNITS

C-ID PHYS 105

Prerequisite: "C" grade or higher or "Pass" or concurrent enrollment in MATH 180 or equivalent
3 hours lecture, 3 hours laboratory

A mathematical and philosophical introduction to basic physical phenomena including force, linear and rotational motion, momentum, work and energy, simple harmonic motion and wave behavior, heat and thermodynamics using calculus, trigonometry and algebra-based problem solving. Laboratory experience is an integral part of this course.

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

131 FUNDAMENTALS OF PHYSICS 4 UNITS

C-ID PHYS 110

Prerequisite: "C" grade or higher or "Pass" in PHYC 130 or equivalent

3 hours lecture, 3 hours laboratory

A mathematical and philosophical introduction to basic physical phenomena including electricity, magnetism, optics and modern physics using calculus, trigonometry and algebra-based problem solving. Laboratory experience is an integral part of this course.

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

190 MECHANICS AND HEAT 5 UNITS

C-ID PHYS 205, C-ID PHYS 200S

Prerequisite: "C" grade or higher or "Pass" in MATH 180 or equivalent or concurrent enrollment

Recommended Preparation: Concurrent enrollment in MATH 280

4 hours lecture, 3 hours laboratory

This course covers linear and rotational kinematics and dynamics, equilibrium, work, energy, momentum, gravitation, simple harmonic motion, thermal properties of matter, and thermodynamics. This course is the first of a three semester sequence intended for students majoring in physical sciences and engineering.

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

200 ELECTRICITY AND MAGNETISM 5 UNITS

C-ID PHYS 210, 200S

Prerequisite: "C" grade or higher or "Pass" in PHYC 190 or equivalent; "C" grade or higher or "Pass" in MATH 280 or equivalent or concurrent enrollment
Recommended Preparation: Concurrent enrollment in MATH 281

4 hours lecture, 3 hours laboratory

Course focus is on the electric and magnetic behavior of matter. The primary emphasis is on Maxwell's Equations and their applications. This course is part of a three semester sequence intended for students majoring in physical sciences and engineering.

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

210 WAVE MOTION AND MODERN PHYSICS

5 UNITS

C-ID PHYS 215, 200S

Prerequisite: "C" grade or higher or "Pass" in PHYC 190 or equivalent; "C" grade or higher or "Pass" in MATH 281 or equivalent or concurrent enrollment

4 hours lecture, 3 hours laboratory

Course focuses on hydrostatics, hydrodynamics, wave behavior, geometric and physical optics, relativity, light as a particle, matter as a wave, the hydrogen atom and the Schrodinger Equation, electrical conductivity of solids, lasers, and nuclear physics. This course is part of a three semester sequence intended for students majoring in physical sciences and engineering.

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit