PHYSICS (PHY)

PHY-100 Physical Science in Modern Society (formerly Conceptual Physics)
3 Units (LEC 48-54)

This course provides a conceptual introduction to the basic physics and chemistry in the Modern World. Effects of technology on individuals and human society. Examines natural phenomena and human-directed technology encountered in daily life from a physical science perspective. Topics may include: mechanics, electricity and magnetism, optics, sound, quantum and nuclear physics, properties of matter, chemical reactions, atomic theory.

Transfers to both UC/CSU
IGETC Area(s): 5A
CSU Area(s): B1
AA/AS General Education: AA/AS A

PHY-101 Basic Physics: Energy and Motion
4 Units (LBE 48-54, LEC 48-54)

This course facilitates the study of various topics in physics including the kinematics of motion, forces, work and energy, circular motion, fluids, temperature and heat, thermodynamics, waves and sound, while focusing on the student's development of technical problem solving skills, vocabulary and the ability to read and understand scientific literature.

Prerequisite: MATH-105 (with a grade of C or better).
Transfers to both UC/CSU
C-ID: PHY 105
IGETC Area(s): 5A, 5C
CSU Area(s): B1, B3
AA/AS General Education: AA/AS A

PHY-102 Basic Electricity and Modern Physics
4 Units (LBE 48-54, LEC 48-54)

This course facilitates the study of various topics in physics including thermodynamics, electromagnetism, DC circuits, optics and modern physics while focusing on the student's development of technical problem solving skills, vocabulary and the ability to read and understand scientific literature.

Prerequisite: PHY-101 (with a grade of C or better).
Transfers to both UC/CSU
C-ID: PHYS 110
IGETC Area(s): 5A, 5C
CSU Area(s): B1, B3
AA/AS General Education: AA/AS A

PHY-201 Mechanics and Wave Motion
4 Units (LBE 48-54, LEC 48-54)

This course is a calculus-based introduction to classical mechanics of solids and fluids. The main topics covered are kinematics, Newtonian mechanics including translational and rotational statics and dynamics, universal gravitation, work, energy, momentum, fluid statics, dynamics, and oscillations. Experiments in lab examine the basic laws of the mechanics of solids and fluids. Objectives include the use of common measuring instruments, the principles of data taking and analysis, and the writing of scientific reports.

Prerequisite: MATH-211 (with a grade of C or better).
Transfers to both UC/CSU
C-ID: PHYS 205
IGETC Area(s): 5A, 5C
CSU Area(s): B1, B3
AA/AS General Education: AA/AS A

PHY-202 Electricity and Magnetism
4 Units (LBE 48-54, LEC 48-54)

This calculus based course covers topics in thermodynamics, electricity and magnetism including electric fields and potential; Gauss' law, capacitance, magnetic fields, Ampere's law, Faraday's law and induction, electromagnetic oscillations, DC and AC circuits.

Prerequisite: PHY-201 (with a grade of C or better).
Prerequisite/Corequisite: MATH-212 or higher (with a grade of C or better).
Transfers to both UC/CSU
C-ID: PHYS 210
IGETC Area(s): 5A, 5C
CSU Area(s): B1, B3
AA/AS General Education: AA/AS A

PHY-202H Honors Electricity and Magnetism
4 Units (LBE 48-54, LEC 48-54)

This calculus based course covers topics in thermodynamics, electricity and magnetism including electric fields and potential; Gauss' law, capacitance, magnetic fields, Ampere's law, Faraday's law and induction, electromagnetic oscillations, DC and AC circuits.

Prerequisite: PHY-201 (with a grade of C or better)., Acceptance into the Honors Enrichment Program.
Prerequisite/Corequisite: MATH-212 or higher (with a grade of C or better).
Transfers to both UC/CSU
C-ID: PHYS 210
IGETC Area(s): 5A, 5C
CSU Area(s): B1, B3
AA/AS General Education: AA/AS A

PHY-203 Optics and Modern Physics
4 Units (LAB 48-54, LEC 48-54)

This course is a calculus based study of optics and modern physics. Subjects covered include Optics, Relativity, Quantum Physics, Atomic Physics, Nuclear Physics and Particle Physics.

Prerequisite: PHY-201 (with a grade of C or better).
Prerequisite/Corequisite: MATH-213 or higher (with a grade of C or better).
Transfers to both UC/CSU
C-ID: PHYS 215
IGETC Area(s): 5A, 5C
CSU Area(s): B1, B3
AA/AS General Education: AA/AS A

PHY-299 Special Projects: Physics
1-3 Unit (IS 16-54)

Students with previous course work in the program may do special projects that involve research and special study. The actual nature of the project must be determined in consultation with the supervising instructor.

Prerequisite: Two Physics classes must be completed prior to enrollment; a contract must be completed with the instructor prior to enrollment.
Transfers to CSU only