PHYSICS (PHYS)

PHYS 130 C Elementary Physics   **4 Units**
Prerequisite(s): Intermediate Algebra or the equivalent, with a grade of C or better.
Term hours: 54 lecture and 54 laboratory. This is an entry level physics course for all science majors. The course provides an introduction to the basic concepts and laws of physics with emphasis upon their practical importance in everyday life. Laboratory work includes experiments in mechanics, heat, sound, electricity, and optics. This is a general education course in the physical science area. The course is not open for credit to students with previous college physics credit. No UC credit if taken after PHYS 201 C, or PHYS 210 C, or PHYS 221 C. (UC Credit Limitation/CSU, AA GE, CSU GE, IGETC).

PHYS 201 C College Physics I   **4 Units**
Prerequisite(s): MATH 141 C or MATH 141PC and MATH 142 C and PHYS 130 C with a grade of C or better.
Term hours: 54 lecture and 54 laboratory. This course is the first half of an algebra- and trigonometry-based two-semester physics sequence (PHYS 201 C and PHYS 202 C) designed primarily for students planning to major in life sciences, medical/dental fields, architecture, psychology, and similar professional fields. The course covers Newtonian mechanics, conservation laws, rotational dynamics, and properties of matter, heat, and waves. The laboratory portion of the course investigates these topics both qualitatively and quantitatively, and includes the use of graphing, statistics, and propagation of errors. This course satisfies a requirement for biology majors in the CSU system, but not the UC system. (CSU/UC Credit Limitation/AA GE, CSU GE, IGETC, C-ID: PHYS 105 and PHYS 100S = PHYS 201 C + PHYS 202 C)

PHYS 202 C College Physics II   **4 Units**
Prerequisite(s): PHYS 201 C with a grade of C or better.
Term hours: 54 lecture and 54 laboratory. This course is the second half of an algebra- and trigonometry-based two-semester sequence (PHYS 201 C and 202 C) designed primarily for students planning to major in life sciences, medical/dental fields, architecture, psychology, and similar professional fields. This course covers electricity and magnetism, optics, atomic physics, nuclear physics, and special theory of relativity. The laboratory portion of the course investigates these topics both qualitatively and quantitatively, and includes the use of graphing, statistics, and propagation of errors. This course satisfies a requirement for biology majors in the CSU system but not the UC system. (UC Credit Limitation/CSU, CSU GE, IGETC/C-ID: PHYS 100S=PHYS 201 C + PHYS 202 C, PHYS 110)

PHYS 210 C Physics for Life Sciences I   **4 Units**
Prerequisite(s): Completion of or concurrent enrollment in MATH 150AC and PHYS 130 C or High School Physics with minimum grades of C or better.
Term hours: 54 lecture and 54 laboratory. This is the first half of a calculus-based two-semester sequence (PHYS 210 C and 211 C) designed for students majoring in life sciences, medical/dental fields, architecture, psychology, and similar professional fields. This course covers Newtonian mechanics, conservation laws, rotational dynamics, properties of matter, heat and waves. The laboratory portion of the course investigates these topics both qualitatively and quantitatively, and includes the use of graphing, statistics, and propagation of errors. This course satisfies a requirement for biology majors in the UC system; the CSU system will accept either this sequence or PHYS 201 C and 202 C sequence. (CSU/UC Credit Limitation/AA GE, CSU GE, IGETC)

PHYS 211 C Physics for Life Sciences II   **4 Units**
Prerequisite(s): PHYS 210 C with a grade of "C" or better and completion of or concurrent enrollment in MATH 150BC
Term hours: 54 lecture and 54 laboratory. This is the second half of a calculus-based two-semester sequence (PHYS 210 C and 211 C) designed for students majoring in the life sciences. This course covers electricity, magnetism, optics, special relativity, and modern physics. The laboratory portion of the course investigates these topics both qualitatively and quantitatively, and includes the use of graphing, statistics, and propagation of errors. This course satisfies a requirement for biology majors in the UC system; the CSU system will accept either this sequence or PHYS 201 C and 202 C sequence.(CSU/UC Credit Limitation/AA GE, CSU GE, IGETC)

PHYS 221 C General Physics I   **4 Units**
Prerequisite(s): PHYS 130 C with a grade of C or better or high school physics with a grade of A or B and MATH 150AC with a grade of C or better and completion of or concurrent enrollment in MATH 150BC.
Term hours: 54 lecture and 54 laboratory. This is the first course of a three-semester introductory physics program for students majoring in physics, chemistry, geology, engineering (all areas), computer science, mathematics and other related fields. Topics studied include mechanics, properties of matter, and fluids. Problems and derivations require knowledge of differential and integral calculus. (CSU/UC Credit Limitation/AA GE, CSU GE, IGETC/C-ID: PHYS 205)

PHYS 222 C General Physics II   **4 Units**
Prerequisite(s): MATH 150BC and PHYS 221 C with a grade of C or better.
Advisory: MATH 250AC.
Term hours: 54 lecture and 54 laboratory. This course is part of a three-semester program of introductory calculus based physics for students majoring in physics, chemistry, geology, engineering (all specializations), computer science, mathematics and other related fields. Topics covered are basic laws of electricity and magnetism including electrostatics, current, magnetic fields, electromagnetic induction, DC circuits, AC circuits, and electromagnetic waves. Requires knowledge of differential and integral calculus. (CSU/UC Credit Limitation/CSU GE, IGETC/C-ID: PHYS 210)

PHYS 223 C General Physics III   **4 Units**
Prerequisite(s): PHYS 221 C and MATH 150BC, with grades of C or better.
Advisory: MATH 250AC.
Term hours: 54 lecture and 54 laboratory. This course is part of a three-semester program of introductory calculus based physics for students majoring in physics, chemistry, geology, engineering (all areas), mathematics, and other related fields. It may be taken before or after PHYS 222 C. Topics covered include oscillations and waves, thermodynamics and kinetic theory, geometrical and physical optics, special theory of relativity, introduction to quantum mechanics, atomic physics, and nuclear physics. Requires knowledge of differential and integral calculus. (CSU/UC Credit Limitation/CSU GE, IGETC/C-ID: PHYS 215)