PHYSICS

PHYSICS COURSES

PHYS 1A - General Physics I

5 units

Introduction to the principles of Newtonian Mechanics and analytical methods of physics using calculus as needed. Topics covered include vectors, kinematics, forces, energy, momentum, rotation, and gravitation. 72 hours lecture, 54 hours laboratory. AA/AS GE: II. Transfer: CSU, UC*; CSUGE: B1, B3; IGETC: 5A, 5C; C-ID# PHYS 200 S (if taken with PHYS 1B+1C+1D), PHYS 205. ** PHYS 2A, 2B or PHYS 1A, 1B, 1C, 1D combined: maximum UC credit, one series.*

Prerequisite: MATH 1 with a minimum grade of C.

- Credit - Degree Applicable
- Grading Option: Letter Grade

PHYS 1B - General Physics II

5 units

Introduction to fluid dynamics, oscillations, mechanical waves, thermodynamics, light and optics. 72 hours lecture, 54 hours laboratory. AA/AS GE: II. Transfer: CSU,
UC*; CSUGE: B1, B3; IGETC: 5A, 5C; C-ID# PHYS 200 S (if taken with PHYS 1A +1C+1D), PHYS 215 (if taken with PHYS 1D). ** PHYS 2A, 2B or PHYS 1A, 1B, 1C, 1D combined: maximum UC credit, one series.*

Prerequisite: PHYS 1A with a minimum grade of C. MATH 2 with a minimum grade of C.

- Credit - Degree Applicable
- Grading Option: Letter Grade

PHYS 1C - General Physics III

5 units

Introduction to electricity and magnetism, circuits, Maxwell's equations and electromagnetic waves. 72 hours lecture, 54 hours laboratory. AA/AS GE: II. Transfer: CSU, UC*; CSUGE: B1, B3; IGETC: 5A, 5C; C-ID# PHYS 200 S (if taken with PHYS 1A+1B+1D), PHYS 210. ** PHYS 2A, 2B or PHYS 1A, 1B, 1C, 1D combined: maximum UC credit, one series.*

Prerequisite: PHYS 1A with a minimum grade of C. MATH 3 with a minimum grade of C (May be taken concurrently).

- Credit - Degree Applicable
- Grading Option: Letter Grade

PHYS 1D - General Physics IV

3 units

Introduction to relativity and modern physics, including: introduction to quantum theory; atomic, molecular, nuclear and particle physics; condensed matter physics; astrophysics and cosmology. 36 hours lecture, 54 hours laboratory. AA/AS GE: II. Transfer: CSU, UC*; CSUGE: B1, B3; IGETC: 5A, 5C; C-ID# PHYS 200 S (if taken with PHYS 1A+1B+1C), PHYS 215 (if taken with PHYS 1B). ** PHYS 2A, 2B or PHYS 1A, 1B, 1C, 1D combined: maximum UC credit, one series.*

Prerequisite: PHYS 1B with a minimum grade of C and PHYS 1C with a minimum grade of C. MATH 5 with a minimum grade of C (May be taken concurrently).

- Credit - Degree Applicable
- Grading Option: Letter Grade

PHYS 2A - Introduction to Physics I

4 units

Introduction to the major principles of classical mechanics using pre-calculus mathematics. Includes Newtonian mechanics, energy, gravitation, fluids, thermodynamics, oscillations, and waves. 54 hours lecture, 54 hours laboratory. AA/AS GE: II. Transfer: CSU, UC*; CSUGE: B1, B3; IGETC: 5A, 5C; C-ID# PHYS 100 S (if taken with PHYS 2B), PHYS 105. ** PHYS 2A, 2B or PHYS 1A, 1B, 1C, 1D combined: maximum UC credit, one series.*

Prerequisite: MATH 39 with a minimum grade of C.

- Credit - Degree Applicable
- Grading Option: Letter Grade

PHYS 2B - Introduction to Physics II

4 units

This algebra-based course is an introduction to the basic principles of electricity, magnetism, and modern physics. Topics include electrostatics, magnetism, circuits, electromagnetic waves, optics, relativity, atomic physics, and nuclear physics. 54 hours lecture, 54 hours laboratory. AA/AS GE: II. Transfer: CSU, UC*; CSUGE: B1, B3; IGETC: 5A, 5C; C-ID# PHYS 100 S (if taken with PHYS 2A), PHYS 110. ** PHYS 2A, 2B or PHYS 1A, 1B, 1C, 1D combined: maximum UC credit, one series.*

Prerequisite: PHYS 2A with a minimum grade of C.

- Credit - Degree Applicable
- Grading Option: Letter Grade

PHYS 10 - Descriptive Physics

3 units

Motion, gravitation, heat, light, sound, electricity, magnetism, atoms, and nuclei. Present-day scientific problems and developments such as alternative energy sources, solar energy, nuclear power, lasers, relativity and black holes. Designed for non-majors in physical science. 54 hours lecture. AA/AS GE: II. Transfer: CSU, UC*; CSUGE: B1; IGETC: 5A. ** No UC credit for PHYS 10 or 10L if taken after PHYS 1A or 2A.*

Prerequisite: Intermediate Algebra or a higher level of mathematics.

- Credit - Degree Applicable
- Grading Option: Letter Grade

PHYS 10L - Descriptive Physics Laboratory

1 units

Introduction to laboratory principles and techniques with emphasis on the basic concepts of physics such as mechanics, thermodynamics, energy, electricity, magnetism, and optics. 54 hours laboratory. AA/AS GE: II. Transfer: CSU, UC*; CSUGE: B3; IGETC: 5C. ** No UC credit for PHYS 10 or 10L if taken after PHYS 1A or 2A.*

Prerequisite: Intermediate Algebra or a higher level of mathematics. PHYS 10 with a minimum grade of C (May be taken concurrently).

- Credit - Degree Applicable
- Grading Option: Letter Grade

PHYS 29 - Independent Study, Physics

0.5 - 2 units

For course information, see "Independent Study". 27-108 hours lab. 27-108 hours laboratory. Transfer: CSU.

- Credit - Degree Applicable
- Grading Option: Letter Grade