

PHYSICS (PHYS)

PHYS 001A PHYSICS FOR SCIENTISTS AND ENGINEERS I: MECHANICS 5 unit

Transfer Credit: CSU; UC credit limitations. See counselor.

C-ID: PHYS 205; PHYS SEQ 200S (with PHYS 001B, 001C, 001D)

Prerequisite(s): MATH 005A or 005AH

Calculus-based study of classical mechanics, including unit systems, particle kinematics, Newton's laws of motion, work and energy, linear and angular momentum, and rigid-body rotation and equilibrium. Total of 72 hours lecture and 72 hours laboratory.

Grade Mode: Letter Grade, Pass/No-Pass

PHYS 001B GENERAL PHYSICS 5 unit

Transfer Credit: CSU; UC credit limitations. See counselor.

C-ID: PHYS SEQ 200S (with PHYS 001A, 001C, 001D)

Prerequisite(s): PHYS 001A and either MATH 005A or 005AH

Calculus-based study of gravitation, fluid mechanics, oscillations and waves, and thermodynamics. For STEM majors but open to all qualified students. Total of 72 hours lecture and 72 hours laboratory.

Grade Mode: Letter Grade, Pass/No-Pass

PHYS 001C GENERAL PHYSICS 5 unit

Transfer Credit: CSU, UC credit limitations. See counselor.

C-ID: PHYS 210; PHYS SEQ 200S (with PHYS 001A, 001B, 001D)

Prerequisite(s): PHYS 001B and either MATH 005B or 005BH

Calculus-based study of electricity and magnetism, and geometrical and physical optics. Total of 72 hours lecture and 72 hours laboratory. For STEM majors but open to all qualified students.

Grade Mode: Audit, Letter Grade, Pass/No-Pass

PHYS 001D GENERAL PHYSICS 5 unit

Transfer Credit: CSU; UC credit limitations. See counselor.

C-ID: PHYS SEQ 200S (with PHYS 001A, 001B, 001C)

Prerequisite(s): PHYS 001C and MATH 005C

Calculus-based study of introductory modern physics, including the theory of relativity, basic principles of quantum mechanics, elementary atomic, molecular, solid state, nuclear, and particle physics. Total of 72 hours lecture and 72 hours laboratory.

Grade Mode: Audit, Letter Grade, Pass/No-Pass

PHYS 002A GENERAL PHYSICS I: MECHANICS AND THERMAL PHYSICS 4 unit

Transfer Credit: CSU; UC credit limitations. See counselor.

C-ID: PHYS 105; PHYS SEQ 100S (WITH PHYS 002B)

Prerequisite(s): MATH 131 or 150 or placement based on the Math assessment process

Algebra- and trigonometry-based study of classical mechanics and thermal physics. Total of 54 hours lecture and 54 hours laboratory.

Grade Mode: Audit, Letter Grade, Pass/No-Pass

PHYS 002B GENERAL PHYSICS II: ELECTROMAGNETISM, OPTICS, AND MODERN PHYSICS

4 unit

Transfer Credit: CSU; UC credit limitations. See counselor.

C-ID: PHYS 110; PHYS SEQ 100S (WITH PHYS 002A)

Prerequisite(s): PHYS 002A

Algebra- and trigonometry-based study of electricity, magnetism, special relativity, atomic and nuclear physics, and elementary particles. Total of 54 hours lecture and 54 hours laboratory.

Grade Mode: Audit, Letter Grade, Pass/No-Pass

PHYS 008A PHYSICS FOR SCIENTISTS AND ENGINEERS I: MECHANICS 5 unit

Transfer Credit: CSU; UC limitations. See counselor

C-ID: PHYS 205

Prerequisite(s): Enrollment in or completion of MATH 005B or MATH 005BH

Recommended Preparation: PHYS 108

Calculus-based study of classical mechanics, including kinematics, Newton's laws of motion, work and energy, linear and angular momentum, rigid-body rotation and equilibrium, gravitation, and fluids. No credit if taken after PHYS 001A. Total of 72 hours lecture and 72 hours laboratory.

Grade Mode: Letter Grade, Pass/No-Pass

PHYS 008B PHYSICS FOR SCIENTISTS AND ENGINEERS II: WAVES, ELECTRICITY & MAGNETISM 5 unit

Transfer Credit: CSU; UC limitations. See counselor.

C-ID: PHYS 210

Prerequisite(s): 1) PHYS 008A and 2) enrollment in or completion of MATH 005C or MATH 005CH

Calculus-based study of simple harmonic motion, mechanical waves, electricity, and magnetism. No credit if taken after PHYS 001C. Total of 72 hours lecture and 72 hours laboratory.

Grade Mode: Letter Grade, Pass/No-Pass

PHYS 008C PHYSICS FOR SCIENTISTS AND ENGINEERS III: THERMODYNAMICS, OPTICS, AND MODERN PHYSICS 5 unit

Transfer Credit: CSU; UC credit limitations. See counselor

C-ID: PHYS 215; PHYS SEQ 200S (with PHYS 008A, 008B)

Prerequisite(s): 1) PHYS 008B and 2) MATH 005C or MATH 005CH and 3) enrollment in or completion of MATH 055 or MATH 055H

Calculus-based study of thermodynamics, optics, and modern physics. No credit if taken after PHYS 001D. Total of 72 hours lecture and 72 hours laboratory.

Grade Mode: Letter Grade, Pass/No-Pass

PHYS 010 DESCRIPTIVE INTRODUCTION TO PHYSICS**3 unit***Transfer Credit: CSU; UC credit limitations. See counselor.***Prerequisite(s):** MATH 131

Exploration of the basic principles of physics and their applications in modern life with a mostly conceptual approach. No credit if taken after any other college physics. Total of 54 hours lecture.

Grade Mode: Audit, Letter Grade, Pass/No-Pass**PHYS 010L DESCRIPTIVE PHYSICS IN THE LABORATORY****1 unit***Transfer Credit: CSU; UC credit limitations. See counselor.***Prerequisite(s):** Enrollment in or completion of PHYS 010

Laboratory investigations of physical principles with a minimum of mathematical emphasis. Total of 54 hours laboratory.

Grade Mode: Audit, Letter Grade**PHYS 020 INDEPENDENT STUDY****2 unit***Transfer Credit: CSU***Prerequisite(s):** Enrollment in or completion of any college physics course

Faculty-guided student research. Each topic includes library research, design and execution of the experiments and the preparation of a summary research report. Total of 108 hours laboratory.

Grade Mode: Audit, Letter Grade**PHYS 031A CALCULUS-BASED COLLEGE PHYSICS I****5 unit***Transfer Credit: CSU; UC credit limitations. See counselor.***Prerequisite(s):** MATH 005A or MATH 005AH

Classical mechanics and thermal physics with calculus. For life sciences majors but is open to all qualified students. Total of 72 hours lecture and 72 hours laboratory.

Grade Mode: Audit, Letter Grade, Pass/No-Pass**PHYS 031B CALCULUS-BASED COLLEGE PHYSICS II****5 unit***Transfer Credit: CSU; UC credit limitations. See counselor.***Prerequisite(s):** PHYS 031A and either MATH 005B or MATH 005BH**Recommended Preparation:** Enrollment in or completion of MATH 005C or MATH 005CH

Electricity and magnetism, optics, and modern physics. For life sciences majors but is open to all qualified students. Total of 72 hours lecture and 72 hours laboratory.

Grade Mode: Audit, Letter Grade, Pass/No-Pass**PHYS 108 INTRODUCTORY PHYSICS FOR SCIENTISTS AND ENGINEERS****2 unit****Recommended Preparation:** MATH 008 or MATH 009, or equivalent

Introduction to physics with emphasis on conceptual understanding as well as quantitative calculations. For science and engineering majors needing preparation for PHYS 008A, but open to all qualified students. Pass/no pass grading. Total of 36 hours lecture.

Grade Mode: Audit, Pass/No-Pass