

PHYSICAL SCIENCE

Program Purpose: Students who complete Physical Science courses will apply fundamental physical science laws and equations describing physical science phenomena to analyze both quantitatively and qualitatively specific problems in the physical science universe; recognize, comprehend, and apply the similar principles in the various discipline of physical science, and critically evaluate and analyze observations and measurements through the use of accepted scientific methods and report the results in formal papers that conform to the style of modern scientific writing.

The strong emphasis on physical sciences on fundamental concepts and problem solving makes it one of the most versatile majors available. The Physical Science major provides the basis for careers in teaching science at the secondary level, serving as a technical administrator in government and industry, or completing legal work with patents, scientific librarianship, and scientific journalism.

PHSC M01 Principles of Physical Science 3 Units

In-Class Hours: 52.5 lecture

Prerequisites: MATH M03 or MATH M03B

C-ID: PHYS 140 (with PHSC M01L), CHEM 140 (with PHSC M01L)

Introduces facts, principles and laws from physics, chemistry, and astronomy. Includes motion, force, energy, wave motion, electricity and magnetism, light, atomic and nuclear structure, chemical bonding and chemical reactions, solutions, organic chemistry, the solar system and planet Earth.

Grade Modes: Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading

Degree Applicability: Applies to Associate Degree

AA/AS GE: A2

Transfer Credit: CSU, UC

UC Credit Limitations: None

CSU GE-Breadth: B1

IGETC: 5A

PHSC M01L Principles of Physical Science Laboratory 1 Unit

In-Class Hours: 52.5 laboratory

Prerequisites: MATH M03, MATH M03B and PHSC M01 or concurrent enrollment

C-ID: PHYS 140 (with PHSC M01), CHEM 140 (with PHSC M01)

Examines some of the basic phenomena in physics, chemistry, and astronomy. Applies common, modern laboratory instruments, in hands-on experiments. Teaches the principles of data taking, reduction, synthesis, and analysis, in addition to the writing of scientific reports.

Grade Modes: Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading

Degree Applicability: Applies to Associate Degree

AA/AS GE: A2

Transfer Credit: CSU, UC

UC Credit Limitations: None

CSU GE-Breadth: B3

IGETC: 5C

PHSC M80 Internship in Physical Science 1-4 Units

In-Class Hours: 60-240 unpaid cooperative, 75-300 paid cooperative

Prerequisites: Completion of or concurrent enrollment in one course in the discipline and instructor approval

Provides on-the-job learning to develop effective work habits, attitudes, and career awareness in paid or unpaid internships that are related to the discipline. Involves the development and documentation of learning objectives and the completion of an internship paper, presentation, or project. Includes both workplace supervisor and faculty adviser feedback and/or written evaluations. Course Credit Limitation: To take this course, contact the Career Transfer Center. Requires orientation session. Students receive one unit of credit for each 60 hours unpaid or 75 hours paid work. May enroll in up to 4 units a semester with a maximum of 16 total units of any type of work experience.

Grade Modes: Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading

Repeatable for Credit: Course may be taken up to 3 times for credit.

Degree Applicability: Applies to Associate Degree

AA/AS GE: None

Transfer Credit: CSU

UC Credit Limitations: None

CSU GE-Breadth: None

IGETC: None

PHSC M122 Independent Study - Physical Science 0.5-3 Units

Formerly: PHYS M22A

In-Class Hours: 26.25-157.5 laboratory

Prerequisites: Completion of one course in Physical Science and instructor approval

Allows independent study for students who wish to extend their knowledge of a particular area of Physical Science through research and study. Utilizes an approved independent project. Includes one-on-one work with instructor. Interested students should contact a Physical Science instructor for assistance in developing a contract for learning about a specific topic.

Grade Modes: Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading

Degree Applicability: Applies to Associate Degree

AA/AS GE: None

Transfer Credit: CSU

UC Credit Limitations: None

CSU GE-Breadth: None

IGETC: None

Dean

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Faculty

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