

PHOT 225 Photographic Portraiture (3)
 1½ hours lecture - 4½ hours laboratory
Prerequisite: A minimum grade of 'C' in PHOT 130
Transfer acceptability: CSU
 Techniques and styles of photographic portraiture. Studio and non studio applications will be explored using black and white and color films or digital capture. Emphasis on lighting equipment and techniques.

PHOT 296 Special Projects (1, 2, 3)
 3, 6, or 9 hours laboratory
Prerequisite: A minimum grade of 'C' in PHOT 105
Transfer acceptability: CSU
 Requires demonstrated proficiency in photography and the creative ability and initiative to work independently on a particular sustained project which does not fit in the context of regularly scheduled classes. Could include portfolio preparation.

Physical Education

See Kinesiology

Physical Science (PHSC)

Contact the Physics and Engineering Department for further information.
 (760) 744-1150, ext. 2505
 Office: NS-355B

COURSE OFFERINGS

PHSC 100 Introduction to Physical Science (3)
 3 hours lecture
Transfer acceptability: CSU; UC – No credit for students with prior lecture credit in ASTR, CHEM, GEOL or PHYS
 The study of selected topics from the fields of astronomy, geology, physics, chemistry, and their related sciences through lectures, films, and demonstrations. A general education course designed particularly for non science majors. For teacher training see PHSC 101.

PHSC 100L Introduction to Physical Science Laboratory (1)
 3 hours laboratory
Prerequisite: A minimum grade of 'C' in PHSC 100, or concurrent enrollment in PHSC 100
Transfer acceptability: CSU; UC – No credit for students with prior lab credit in ASTR, CHEM, GEOL or PHYS
 The study of selected topics from the fields of astronomy, geology, physics, chemistry, and their related sciences through lab exercises. A general education course designed particularly for non-science majors. For teacher training see PHSC 101L.

PHSC 101 Principles of Physical Science (3)
 3 hours lecture
Transfer acceptability: CSU
 The study of selected topics from the fields of physics and chemistry and their related sciences through lectures, films, and demonstrations. A general education course designed particularly for non science majors. Especially recommended for teacher training.

PHSC 101L Principles of Physical Science Laboratory (1)
 3 hours laboratory
Prerequisite: A minimum grade of 'C' in PHSC 101, or concurrent enrollment in PHSC 101
Transfer acceptability: CSU
 The study of selected topics from the fields of physics and chemistry and their related sciences through lab exercises. A general education course designed particularly for non-science majors; not open to majors in physics, chemistry, or engineering. Especially recommended for teacher training.

Physics (PHYS)

Contact the Physics and Engineering Department for further information.
 (760) 744-1150, ext. 2505
 Office: NS-355B

COURSE OFFERINGS

*UC credit limitations --
 • No credit for PHYS 101 or 102 if taken after 120, 200, or 230
 • PHYS 120, 121 or 200, 201 or 230, 231, 232 combined: maximum credit, one series
 • PHYS 200 and 230 combined: maximum credit, one course
 • PHYS 201 and 231 combined: maximum credit, one course

PHYS 101 Introduction to Physics (4)
 3 hours lecture - 3 hours laboratory
Prerequisite: A minimum grade of 'C' in MATH 50 or one year of high school Algebra
Note: Not open to students with prior credit in PHYS 100, 110, 115, 120, 125, 230, 231, and 232
Transfer acceptability: CSU; UC*
 An introductory survey course in classical and modern physics. Not intended for science majors.

PHYS 102 Introduction to Physics (Lecture) (3)
 3 hours lecture
Prerequisite: A minimum grade of 'C' in MATH 50 or one year of high school Algebra
Note: Not open to students with prior credit in PHYS 101, 110, 115, 120, 125, 230, 231, and 232
Transfer acceptability: CSU; UC*
 An introductory survey course in classical and modern physics. Not intended for science majors.

PHYS 120 General Physics (4)
 3 hours lecture - 3 hours laboratory
Prerequisite: A minimum grade of 'C' in MATH 110
Recommended preparation: MATH 115
Transfer acceptability: CSU; UC*
 C-ID PHYS 105; C-ID PHYS 100S for PHYS 120 and 121 combined
 The fundamental principles of classical mechanics, wave motion, sound, thermodynamics, and fluids.

PHYS 121 General Physics (4)
 3 hours lecture - 3 hours laboratory
Prerequisite: A minimum grade of 'C' in PHYS 120
Transfer acceptability: CSU; UC*
 C-ID PHYS 110; C-ID PHYS 100S for PHYS 120 and 121 combined
 A second semester continuation of PHYS 120. The fundamental principles of optics, electricity, magnetism, and modern physics.

PHYS 130 Preparation for Principles of Physics (3)
 3 hours lecture
Prerequisite: A minimum grade of 'C' in MATH 140, or concurrent enrollment in MATH 140
Transfer acceptability: CSU
 Provides the applied mathematics and problem solving/presentation skills necessary for success in an introductory physics sequence for physics and engineering majors. Students will learn how to analytically solve physics problems and properly prepare laboratory reports. Reinforcement of math concepts will be emphasized throughout.

PHYS 197 Physics Topics (.5-5)
Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture or laboratory may be scheduled by the department. Refer to Class Schedule.

Transfer acceptability: CSU; UC - Credit determined by UC upon review of course syllabus

Topics in Physics. See Class Schedule for specific topic offered. Course title will designate subject covered.

PHYS 200 Fundamentals of Physics (5)
 4 hours lecture - 3 hours laboratory
Prerequisite: A minimum grade of 'C' in MATH 140, or concurrent enrollment in MATH 140

Note: PHYS 200-201 series not recommended for majors in engineering, computer science or physics; PHYS 230 series recommended for majors in engineering, computer science, or physics.

Transfer acceptability: CSU; UC*

A calculus-based course in classical mechanics, waves, sound, fluids and thermodynamics, with an emphasis on life science, pre-professional, and architectural fields.

PHYS 201 Fundamentals of Physics (5)
 4 hours lecture - 3 hours laboratory
Prerequisite: A minimum grade of 'C' in PHYS 200; A minimum grade of 'C' in MATH 141, or concurrent enrollment in MATH 141

Note: PHYS 200-201 series not recommended for majors in engineering, computer science or physics; PHYS 230 series recommended for majors in engineering, computer science, or physics.

Transfer acceptability: CSU; UC*

A calculus-based course in classical electromagnetism, optics and atomic physics, with an emphasis on life science, pre-professional, and architectural fields.

PHYS 230 Principles of Physics (5)
 4 hours lecture - 3 hours laboratory
Prerequisite: A minimum grade of 'C' in MATH 141, or concurrent enrollment in MATH 141

Recommended preparation: PHYS 130

Transfer acceptability: CSU; UC*

C-ID PHYS 205; PHYS 200S for PHYS 230, 231 and 232 combined

Classical mechanics, thermodynamics, and fluid dynamics. Required for students whose major field is physics, chemistry, or engineering. This is the first semester of a three semester sequence.

PHYS 231 Principles of Physics (5)
 4 hours lecture - 3 hours laboratory
Prerequisite: A minimum grade of 'C' in PHYS 230; A minimum grade of 'C' in MATH 205, or concurrent enrollment in MATH 205

Transfer acceptability: CSU; UC*

C-ID PHYS 210; PHYS 200S for PHYS 230, 231 and 232 combined

Classical electromagnetism, electromagnetic waves, and optics. Required for students whose major field is physics, chemistry, or engineering. This is the second semester of a three semester sequence.

PHYS 232 Principles of Physics (4)
 3 hours lecture - 3 hours laboratory
Prerequisite: A minimum grade of 'C' in PHYS 231 or PHYS 201, and MATH 205
Transfer acceptability: CSU; UC*

C-ID PHYS 215; PHYS 200S for PHYS 230, 231 and 232 combined

Modern Physics. Required for students whose major field is physics, chemistry, or engineering. This is the third semester of a three-semester sequence.

PHYS 295 Directed Study in Physics (1, 2, 3)
 3, 6, or 9 hours laboratory

Prerequisite: Approval of project or research by department chairperson

Transfer acceptability: CSU

Designed for the student who has demonstrated a proficiency in physics subjects and the initiative to work independently on a particular sustained project which does not fit into the context of regularly scheduled classes.

Physiology

See Zoology

Political Science (POSC)

Contact the Economics, History and Political Sciences Department for further information.

(760) 744-1150, ext. 2412

Office: MD-375

COURSE OFFERINGS

POSC 100 Introduction to Political Science (3)
 3 hours lecture

Transfer acceptability: CSU; UC

Introduction to the scope and methods of political science; basic political concepts and policies; comparative government institutions, stressing the United States; an overview of political theories, international politics, and political economy.

POSC 101 Introduction to Politics and American Political Institutions (3)
 3 hours lecture

Note: This course plus POSC 102 meets the State requirement in American History and Institutions.

Transfer acceptability: CSU; UC

C-ID POLS 110 for POSC 101 and 102 combined

A study of the development of American political institutions, the basic features of the Constitution, and major court interpretations that affect our lives today. Special attention will be given to evolution of political rights and individual liberties, the electoral process and fundamental concepts of democracy, liberty, diversity, and equality.

POSC 102 Introduction to United States and California Governments (3)
 3 hours lecture

Note: This course plus POSC 101 meets the State requirement in American History and Institutions.

Transfer acceptability: CSU; UC

C-ID POLS 110 for POSC 101 and 102 combined

An examination of the US Constitution as it relates to the major institutions of government: the Congress, the Presidency, and the Supreme Court. It also emphasizes social, economic, and foreign policy so that students will have an understanding of the issues they face in the contemporary era. California history and government, another course component, will be compared and contrasted to the national political system.

POSC 110 Introduction to World Politics (3)
 3 hours lecture

Transfer acceptability: CSU; UC

Sources and uses of power in the arena of international politics. Causes and consequences of 20th century wars. The balance of power, history, geography, military and economic potential will be examined to show their impact on foreign policies of the United States, Europe, Russia, Japan, China and less-developed states. Uses of military force, economic leverage, diplomacy, law, etc., discussed as approaches to limit war.

POSC 120 California Government (1)
 1 hour lecture

Transfer acceptability: CSU

Intended for students who have completed the American History and Institutions requirements for the A.A. Degree or CSU General Education, but have not met the California Constitution requirement. Organization and operation of California state and local government. Stress upon citizen participation in the decision making process.