

PHOT 197A Photography Topics: Field Studies (.5 - 4)
Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture and/or laboratory may be scheduled by the department. Refer to Class Schedule.
Transfer acceptability: CSU
 Topics in Photography, Field Studies. See Class Schedule for specific topic offered. Course title will designate subject covered.

PHOT 197B Photography Topics: Technical Studies (.5 - 4)
Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture and/or laboratory may be scheduled by the department. Refer to Class Schedule.
Transfer acceptability: CSU
 Topics in Photography, Technical Studies. See Class Schedule for specific topic offered. Course title will designate subject covered.

PHOT 197C Photography Topics: General (.5 - 4)
Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture and/or laboratory may be scheduled by the department. Refer to Class Schedule.
Transfer acceptability: CSU
 Topics in Photography, General. See Class Schedule for specific topic offered. Course title will designate subject covered.

PHOT 209 Photographic Portfolio (3)
1½ hours lecture - 4½ hours laboratory
Prerequisite: A minimum grade of 'C' in PHOT 105 or PHOT 130
Transfer acceptability: CSU
 Methods of portfolio design and production, goal setting, market research, resumes, artist statements, cover and inquiry letters and self-promotion for a range of career, scholastic and artistic purposes. Students will be required to employ their developing visual literacy, analytical skills and subjective thought. Field trips and classroom visits by working professionals will be incorporated.

PHOT 210 Advanced Black and White Photography (3)
1½ hours lecture - 4½ hours laboratory
Prerequisite: A minimum grade of 'C' in PHOT 105
Transfer acceptability: CSU; UC
 An exploration of the creative and technical possibilities of the View Camera through various assignments aimed at developing a personal style and approach to the production of quality black and white photography. A study of the relationship between film exposure and development and its application in the "zone system" is stressed.

PHOT 212 Landscape Photography (3)
1½ hours lecture - 4½ hours laboratory
Prerequisite: A minimum grade of 'C' in PHOT 100 or PHOT 120
Transfer acceptability: CSU
 A survey and comparison of past and present landscape photography. An analysis of different philosophies and approaches as it applies to different locations. Usually will require one trip of several days outside of the local area.

PHOT 213 Carbon Printing (3)
1½ hours lecture - 4½ hours laboratory
Prerequisite: A minimum grade of 'C' in PHOT 100 or PHOT 124
Transfer acceptability: CSU
 An exploration of the 19th century carbon photographic process. Students make large negatives from which they produce high-quality hand-made carbon transfer prints.

PHOT 214 Photogravure (3)
1½ hours lecture - 4½ hours laboratory
Prerequisite: A minimum grade of 'C' in PHOT 100 or PHOT 124
Transfer acceptability: CSU
 An introduction to the aesthetics and creation of photogravure intaglio-printed imagery. Historical and contemporary methods will be covered. Non-toxic methods will be stressed. Topics will include digital image preparation, polymer plates, safety, ink, paper, printing and press techniques, presentation, and critique.

PHOT 215 Creative Photography (3)
1½ hours lecture - 4½ hours laboratory
Prerequisite: A minimum grade of 'C' in PHOT 100
Transfer acceptability: CSU; UC
 Exploration of photography as an art form using both conventional and non conventional silver and non silver processes to permit broad variations and approaches to photographic expression.

PHOT 216 Alternative Photographic Processes (3)
1½ hours lecture - 4½ hours laboratory
Prerequisite: A minimum grade of 'C' in PHOT 105, or concurrent enrollment in PHOT 105
Transfer acceptability: CSU
 A practical, hands-on survey of historical alternatives and contemporary variations to the modern standard photographic process. Silver, Ferric, Dichromate, and Photomechanical possibilities for self expression will be explored. Typical processes learned will include Van Dyke, Cyanotype, Platinum and Palladium Kallitype, Bromoil, and gum printing.

PHOT 220 Commercial Photography (3)
1½ hours lecture - 4½ hours laboratory
Prerequisite: A minimum grade of 'C' in PHOT 130
Transfer acceptability: CSU
 Considerations of professional technical fundamentals in lighting, camera systems, digital workflow and management as applied in studio and location photography for commercial, advertising, and promotional purposes.

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.