

PALOMAR COLLEGE
COURSE OUTLINE OF RECORD FOR
DEGREE CREDIT COURSE

 X Transfer Course X A.A. Degree applicable course
(check all that apply)

COURSE NUMBER AND TITLE: PHSC 100L Introduction to Physical Science Lab

UNIT VALUE: 1

MINIMUM NUMBER OF SEMESTER HOURS: 48

BASIC SKILLS REQUIREMENTS: Appropriate language and computational skills

ENTRANCE REQUIREMENTS

PREREQUISITE: Completion of, or concurrent enrollment in, PHSC 100

COREQUISITE: None

RECOMMENDED PREPARATION: None

SCOPE OF COURSE:

The study of selected topics from the fields of matter and energy, and their related sciences. A general education course designed particularly for non-science majors; not open to majors in physics, chemistry, or engineering. Especially recommended for elementary school teacher training. CSU; UC (*Credit limitations for students with prior credit in ASTR, CHEM, GEOL, or PHYS*)

SPECIFIC COURSE OBJECTIVES:

The successful student will:

1. Demonstrate a conceptual understanding of introductory physical science (Matter and Energy).
2. Identify, analyze, and explain various physical science concepts and principles related to Matter and Energy.
3. Apply the various physical science concepts and principles through observing demonstrations including multimedia.
4. Analyze and solve selected physical science problems.
5. Develop critical thinking skills through the study of physical science.

CONTENT IN TERMS OF SPECIFIC BODY OF KNOWLEDGE:

Selected experiments dealing with the following subject matter:

- I. MATTER:
 - A. Basic chemistry concepts
 - B. Periodic table
 - C. Chemical interactions or reactions

Additional topics may be included:

- D. Rocks and Minerals
- E. Surface processes
- F. Earth's structure and history

II. ENERGY

- A. Motion and Newton's law
- B. Momentum and energy
- C. Gravity and satellite motion
- D. Fluid mechanics
- E. Thermal energy and thermodynamics
- F. Electricity and magnetism
- G. Sound waves
- H. Light and its properties
- I. Atomic and nuclear structure

Additional topics may be included:

- J. Weather system
- K. Solar system
- L. Stars and galaxies
- M. The universe

REQUIRED READING:

Shipman, James T., Jerry D. Wilson, and Aaron W. Todd. An Introduction to Physical Science. 9th Ed.

Boston: Houghton Mifflin Company, 2000.

SUGGESTED READING:

Articles from science periodicals or other sources as recommended by the instructor.

REQUIRED WRITING:

Written lab reports and/or quantitative answers for assigned work and/or quizzes may be required.

OUTSIDE ASSIGNMENTS:

Students are expected to spend a minimum of three hours per unit per week in class and on outside assignments, prorated for short-term classes.

Preparation may include such activities as readings in assigned text, review of lecture material, solving assigned problems, answering assigned questions, and preparing for lab experiments.

INSTRUCTIONAL METHODOLOGY:

Check all that apply:

- lecture
- laboratory
- lecture-laboratory combination
- directed study

DISTANCE LEARNING:

This course may be offered as a distance learning course and meets Title 5 regulations 55370, 55372, 55374, 55376, 55378, and 55380.

Yes No

If yes, check all that apply:

- Television Course (Video one-way, e.g. ITV, video cassette, etc.)
- Online Course (Text one-way, e.g. newspaper, correspondence, electronic file, etc.)
- Two-Way Video Conferencing (Two-way interactive video and audio)
- One-Way Video Conferencing (One-way interactive video and two-way interactive audio)
- Computer Assisted Instruction (A specialized form of mediated instruction relying primarily on student access to information and prepared lessons or teaching materials through a computer terminal, but not under immediate supervision of a qualified instructor.)

GRADING POLICY AND STANDARDS (include methods of determining whether the stated objectives have been met by students):

Lab reports	50 - 100%
Lab Quizzes	0 - 50%

IS COURSE REPEATABLE FOR REASON(S) OTHER THAN DEFICIENT GRADE?

Yes No Number of times course may be taken for credit: 1

If yes, identify specific provision of Title 5 Division 2 section(s), 55761-55763 and 58161 which qualifies course as repeatable:

CONTACT PERSON: Takashi Nakajima

SIGNATURES ON FILE