

**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 100 – Introduction to Physical Science

**UNIT VALUE:** 3

**MINIMUM NUMBER OF SEMESTER HOURS:** 48

**BASIC SKILLS REQUIREMENTS:** Appropriate language and computational skills

**ENTRANCE REQUIREMENTS**

**PREREQUISITE:** None

**COREQUISITE:** None

**RECOMMENDED PREPARATION:** None

**SCOPE OF COURSE:**

The study of selected topics from the fields of astronomy, geology, physics, chemistry, 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 teacher training.

**SPECIFIC COURSE OBJECTIVES:**

The successful student will be able to:

1. Demonstrate a general conceptual understanding of introductory physical science (physics, chemistry, geology, and astronomy) which is intended for students who are not majoring in science, engineering, or related fields.
2. Identify, analyze, and explain various physical science concepts and principles.
3. Apply the various physical science concepts and principles.
4. Analyze and solve selected physical science principles.
5. Develop critical thinking skills.

**CONTENT IN TERMS OF SPECIFIC BODY OF KNOWLEDGE:**

I. PHYSICS:

- 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

II. CHEMISTRY:

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  - A. Basic chemistry concepts
  - B. Periodic table
  - C. Chemistry interactions or reactions
- III. GEOLOGY:
  - A. Rocks and minerals
  - B. Surface processes
  - C. Earth's structure and history
- IV. ASTRONOMY:
  - A. Solar system
  - B. Stars and galaxies
  - C. The universe

Additional topics may be included at the instructor's discretion.

**REQUIRED READING:**

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

Boston: Houghton Mifflin Company, 2000.

**SUGGESTED READING:**

Hewitt, Paul, John Suchocki, and Leslie A. Hewitt. Practicing Conceptual Physical Science. New York:

Harper Collins, 1994.

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 X

**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):

Homework assignments	0 - 20%
Exams	50 - 75%
Final exam	20 - 40%

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

Yes \_\_\_ No X 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