

PALOMAR COLLEGE
COURSE OUTLINE OF RECORD FOR
DEGREE CREDIT COURSE

X Transfer course X A.A. degree applicable course

COURSE NUMBER AND TITLE: Earth Sciences 100
The Earth as a System: Case Studies of Change in
Space and Time

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:

An overview of current topics in the fields of astronomy, geography, geology and oceanography that emphasize change in space and time for Earth as a system. Topics include ~~(but are not limited to)~~ plate tectonics, earthquakes, volcanoes, coastal erosion, extinction of the dinosaurs, severe weather, climate change, pollution, flooding, the big bang theory, life and death of stars, recent discoveries by the Hubble Space Telescope, and extraterrestrial life.

SPECIFIC COURSE OBJECTIVES:

The course objectives will depend on the specific topics covered. A set of objectives will be developed for each topic class and included in an outline developed by the instructors who will team-teach the course.

CONTENT IN TERMS OF SPECIFIC BODY OF KNOWLEDGE:

The content will vary with each topic covered and will be detailed in the outline. Below is an example sequence:

- 1 Introduction, map locations, the scientific method, Earth structure
- 2 Plate tectonics
- 3 Volcanoes
- 4 Faults and earthquakes
- 5 Sea cliff erosion
- 6 The K-T extinction (forum by all instructors)
- 7 Pollution (ground water, surface water, atmosphere)
- 8 Climate change (natural and anthropogenic)
- 9 Vegetation change (natural and anthropogenic)
- 10 Severe weather (hurricanes & tornadoes)

- 11 Case study on flooding (causes and human response)
- 12 Life and death of stars: white dwarfs, neutron stars, supernovae
- 13 Theory of relativity, black holes
- 14 Galaxies and the large scale structure of the universe
- 15 The origin of the universe, the big bang theory
- 16 Extraterrestrial life

REQUIRED READING:

Tarback, Edward J., and Frederick K. Lutgens. Earth Science. Upper Saddle River, NJ: Prentice-Hall Publishers, 1997.

SUGGESTED READING:

Various articles in current journals and Internet readings will be assigned.

REQUIRED WRITING:

A poster session will be required for the successful completion of the course. This entails selecting a topic that relates to class discussion, researching that topic, and presenting the information in a poster format.

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.

- Required and suggested readings as indicated above.
- Review of class notes and preparation for exams.
- Reading and preparation of the required written assignment.

INSTRUCTIONAL METHODOLOGY:

Check all that apply:

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

This course may be offered as a distance education course and meets Title 5 regulations 55370, 55372, 55374, 55376, 55378, and 55380. Yes No

If yes, check all that apply. (See guidelines for preparation for definitions.)

- telecourse
- mediated instruction
- computer assisted instruction

Lecture will be supplemented with discussion, films, slides, and demonstrations.

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

Test #1	=	50 points
Test #2	=	50 points
Test #3 (Final exam)	=	50 points
Poster Assignment	=	<u>100</u> points

TOTAL = 250 points

Tests will test cover information presented in each of the 3 units (geology/oceanography, geography, astronomy) and include critical thinking skills and the application of the scientific method.

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:

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SIGNATURES ON FILE