

PALOMAR COLLEGE
COURSE OUTLINE OF RECORD FOR
DEGREE CREDIT COURSE

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

COURSE NUMBER AND TITLE: BIOL 131- Marine Biology Lecture

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 introduction to marine biology with an emphasis on the adaptations, classification and ecology of marine organisms as well as current issues in marine biology. *Not open to students with prior credit in BIOL 130.* CSU; UC*

SPECIFIC COURSE OBJECTIVES:

Upon successful completion of this course, the student will be able to:

1. Explain the scientific method and the importance and application it has to marine biology;
2. Describe the ocean environment in terms of geology, geography, chemistry, and water movement;
3. Apply principles of taxonomy to marine life forms;
4. Identify major taxonomic groups living in the ocean;
5. Explain how marine ecosystems function;
6. Describe the major ecosystems of the ocean in terms of physical and biological characteristics;
7. Analyze the marine environment and marine species' adaptations to the most important environmental parameters;
8. Demonstrate an understanding of current global concerns and issues in the field of marine biology;
9. Progress to advanced studies in marine biology and professions in the marine sciences;
10. Analyze and identify preserved and live marine plants and animals;
11. Observe, analyze, and recognize the marine ecological communities of Southern California.

CONTENT IN TERMS OF SPECIFIC BODY OF KNOWLEDGE:

- I. Scientific Method
- II. The Ocean Environment
 - A. Ocean Geology
 - B. Ocean Geography
 - C. Water Chemistry
 - D. Surface Currents & Waves
 - E. Tides & Deep Water Currents
- III. Evolution and Taxonomy of Marine Organisms
 - A. Protista, Fungi & Plantae
 - B. Invertebrates
 - C. Fish
 - D. Marine Reptiles and Birds
 - E. Marine Mammals
- IV. Marine Ecology
 - A. Rocky Shores & Sandy Shores
 - B. Estuaries & Mangroves
 - C. Kelp Forests
 - D. Coral Reefs
 - E. Epipelagic, Mesopelagic & Deep Sea
 - F. Hydrothermal Vents
- V. Human Impacts on the Marine Environment
 - A. Fisheries
 - B. Pollution
 - C. Introduced Species

REQUIRED READING:

Castro, P and M. Huber. Marine Biology. 3rd Edition. Dubuque, IA: McGraw-Hill Publishing 2000.

OR

Sumich, J. Introduction to the Biology of Marine Life. 7th Edition. Dubuque, IA: McGraw-Hill Publishing 1999.

OR

Nybakken, J. Marine Biology. 5th Edition. San Francisco, CA: Benjamin Cummings Publishing 2001.

Various independent readings may also be required by the instructor.

SUGGESTED READING:

Extensive reference material is available in the library to supplement course presentations and required text readings.

REQUIRED WRITING:

Writing assignments may include review of articles and audio visual materials, analysis of data, a poster presentation of an appropriate marine biological topic and other assignments. Writings for the semester will total a minimum of ten pages.

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. Outside assignments include studying lecture notes, writing assignments, reading text, preparation for examinations, and preparing a poster assignment.

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):

Evaluation of students may include quizzes, examinations, laboratory reports, and other assignments, such as oral and written reports. At least 70% of the grade is determined by examinations and up to 30% by other assignments.

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: Elizabeth Lowe x2874

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