Number: BIOL G104  
TITLE: Marine Life

ORIGINATOR: Deborah Birnie  
EFF TERM: Fall 2011

FORMERLY KNOWN AS:
DATE OF OUTLINE/REVIEW: 12-09-2008

CROSS LISTED COURSE:  
TOP NO: 0401.00

SEMESTER UNITS: 3.0  
HRS LEC: 54.0  
HRS LAB: 0.0  
HRS OTHER: 0.0  
CONTACT HRS TOTAL: 54.0  
STUDY NON-CONTACT HRS RECOMMENDED: 108.0

CATALOG DESCRIPTION:
This course examines the marine environment, interaction of species, populations and communities, including geology of ocean basins, physical and chemical characteristics of the ocean basins. A survey of marine plants and animals through invertebrates, fish, reptiles, birds and mammals. The renewable and nonrenewable resources from the ocean realm. The influence of humans on the health of the environment. Current issues—including the concepts of: (global warming, types of pollution and the consequences thereof, greenhouse effects, and fisheries management)

JUSTIFICATION FOR COURSE:

PREREQUISITES:

COREQUISITES:

ADVISORIES:

ASSIGNED DISCIPLINES:
  Biological sciences
  Earth science

MATERIAL FEE: Yes [ ] No [X] Amount: $0.00

CREDIT STATUS: Noncredit [ ] Credit - Degree Applicable [X] Credit - Not Degree Applicable [ ]

GRADING POLICY: Pass/No Pass [ ] Standard Letter [X] Not Graded [ ] Satisfactory Progress [ ]

OPEN ENTRY/OPEN EXIT: Yes [ ] No [X]

TRANSFER STATUS: CSU Transferable[ ] UC/CSU Transferable[X] Not Transferable[ ]

BASIC SKILLS STATUS: Yes [ ] No [X]  
LEVELS BELOW TRANSFER: Not Applicable

CALIFORNIA CLASSIFICATION CODES: Y - Not Applicable

NON CREDIT COURSE CATEGORY: Y - Not applicable, Credit Course

OCCUPATIONAL (SAM) CODE: E

REPEATABLE ACCORDING TO STATE GUIDELINES: No [X]  
NUMBER REPEATS:

REQUIRED FOR DEGREE OR CERTIFICATE: No [ ] Yes [X]

Liberal Arts: Emphasis in Science(Associate in Arts)

GE AND TRANSFER REQUIREMENTS MET:

IGETC Area 5: Physical and Biological Sciences
  5B: Biological Science
    x
  x

CSU GE Area B: Scientific Inquiry and Quantitative Reasoning
COURSE LEVEL STUDENT LEARNING OUTCOME(S) Supported by this course:

1. Explain the physical and chemical properties of the oceans as they affect life in the sea.
2. Identify the ocean realms.
3. Recognize the organisms found in each ocean realm.

COURSE OBJECTIVES:

1. explain the physical and chemical properties of the oceans as they affect life in the sea.
2. describe the many types of life found in the sea, including plants, invertebrates, fishes, reptiles, birds and mammals.
3. explain the distribution patterns (intertidal through pelagic realms) of the various life forms in the sea.
4. describe and explain the effects of the various oceanic environments on the organisms of the sea.
5. describe the influence of humans on the chemical, physical and biological make-up of the world’s oceans.
6. demonstrate understanding of the biota of the sea, including planktonic forms, benthic organisms and pelagic forms.
7. describe, either orally or in written format, the patterns of distribution of marine life, particularly within the Southern California area.
8. describe the ways in which marine biological investigations are conducted.

COURSE CONTENT:

LECTURE CONTENT:

1. The geological, chemical and physical factors in the sea
2. The unity and evolution of undersea life
3. The world of marine plants
4. The basis for our animal classification system
5. A survey of invertebrate animals
6. Introduction to marine vertebrates
7. Marine vertebrates: the fishes
8. Marine vertebrates: reptiles and birds
9. Marine vertebrates: mammals
10. Introduction to ecological principles
11. The pelagic environment
12. Ocean Depths
13. Estuarine communities
14. The biology of sand beaches and dunes
15. The ecology of rocky shores
16. The ecology of coral reefs
17. The ecology of the benthos
18. Resources from the sea
19. Human influence on the oceans
20. Current issues (global warming, aspects of pollution, greenhouse gases, etc.)
METHODS OF INSTRUCTION:

A. Lecture:
B. Video One Way – Audio Two Way:
C. Other simultaneous interactive:
D. Independent Study:

INSTRUCTIONAL TECHNIQUES:

COURSE ASSIGNMENTS:

Out-of-class Assignments

Outside reports and projects are assigned to individual students as part of the coursework. Topic outline required for approval by instructor.

Reading Assignments

A. Required Reading such as:

Marine Biology, Castro and Huber, 4th edition 2005

Writing Assignments

Short-answer quizzes are given irregularly, testing knowledge as well as problem solving proficiency. These are written cause and effect relationships that are constantly made in this course, as well as practice in assessing rates and causes of change with time in annual, seasonal and geological periods.

METHODS OF STUDENT EVALUATION:

Midterm Exam
Final Exam
Short Quizzes
Essay Examinations
Objective Examinations
Report
Projects (ind/group)
Problem Solving Exercises

Demonstration of Critical Thinking:

Each question in each of the six one-hour exams and one final exam is validated and rewritten until it tests reliably for the specific learning level for which it is designed. Practice problems and questions are given for each unit of work as additional homework.

Required Writing, Problem Solving, Skills Demonstration:

Short-answer quizzes are given irregularly, testing knowledge as well as problem solving proficiency. These are written cause and effect relationships that are constantly made in this course, as well as practice in assessing rates and causes of change with time in annual, seasonal and geological periods.

TEXTS, READINGS, AND RESOURCES:

TextBooks:


Other:

1. Course syllabus (handout) and scantrons (for exam).
2. Accessory handouts for individual units.

LIBRARY:

Adequate library resources include:

Comments: