Introduction to Marine Biology

Course Description

Introduces students to the field of marine biology in a broad sense, including geological, physical, chemical, and biological aspects, with an emphasis on the ecology of the marine environment. Describes the organization of marine communities and the factors that regulate their functioning. Uses tropical marine communities as the primary focus for both comparison with other systems and for the laboratory and field component of this course.

Course prepared by: Harris

Math Science Department

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<tr>
<th>Hours per Week</th>
<th>Number of Weeks</th>
<th>Total Hours</th>
<th>Credits</th>
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<tr>
<td>Lecture</td>
<td>3</td>
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<td>Laboratory</td>
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<td>16</td>
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<td>Clinical</td>
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<td>Seminar</td>
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Total Credit Hours: 4

Purpose of Course: Degree Requirement

Degree Elective: x
Certification: 
Developmental: 
Other: 

Prerequisite(s): MATH 095

Signature, Curriculum & Assessment Committee Chairperson: 
Date: 2-23-09

Signature, Dean of Academic Affairs: 
Date: 12/23/09

Signature, Vice President for Academic and Student Affairs: 
Date: 12/23/09

Last Date reviewed or revised: Oct. 2008
I. Introduction to Marine Biology

Course Title

I. Course Objectives
   A. General Outcomes

   Students who complete this course will:
   1. Understand the general elements of physical, chemical, and biological science that is the study of marine science (GE 1, 4) (LA 1, 4, 6)
   2. Be familiar with the ways that marine life is particularly vulnerable to human activities (GE 1, 4) (LA 1, 4, 6)

II. Specific Learning Objectives

   Upon completion of this course, the successful student will be able to:
   1. Analyze the general elements of physical, chemical, and biological science that is the study of marine science
      a. Use the scientific method to plan a natural science experiment
      b. Classify marine invertebrates and their ecological roles
      c. Identify the major physical conditions that influence living creatures
      d. Describe the geological and oceanic circulations processes that lead to coral reef formation
      e. Identify chemical and physical properties of seawater
      f. Identify and describe different groups of marine vertebrates and their lifestyles
   2. Analyze the effects of human activities on marine life
      a. Explain the human impact from fishing and over-fishing on bony and cartilaginous fish
      b. Describe the importance of marine resources and the impacts of the use of those resources to human societies
      c. Explain the causes of global climate change and its effects on the planet

III. Course Content

   This course introduces the student to the basics of marine biology including geological, physical, chemical, and biological aspects, with an emphasis on the ecology of the marine environment.

   1. Introduction to water physics and chemistry
   2. Plate tectonics and the geology of ocean basins
   3. Introduction to oceanography and atmospheric physics
   4. Introduction to chemistry of life and molecular biology
   5. Marine biodiversity, from plankton to nekton
   6. Marine ecology, with focus in coral reefs
   7. Marine mammals
   8. Environmental issues of the sea
   9. Climate change and the future of marine ecosystems

IV. Methods of Instruction

   1. Lecture
   2. Laboratory, including field trips
   3. Small groups
V. Equipment and Materials

1. VCR/DVD
2. Computers
3. LCD projector
4. Snorkel gear

VI. Suggested Methods of Evaluation

1. Exams
2. Written lab reports
3. Individual or group project

Letter grades will be assigned per CMI Grading System.
# Course History Summary

**Course Number:** SCI 135  
*Introduction to Marine Science (4 cr)*

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