

CATALOG INFORMATION

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Dept & Nbr: BIO 241 Title: MARINE BIOLOGY

Full Title: Marine Biology

Units	Course Hours	Per Week	Nbr of Weeks	Course Hours	Total
Max: 4.0	Lecture	3.0	17	Lecture	51.0
Min: 4.0	Lab	3.0		Lab	51.0
	Contact DHR	0.0		Contact DHR	0.0
	Contact Total	6.0		Contact Total	102.0
	Non-contact DHR	0.0		Non-contact DHR	0.0

Title 5 Category: 01 AA Degree Applic
Grading: GC Credit course for grade or CR/NC
Repeatability: 00 No repeatability allowed or defined
Also listed as:

CATALOG DESCRIPTION:

Introduction to biological oceanography, natural history, taxonomy, and ecology of major plant and animal groups of the Northern California coast.

PREREQUISITES:

COREQUISITES:

RECOMMENDED PREPARATION:

No advisories.

LIMITS ON ENROLLMENT:

SCHEDULE OF CLASSES INFORMATION:

Learn about the animals and plants that live in the ocean. Includes several field trips to ocean study sites. (Grade or CR/NC)
Transfer Credit: CSU; UC.

ARTICULATION and CERTIFICATE INFORMATION

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ASSOCIATE DEGREE:		Effective: FALL	1981	Inactive:
Area:	A	NATURAL SCIENCES		
CSU GE:		Effective: FALL	1981	Inactive:
Transfer area:	B2	LIFE SCIENCE		
	B3	LAB ACTIVITY		
IGETC:		Effective: FALL	1981	Inactive:
Transfer area:	5B	BIOLOGICAL SCIENCES		

CSU TRANSFER: TRANSFERABLE Effective: FALL 1981 Inactive:

UC TRANSFER: TRANSFERABLE Effective: FALL 1981 Inactive:

CAN:

CERTIFICATE APPLICABLE: C CERTIFICATE APPLICABLE COURSE

APPROVAL AND DATES

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Version 01 Submitted by: ALAN WEST Date: 09/13/1994
 Department approved: Date:
 Curriculum approved: 09/13/1994 Version approved: 09/13/1994
 Prerequisites approved: Last reviewed: 09/13/1994
 Term effective: FALL 1995 Last taught: SPRING 2008 Inactive:

COURSE CONTENT

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OUTCOME AND OBJECTIVES:

1. Become familiar with marine organisms of importance that are studied in laboratory and field situations.
2. Develop a broad understanding of the fundamental principles of marine life.
3. Develop an understanding of critical environmental issues important to ocean ecosystems.
4. Develop critical thinking skills by using the scientific method of problem solving.

TOPICS AND SCOPE:

Lecture

1. The World's Oceans
2. Chemical Properties of Sea Water
 - a. Water
 - b. Salinity
 - c. Ratio of oxygen to carbon dioxide
 - d. Heat
3. Geological Features
 - a. Bathymetry
 - b. Continental shelf
 - c. MOR
 - d. Trenches
 - e. Plate tectonics
4. Physical Processes of the Ocean
 - a. Waves and beaches
 - b. Currents
 - c. Upwelling
 - d. Thermoclines
5. Major Marine Taxonomy
 - a. Divisions
 - b. Phyla
6. Macrophytes
 - a. I.D.
 - b. Biology
 - c. Ecological importance

7. Primary Production
 - a. Photic zone
 - b. Compensation depth
 - c. Blooms
8. Zooplankton
 - a. Meroplankton
 - b. Holoplankton
9. Nekton
 - a. Shark biology/ecology
 - b. Fish biology/ecology
 - c. Marine mammal biology/ecology
10. Special Marine Habitats
 - a. Intertidal
 - b. Estuaries
 - c. Coral reefs
 - d. Polar seas
11. Migrations
 - a. Whales
 - b. Turtles
 - c. Fish
12. Resources from the Ocean
 - a. Fishing
 - b. Mariculture
13. Pollution
 - a. Direct
 - b. Indirect

Laboratory

1. Plankton Collection/Analysis
2. Marine Intertidal Survey
3. Fouling Organisms
4. Marsh Observation
5. Estuary Sampling
6. Marine Laboratory Tour
7. Marine Mammal Biology
8. Marine Mammal Training
9. Common Marine Birds
10. Marine Animal/Plant Reproduction
11. Coastal Lighthouse History
12. Three Field Trips

ASSIGNMENTS:

ASSIGNMENTS

READING ASSIGNMENTS:

Students will be required to read and study assigned chapters in the textbook and field guide and read at least five articles from an approved list of periodicals. Examples of appropriate recommended reading are: Scientific American; Science; and Oceanus.

WRITING ASSIGNMENTS:

Students are required to write a field research book, which records their field experiences and analysis.

OUTSIDE ASSIGNMENTS:

Four hours of independent work must be completed outside of class each week. This work includes studying lecture discussions, reviewing

and writing about field experiences, answering questions presented in class, and preparing for upcoming field research activities.

ASSIGNMENTS THAT DEMONSTRATE CRITICAL THINKING:

A field laboratory course by its very nature requires critical thinking on the part of the student. Students must analyze field research results and compile a well-organized scientific research book to record and discuss their conclusions.

METHOD OF INSTRUCTION:

Lecture, slide presentations, films, overnight field trips, reading assignments and class discussions.

METHODS OF EVALUATION:

1. The total grade for the semester will be comprised of 3/5 for the lecture and 2/5 from the laboratory. 2. The lecture grade will be based on at least four exams including final with the total score being the cumulative total of each score. Each exam will have equal weighting. 3. The laboratory grade will be based on at least two major field research projects and the evaluation of an extensive laboratory research book.

BASIS FOR GRADING:

The assignment of a grade is based on the level of achievement of the outcomes and objectives of the course outline and is reflected in quantifiable terms in the course syllabus.

REPRESENTATIVE TEXTBOOKS:

Lecture: An Introduction to the Biology of Marine Life, Sumich

Laboratory: The Naturalist's Seashore Guide, Brusca

RATIONALE

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RESOURCES REQUIRED

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MISCELLANEOUS

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Advisory generate desc:	N	NO
Area department:	BIO	BIOLOGICAL SCIENCES
Audit flag:	N	NOT AUDITABLE
Basic skills:	X	NOT BASIC SKILLS
Classification:	A	Liberal Arts and Sciences
Cost level:	01	
Disciplines:		BIOLOGICAL SCIENCES
Division:	02	MERIDITH RANDALL
Faculty service areas:		BIOLOGY
Fee:	\$0.00	
In-service:	X	NOT IN-SERVICE
Level below transfer:	X	NOT APPLICABLE
Matric-requiring:	X	Exempt from assessment
Maximum class size:	0	
Maximum wait list:	0	
Method of instruction:	03	LECTURE/LABORATORY
Non-credit category:	X	NOT APPLICABLE, CREDIT COURSE
Open entry/exit:	N	Not open entry/exit
Pacs activity:	0401	BIOLOGY GENERAL
Pacs program project:	0000	
Preq/coreq generate desc:	N	NO
Preq/coreq provisional:	N	NO
Preq/coreq reg check:	N	NO PREREQUISITE RULES EXIST
Repeat group id:		
Requires instructor sig:	N	INSTRUCTOR'S SIGNATURE NOT REQUIRED
SAM classification:	E	Non-occupational
Selected/special topic:	N	NOT A SELECTED TOPIC COURSE
Special class:	X	NOT A SPECIAL COURSE
TOP code:	0401.00	BIOLOGY, GENERAL
Workload:	0.0000	