Bio. 11501-Intro to Marine- Bio Lec.- Fall 2000
MWF 11-11:50, 3 semester credits,. H 17 Augu
Bio. 115L01-Intro to Marine Bio Lab. December 14, 2000
W 2-4:50, 1 semester credit, H 8- Instru r
Chaminade Univerity of Honolulu Ronald M. Iwamoto

COURSE OUTLINE AND! SYLLABU

Text:

Nybakken, James W. 1997 (4th ed.) Marine Biology: An Ecological Approach. Harper Collins, N.Y., N.Y.

2. There is no laboratory manual that needs to be purchased. Hand-outs will be given for each lab.

COURSE OBJECTIVES: The course is designed to fulfill the following objectives:

1. To present the basic facts, concepts, and principles of marine biology;

2. To examine marine organisms and ecosytems or habitats, especially intertidal and coral reef ecosystems.

3. To provide the student with information of a practical nature about marine organisms and their habitats, such as products from organisms and and identification of venomous or toxic marine organisms and remedies for them; and

4. To discuss current topics relating marine biology to other fields, such as history, economics, and social sciences. Thus, topics including ocean thermal energy conversion, fisheries and/or mariculture, whaling, and foods from the sea in health and welfare will be examined.

STUDENT *OBJECTIVES*: At the completion of the course, the student will be able to:

Identify marine ecosystems or habitats and present characteristics of the ecosystems, including those visited on lab field trips (lecture and lab);

2. Give examples of plants and animals of marine ecosystems (lecture and lab);

3. Give examples of applied marine biology, such as products from organisms, identification of venomous organisms and remedies for the venoms;

4. Explain a current topic in marine biology, such as food from marine extracts and medication from marine organisms;

5. Explain the relationship between marine biology and other disciplines, such as law (of the sea) and marine biology.

6. Use a microscope to examine marine specimens (lab.); and

7. Give an example of Hawaiian endemic (found only in Hawaii) marine plant or animal (lab).

Lectures are MWF 11-1.:50 for approximately weeks. Lecture topics are listed on a separate outline together with text assignments.

Topics and assignments may be altered during the semester. borator es are W 2-4:50 for a oximately 3= hours for 15 ; eks == aborator = = o s and assignments, like those for lecture, are listed on a separate outline. Please prepare assignments prior to attendance at laboratories. Topics and assignments may be altered, especially' with respect to weather d tides. Several labs will be in the field and entail travel to sites.

GRADE DETERMINATION:

1. Separate grades wil be given for lecture and laboratory. It is possible to receive different grades for lecture and laboratory.

2. Quizzes, announced and unannounced, will be given in lecture. At the end of the semester, the student may substitute the total quiz score, based on 1008, for one of the lecture exams, but not the final exam.

3. Each student will submit 5 summaries of current events in the marine biology field. Each summary will be worth 10 points and the instructions and requirements for the written summaries are given on a separate page. Summaries will be included as part of the lecture grade.

4. Lecture grades will be determined in the following manner.

		Grading scale
Lecture Exam 1	100 pts.	908 = A
Lecture Exam 2	100 pts.	808 = B
Summaries (5 summaries @ 10 pts.)	50 pts.	708 = C
Two Hour Comprehensive Final Exam	150 pts.	508 = D
	400 pts.	below 508 = F

5. Lecture exams will include 10 extra credit points each, while the final exam will not include extra credit points. The final exam is comprehensive and 508 of the exam includes questions given in lecture exams 1 and 2.

6. Laboratory grades will be determined in the following manner with the same grading scale as in lecture.

Laboratory Exam 1	100 pts.
Laboratory Exam 2	100 pts.
Laboratory Notebook (graded twice)	100 pts.
	300 pts.

7. Laboratory notebooks are graded twice and are due on the lab exam dates. They are graded on the basis of completeness, organization, and correct answers to the questions on the hand-outs. Please refer to the lab notebook hand-out for procedures.

8. Laboratory exams are station exams with students moving from station to station answering questions at each station. Each laboratory exam contains 10 extra credit points. The second lab exam is not comprehensive and includes material covered since the first exam.

9. Quizzes, announced and unannounced, will be also given in lab and the score (total percentage based on 1008) may be substituted for either lab exam.

POLICIES, CLASS STANDING, OFFICE HOURS; AND EXTRA HELP:

1. Attendance is expected for each lecture and laboratory. Attendance for lab is especially important and unexcused absences for lecture or laboratory will result in grade penalties to be determined by the instructor.

2. Quizzess and exams missed because of unexcused absences can not be made up. Excused absences should be documented, e.g., a physician's excuse, and will be considered by the instructor for a valid absence.

3. Incompletes and early exams are not given.

4. Students may obtain their grades at any time from the instructor. Those with deficient grades will be notified prior to the withdrawl deadline of Nov. 13, 2000.

5. Peer tutoring is available. Please consult the instructor for tutoring.

6. The instructor's office is in Henry Hall, Room 16, phone 735-4808(faculty secretary = 735-4793 or 735-4757), e-mail = riwamoto@chaminade.edu. Office hours are posted outside the faculty office in Henry Hall and outside the library. If you cannot see me during office hours, please see me to make an appointment.

7. Please note that it is biology department policy to reduce grades by one grade level for late assignments and assignments later than 24 hours are not accepted resulting in a F grade.

8. Those students with special needs, e.g., learning disabilities, should consult with the instructor during the first or second week of classes and not wait till the end of the semester.

9. Because electronic devices, such as cellular phones and pagers, can be disruptive to normal classroom activities, please turn off these devices during class.

10. Extra credit work is not normally given in the course.

MARINE BIOLOGY SUMMARIES AND LAB NOTEBOOK

Marine Biology Summaries:

1. The objectives of the summaries are threefold:
   a. To read and report on current topics in marine biology;
   b. To offer an alternative to quizes and examinations; and
   c. To participate in "Writing Across Disciplines"; compositions in each area of the university curricula. This should help you develop the ability to research and write about selected topics.

2. There will be five, one to two paged summaries. Each summary will be worth 10 points and the total will be 50 points that are counted in the lecture grade.

3. The summaries must be from a 1999 or 2000 publication of a newspaper, magazine, journal, or internet/web pages which must be pertinent to the marine biology field, e.g., not on freshwater or terrestrial biology.

4. Summaries are to be word processed or typed following university writing standards. The summary must include: author, title of article; title of journal, magazine, or newspaper with titles of sources, e.g., newspapers italicized or underlined; date of publication; page number(s). Please use the following for web site publications:
   Author (if known). "Title" (main title if appicable). Last date updated or revised (if known. <URL> (date accessed).

   Example:Mestel, R. (March 1999). Drugs from the Sea. Discover, Vol. 20 No. 3 Available:http//www.discovfer.com_99/drugs.html, Date accessed 3/8/99.

5. Please submit a xerox copy of the article or internet/web page print out of the article with your summary. If you utilize National Geographic or Hawaii Fishing News, articles, you need not xerox the article as the instructor has subscriptions to the above.

6. Due dates for summaries are listed on the course outline. Please submit both summaries and lab notebooks on time as there are penalties for lateness, reduction in one grade level for submissions within 24 hours of the deadline and F for those after 24 hours of the deadline.

7. Examples of summaries are available for examination during the first weeks of classes.

Laboratory Notebook:

1. The notebook may be a folder, spiral bound or other notebook material. It is to include the following listed in a mandatory table of contents preceding the lab exercises:
   a. title or topic of the exercise;
   b. date of exercise;
   c. page numbers using your own numbering.

2. Observations [illegible] an the hand-outs [illegible] st be included in the notebook.

3. Previous students have found it is best to keep separate lecture and laboratory notebooks [illegible] for lecture and labo[illegible] r;

3. Lab hand-outs may be [illegible] notebook, but inclusion is left to the discretion of the student.

4. Please do not expect the instructor to read notes written on the hand-outs, nor answers to questions written on the hand-out. <u>Separate pages are required or points will be deducted</u>.

5. Laboratory notebooks are due at the time of the lab exams, the first and second lab exams.

6. Examples will be available for examination the first two weeks Of classes only.

CHAMINADE UNIVERSITY WRITING STANDARDS

All work submitted by Chaminade University students must meet the following Writing Standards. Written assignments which fail to meet these standards will not be accepted by Chaminade University faculty unless alternative criteria have been specified by an instructor for a particular assignment.

(1) A paper should have a title page. On the title page should appear the title, his or her name, the course title, and the date of submission. For short papers, it is usually adequate to provide this information on the first page of the paper.

A paper must adhere to accepted manuscript format.*

a) It must be typed on white 8½" by 11" paper (except for in-class essays.

b) It must be double-spaced and typed on only one side of the paper.

c) It must have adequate margins on top, bottom, and sides*

d) References and/or footnotes must be used in accordance with standards specified by the instructor. In the absence of such specification, the writer should use standards given to English 102.

(2) A paper must adhere to conventional standards for written expression.

a) It should be free of errors in spelling, punctuation, capitalization and grammar.

b) The vocabulary and syntax should be appropriate to the assignment.

c) The writer should use proper sentence construction and coherent paragraphing.

*See the handbook of English recommended by the English Department for a complete list of manuscript requirements.

WRITING ASSISTANCE

The Chaminade Learning Center provides assistance for students in proofreading and correcting their written assignments. A writing clinic and tutorials are available to students at no cost to assist them in the mastery of basic writing skills. Typing instruction is available at several locations near Chaminade University and there are also lists of student typists available in the Learning Center.

CHAMINADE UNIVERSITY OF HONOLULU
Honolulu, Hawaii 96816

SESSION: FALL 2000
DAY ON CAMPUS

COURSE OUTLINE

BIO 11501 (3 crs) Intro to Marine Biology Mr. R. Iwamoto
Dept. No. Crs. Instructor

WEEK	MONTH	DATE		ASSIGNMENTS	
	AUG	28	M	Introduction: Syllabus & Course Outline-	Chapt. 1 pp. 1-35
1		30	W	Film: "The Sea," Begin Marine Biology & Society:International Relations, Economics, & Social Structure	Castro & Huber Reference on Reserve in Library
	SEPT	1	F	SPIRITUAL AND ACADEMIC CONVOCATION, NO 11AM CLASSES	
	SEPT	4	M	LABOR DAY, NO CLASSES	
		5	T	LAST DAY TO ADD/DROP CLASSES	
2		6	W	Marine Biology & Society: Cont'd from above & Marine Resources-OTEC, Minerals & Fisheries	Chapt. 11 pp.425-430 "Overexploit. to New Fisheries" p. 443, "Drugs from the Sea"
		8	F	Marine Biology & Society: Climate, Waves, & Currents; Food & Health; and Recreation	
	SEPT	11	M	The Marine Environment: General Features of the Ocean, Tectonics, & Topography	Chapt. 1 p. 8 LECTURE QUIZ 1
3		13	W	The Marine Environment: Sea Water Properties-temperature, salinity, gases, and nutrients	
		15	F	The Marine Environment: Ocean Movement-Waves, Tides, and Currents	SUMMARY ONE DUE Chapt. 6 pp. 219 223 "Tides" Review Chapt. 1 pp. 10-15

	SEPT	18	M	The Mar ne Env ro ent o+ ean Movement Cont'd...; Video on Tsunamis	
		20	W	The Marine Environment: Classification	Chapt 1 p. 32-33
		22	F	Ecological Principles	Review Chapt. 1 pp. 16-22
	SEPT	25	M	Plants of the Sea	Chapt. 5 p. 194 "Kelp Beds...
5		27	W	Plants of the Sea cont'd...,	to Sea Grass Comms" Chapt. 8 pp. 324-335 "Salt Marshes"
		29	F	Video:	Chapt. 9 pp. 377-388 "Mangrove Forests" "Forest in the Sea"
	CT		M	Productivity o Plankton & Seaweeds	C apt. pp. -
6		4	W	FIRST LECTURE EXAM - up to plants of the sea	
		6	F	Benthic & Sea Ice Communs.	Chapt. 5 pp. 165-185, 202-215
	OCT	9	M	DISCOVERS' DAY HOLIDAY, NO CLASSES	
7		11	W	Intertidal Ecology: Rocky Shorelines	SUMMARY TWO DUE Chapt. 6 pp. 219-252
		13	F	Intertidal Ecology: Rocky Shorelines Cont'd...	Chapt. 6 pp.252-255
		16	M	Intertidal Ecology: Sandy Shorelines	Chapt. 6 pp. 255-270, Skim Chapt. 7 LECTURE QUIZ
8		18	W	Intertidal Ecology: Estuaries	Chapt. 8 pp. 304-337
		20	F	Intertidal Ecology Video: "Margins of the Land"	Review Chapt. 9 pp. 377-388

		23	M	Intertidal Ecology: Estuaries	
9		25	W	Coral Reefs: Characteristics and Types	Chapt. 9, pp. 338 394
		27		Coral Reefs: Zonation & Ecology	LECTURE QUIZ
		30	M	Coral Reefs: Interactions & Fish	SUMMARY THREE DUE
10	NOV	1	W	Coral Reefs: video-"The Coral Triangle"	
		3	F	SECOND **LECTURE EXAM** INCLUDING **INTERTIDAL** ECOLOGY	
	NOV	6	M	Symbiosis, Coloration and Bioluminescence	Chapt. 10 pp. 395-417, Chapt 3 pp. 101-102 "cryptic color."Chapt. 4 pp. 135-color, Chapt. 4 pp. 141-145
11		8	W	Assigned extra credit assignment, instructor will be attending national conference with 6 students	
		10	F	**VETERANS'** DAY HOLIDAY, NO CLASSES	
	NOV	13	M	Venomous and Toxic Marine Organisms Hand-outs LAST DAY TO **WITHDRAW**	
12		15	W	Video on Sharks	SUMMARY FOUR DUE
		17	F	Nekton: Composition & Adaptations	LECTURE QUIZ Chapt. 4, pp. 124-164
	NOV	20	M	Nekton: Video on Mammals	
13		22	W	Birds & Reptiles	
		23-24		**THANKSGIVING** RECESS, NO CLASSES	

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Honolulu, Hawaii 96816

SESSION: FALL 2000
DAY ON CAMPUS

COURSE OUTLINE-SUBJECT CHANGE

BIO 115L01 (1 CR.) Intro to Marine Biology Lab Mr. R. Iwamoto
Dept. No. Crs.# Title Instructor

WEEK	DATE	ASSIGNMENT	
1	AUG 30 W	Introduction: Course Outline and Syllabus; Water Safety Signs, Microscopy: Parts & Functions; Rules/Regulations of Field Trips	Hand-outs 1) Mic. Diagram 2) Mic. Appendix 3) Water Safety Signs
2	SEPT 6 W	Paiko Coral Reef Field Trip: Coral Reef Ecosystem; Physical Factor Measurement: pH, temp., & salinity	MICROSCOPE QUIZ Hand-out 1) Paiko field trip
3	SEPT 13 W	Dichotomous Keys; Seaweeds: Observation and Identification of fresh & preserved specimens; pressing of Seaweeds; and sampling of seaweed products	Hand-outs 1) 3 keys of algae, fish & inverts 2) Seaweeds & Plankton
4	SEPT 20 W	Plankton, Preserved & Live from Plankton Tow	Hand-outs 1) Seaweeds Plankton from 9/13/00 2) Plankton Diagrams
5	SEPT 27 W	Lanai Lookout and Sandy Beach Rocky Shoreline & Tidepool Field Trip Physical Factors Measurements	QUIZ ON SEAWEEDS & PLANKTON Hand-out 1) Lanai Lookout & Sandy Beach Tidepools

	27	M	Abyssal Biology	
14	29	W	Hydrothermal Vents	Chapt. 11 pp. 418-425
	DEC 1	F	Fisheries	
	DEC	M	Fisheries	SUMMARY FIVE DUE
15	6	W	Marine Resources	
	8	M	Review	

16 FINAL TWO HOUR COMPREHENSIVE EXAMINATION, WEDNESDAY, DECEMBER 13, 1998, 10:30-12:30 AM

IMPORTANT DATES:

SEPT 4 *LAST DAY TO ADD/DROP*

NOV 13 *LAST DAY TO DECLARE CREDIT/NO CREDIT OPTION*

NOV 13 *LAST DAY TO WITHDRAW WITHOUT GRADE PENALTY*

6	OCT	4	W	Rocky Shoreline, Sand Beach & Estuarine Organisms	Hand-out 1) Rocky Shoreline, sand beach, & Estuary Organisms	re- d
7	OCT	11	W	FIRST LAB EXAM & **LAB NOTEBOOKS DUE**		
8	OCT	18	W	Coral Diversity	Hand-out 1) Coral Diversity	
9	OCT	25	W	Waikiki Aquarium	Hand-out 1) Questions for Waikiki Aquarium	
10	NOV	1	W	Crab, Clam, Starfish Dissection	Hand-out 1) Crab, Clam & Starfish Dissection	
11	NOV	8	W	Dangerous & Venomous Specimens	Hand-outs 1) Dang. & Venom.Os. 2) Fish Poisons 3) Sharks	
12	NOV	15	W	Kaloko Cove Estuary Field Trip: Estuarine Environment; Physical Factors Measurements; & Hawaiian Plants	Hand-outs 1) Kaloko & Coast Plants	ove l
13	NOV	22	W	Kaneohe Boat Trip or Sea Life Park	QUIZ ON DISSECTIO & COASTAL PLANTS	S

14	NOV	29	W	Fish Dissection & Diversity Hand-out 1) Fish Dissec. & Diversity
15	DEC	6	W	SECOND LAB EXAM **FROM** CORALS **TO** FISH DISSECTION AND DIVERSITY, LAB **NOTEBOOKS** DUE

IMPORTANT DATES:

SEPT 5 LAST DAY TO ADD/DROP

NOV 13 LAST DAY TO DECLARE CREDIT/NO CREDIT OPTION

NOV 13 LAST DAY TO WITHDRAW WITHOUT GRADE PENALTY