



COURSE: BI 110 - People and Nature: Oceans and Human Health (Lecture and Lab)

TIME: Fall Semester 2015, 01:30-02:20 p.m. MWF (August 24 - December 4)

PLACE: Henry Hall 227

INSTRUCTOR: Dr. Hank Trapido-Rosenthal

Phones: 735-4908 (CUH) and 551-3625 (cell)

email: henry.trapido-rosenthal@chaminade.edu

OFFICE: WSC 101 **OFFICE HOURS:** When the office door is open, or by appointment.

TEXT: All required reading materials will be available on the course website.

COURSE DESCRIPTION: This course is designed to introduce you to our relationship with the natural environment and the consequences of our actions/inaction in dealing with it. We will do this by focusing on the interactions, both positive and negative, between the oceans and the earth's human population. We will be combining ideas and information from both the natural sciences (i.e., biology, geology, physics, chemistry, etc.) and the social sciences (i.e., economics, politics, ethics, etc.) to try to gain an understanding of man's present relationship with the environment, what historical events have brought us here and what we must accomplish to insure our survival through the next millennium.

OBJECTIVES:

1. To understand the way the scientific method is used to gain knowledge.
2. To gain some basic knowledge of the processes of our natural environment.
3. To increase awareness of the complex relationships among all living things and their non-living environment.
4. To examine man's past and present relationship with his environment and the possible affects of these relationships on our future.
5. To increase awareness of the environmental problems facing us today and to present some solutions to these problems.
6. To enhance your knowledge and awareness of our environmental problems to enable more informed political and economic decisions.

LECTURES:

1. Lecture topics and text assignments are listed in the course outline. Lecture files will be posted on the course web site.
2. Dates for the midterm and final exams are also listed in the course outline.
3. The instructor reserves the right to add, omit, or change the materials as he sees fit.

LABS: Unless otherwise specified, labs will be field trips, beginning at 2:30 PM on Mondays and ending by 5:20 PM.

EXAMS, QUIZZES & GRADES:

1. All exams & quizzes will consist of multiple choice, true-false, and short essay questions. You will be graded on your ability not only to answer the question (some can be answered in several ways), but also in how effectively you can defend your answer/position using

your knowledge of the subject & applying what you learned through the use of appropriate facts/examples. Thus all questions asking for your opinion or position, whether stated or not have an implied "Why?" or "How?" question attached.

2. Quizzes will be "unannounced" & if missed cannot be made up w/o a valid excuse.
3. If you are absent it is your responsibility to inform the instructor and to inquire about missed assignments, tests, etc. & to make these up on the day of your return to class.
4. Grades will be based on the following system & scale:

Grade Scale:

85% & above = A

70 - 85% = B

60 - 69% = C

50 - 59% = D

49% & below = F

Grading System:

Quizzes 35%

Mid Term 30%

Final 35%

COURSE SCHEDULE:

<u>Week</u>	<u>Dates</u>	<u>Lecture Topic</u>	<u>Readings</u>
1	Aug 24	Course Introductions My past and present, your present and future Entry Quiz (doesn't contribute to grade) General Ed Evaluation (doesn't contribute to grade)	
	24	<i>Lab Rules and Field Trip Procedures</i>	
	26	Introduction to Science	<i>Lucas-Clark, What to Tell Student About Science</i>
	28	Pope Francis, <i>On Care for Our Common Home</i>	
2	31	Origins video	
	31	<i>Pu'u Pia Hike or Seawater Lab</i>	
	Sept 2	The Ocean and Atmosphere	<i>Laws, Background Oceanography</i>
	4	Case Study 1: Hurricanes	
3	Sept 7	Labor Day - NO CLASSES	
	7	Labor Day - NO LAB or FIELD TRIP	

	9	How the Oceans Make Fish	<i>Laws, How the Oceans Make Fish</i>
	11	Why We Harvest the Ocean	
4	14	How We Harvest the Ocean	<i>Laws, Fishing Methods</i>
	14	<i>Seawater Lab or Pu'u Pia Hike</i>	
	16	How We Harvest the Ocean (Video)	
	18	Tunas: Case Study 2: Atlantic Bluefin	<i>Sushinomics</i>
5	21	Anchovies: Case Study 3: Peruvian Anchoveta	
	21	<i>Lyon Arboretum Field Trip or Microscopy Lab</i>	
	23	No Class - Yom Kippur	
	25	Whales and Whaling 1	<i>Roman et al. Article</i>
6	28	Whales and Whaling 2 Case Study 4: Illegal Whaling	<i>Palumbi Articles</i> <i>Herman Article</i>
	28	<i>Microscopy Lab or Lyon Arboretum Field Trip</i>	
	30	Into the Deep 1	
Oct	2	Into the Deep 2	
7	5	The Tragedy of the Commons & A Tragedy of the Commons Averted	<i>Hardin: Tragedy of the Commons</i> <i>Butler: Bermuda Fisheries</i>
	5	<i>No Lab or Field Trip - Review for Midterm</i>	
	7	MIDTERM EXAM	
	9	Midterm Results, Shifting Baselines, <i>Fishing the Ancient Waters</i> video	

8	12	No Class - Discoverers Day	
	12	No Lab or Field Trip - Discoverers Day	
	14	Polynesia- Oceanic Islands - The Ahupua'a & Polynesian Voyaging	
	16	Know Your Limits - Failed Island Societies	
9	19	Pacific Disparities	
	19	Mānoa Heritage Center Field Trip	
	21	Risks, Benefits, and Consequences of Seafood Consumption	
	23	The Ocean's Ecosystem Services I	<i>Van Beukering et al.: Total Economic Value of Bermuda's Coral Reefs</i>
10	26	The Ocean's Ecosystem Services II	<i>Van Beukering et al.</i>
	26	Board of Water Supply Field Trip	
	28	Plant Domestication	<i>Plant and Animal Domestication</i>
	30	Animal Domestication	<i>Plant and Animal Domestication</i>
11	Nov 2	Oceans and Human Health	
		Biodiscovery I:	
		Overview	
		Marine Labs	
		Biomedical Research Tools	
	2	Taste and Smell Lab	
	4	Oceans and Human Health	
		Biodiscovery II:	
		Drugs from the Sea	
	6	Oceans and Human Health	
		Biodiscovery III:	
		Industrial and Consumer Products	

12	9	Oceans and Human Health Biodiscovery IV: Renewable Energy - Biofuels from the Sea
	9	<i>Waikiki Aquarium</i>
	11	International Law of the Sea
	13	Why Do We Age?
13	16	Young and Old
	16	<i>Diamond Head Tide Pools Field Trip</i>
	18	Why Sex?
	20	Why Cooperate?
14	23	Symbiosis
	23	<i>Makapuu Field Trip</i>
	25	<i>An Inconvenient Truth</i> video
	27	No Classes - Day After Thanksgiving
15	30	<i>An Inconvenient Truth</i> video
	30	<i>Diamond Head Tide Pools Backup</i>
Dec	2	Exit Quiz (doesn't contribute to grade) Review for Final
	4	General Ed Evaluation, and Course Evaluation
16	8	Final Exam, 11:00

Additional Departmental and University Policies

1. Electronic Devices

Use of music devices and cell phones is prohibited during all Natural Science and Mathematics classes at Chaminade, unless specifically permitted by your instructor. Use of cellphones and music devices in laboratories is a safety issue. In addition, use of cellphones and music devices in any class is discourteous and may lead to suspicion of academic misconduct. Students who cannot comply with this rule will be asked to leave class and may be subject to laboratory safety violation fines. You will be asked to leave class and marked absent if you do not comply. This will negatively affect your grade. Please refer any questions to the Dean of Natural Sciences and Mathematics.

2. ADAA Statement

2.1 Pursuant to several federal and state laws, including the Americans with Disabilities Act of 1990, as amended by the ADA Amendments Act of 2008, and Section 504 of the Rehabilitation Act of 1973, all qualified students with disabilities are protected from discrimination on basis of disability and are eligible for reasonable accommodations or modifications in the academic environment to enable them to enjoy equal access to academic programs, services, or activities. If a student would like to determine if they meet the criteria for accommodations, they should contact the Counseling Center at 808-735-4845 for further information.

3. Attendance & Tardiness

3.1 Students are expected to attend regularly all courses for which they are registered. Students should notify their instructors when illness or other extenuating circumstances prevents them from attending class and make arrangements to complete missed assignments. Notification may be done by emailing the instructor's Chaminade email address, calling the instructor's campus extension or by leaving a message with the instructor's division office (Natural Science and Math 1 (808) 440-4204). It is the instructor's prerogative to modify deadlines of course requirements accordingly. Any student who stops attending a course without officially **withdrawing** may receive a failing grade.

3.2 Unexcused absences equivalent to more than a week of classes may lead to a grade reduction for the course. Any unexcused absence of two consecutive weeks or more may result in being **withdrawn** from the course by the instructor, although the instructor is not required to **withdraw** students in that scenario. Repeated absences put students at risk of failing grades.

3.3. Tardiness

Occasional tardiness is a fact of life and traffic, and is excusable. Routine tardiness is rude, and will not be tolerated.

4. Policy on Make-Up Tests

Missed quizzes and exams can be made up if the reason for missing them is plausible.

5. Policy on Communication

The University provides a Chaminade email address for all students. Official Chaminade communications will be sent to the students' Chaminade email address and instructors will use only this email to communicate with students. It is the responsibility of the student to check their email frequently. Report email-related problems to the Helpdesk at 808-735-4855 or helpdesk@chaminade.edu.

6. Laboratory Safety Information

The following guidelines are established to provide instructions in maintaining safety for students, staff, and faculty while using any of the science laboratories at Chaminade University. The Division of Natural Sciences and Mathematics (NSM), along with the University Environmental Safety Office are responsible for enforcing the regulations set forth in the current Student Handbook. Queries should be addressed to: Dean of Natural Sciences and Mathematics (808) 440-4204; Environmental Safety Officer (808) 739-4811

7. Title IX Declaration

Chaminade University of Honolulu recognizes the inherent dignity of all individuals and promotes respect for all people. Sexual misconduct, physical and/or psychological abuse will NOT be tolerated at CUH. If you have been the victim of sexual misconduct, physical and/or psychological abuse, we encourage you to report this matter promptly. As a faculty member, I am interested in promoting a safe and healthy environment, and should I learn of any sexual misconduct, physical and/or psychological abuse, I must report the matter to the Title IX Coordinator. Should you want to speak to a confidential source you may contact the following:

- Chaminade Counseling Center| 808 735-4845.
- Any priest serving as a sacramental confessor or any ordained religious leader serving in the sacred confidence role.

8. Academic Honesty

Students are expected to have read and to abide by the "Student Rules of Conduct" which are available in your copy of Chaminade University's Student Handbook. Cheating in the form of plagiarism, collusion, deception and will not be tolerated and will negatively affect your grade.