COURSE: BI 110 - People and Nature: Oceans and Human Health (Lecture)
TIME: 01:30-02:20 p.m. MWF (January 17 – May 10, 2012)
INSTRUCTOR: Dr. Hank Trapido-Rosenthal
Phones: 956-9418 (UH) and 551-3625 (cell)
email: henry.trapido-rosenthal@adjunct.chaminade.edu
OFFICE: TBD **OFFICE HOURS:** TBD
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 in sure our survival through the next millennium.

OBJECTIVES:

1. To understand the way in which 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.
2. Examination dates are also listed in the course outline.
3. The instructor reserves the right to add, omit, or change the materials as he sees fit.

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. Otherwise this will be considered an unexcused absence & the work cannot be made up.
4. Grades will be based on the following system & scale:

Grade Scale:		Grading System:	
86% & above	= A	Quizzes	30%
70 - 85%	= B	Mid Term	30%
60 - 69%	= C	Final	40%
50 - 59%	= D		
49% & below	= F		

BI 110 Course Syllabus

Date		Subject	Readings
January	18	Course Introductions My past and present, your present and future Entry Quiz (doesn't contribute to grade)	
	20	Introduction to Science	*Miller, Environmental Science: Chapter 2;* *Lucas-Clark, What to Tell Students About Science*
	23	No Lecture – Hank at NSF meeting Lab Safety Rules (Brandi Sasaki)	
	25	The Ocean and Atmosphere I	*Laws, Chapter 1, Background Oceanography, and Meteorology in* Oceans and Human Health – Risks and Remedies from the Seas (OHH-RSS)
	27	The Ocean and Atmosphere II	
	30	Case study 1: Hurricanes Seawater Lab	*Keim and Muller, Chapter 4, Overview of Atlantic Basin Hurricanes, in* OHH -RRS
February	1	Why We Harvest the Ocean	*Laws, Limitations of the Marine Fish Catch*
	3	How the Oceans Make Fish	*Laws, Limitations of the Marine Fish Catch*
	6	Aquarium Field Trip	*Aquarium Field Trip*
	8	How We Harvest the Ocean	*Laws, Fishing Methods*
	10	How We Harvest the Ocean	*History Channel Video*
	13	The Tragedy of the Commons Microscopy Laboratory	*Hardin: Tragedy of the Commons* *Butler: The Bermuda Fisheries – A Tragedy of the Commons Averted?*
	15	Tunas	
	17	Case Study 2:	*Bluefin 1 & Bluefin 2*
	20	No Class – Presidents' Day	
	22	Case Study 3: Anchovies	
	24	Whales and Whaling	*Laws, Chapter 10, Whales and Whaling*
	27	Whale Watching Field Trip	
	29	Case Study 4: Illegal Whaling & Whales in Hawaii	*Palumbi Articles* *Herman Article*
March	2	Conclusion of Illegal Whaling	
	5	Hawaii Fisheries Chromatography Laboratory	*Video*
	7	Review for Midterm	

	9	**MIDTERM EXAM**	
	12	Sea Life Park Field Trip	
	14	Midterm results Earthquakes and Tsunamis	*Dixon and Okal, Chapter 3,Hazardsin the Oceanic Environment from a Dynamic Earth, in* OHH-RRS
	16	Ciguatoxin and Case Study 5: CFP and Polynesian Exploration	*Bienfang et al., Chapter 14, Ciguatera Fish Poisoning – A Synopsis from Ecology to Toxicology, in* OHH-RRS *Rongo et al., Did Ciguatera Prompt the Late Holocene Polynesian Voyages of Discovery?*
	19	No Class – Spring Break	
	21	No Class – Spring Break	
	23	No Class – Spring Break	
	26	Oceans and Human Health BioDiscovery I: Overview Marine Labs Biomedical Research Tools Taste and Smell Lab	*Fieber and Schmale, Chapter 28, Aquatic Animal Neurophysiological Models, in* OHH-RRS
	28	Oceans and Human Health BioDiscovery II: Drugs from the Sea	*Gerwick, Chapter 21, Marine Remedies, in* OHH-RRS *Fenical, Marine Pharmaceuticals - Past, Present and Future* *Carter, Chapter 23, Discovering Anti-Infectives from the Sea, in OHH-RRS* *Toledo et al., High Throughput Cultivation for Isolation of Marine Microorganisms*
	30	Risks, Benefits, and Consequences of Seafood Consumption I	*Oceanography* Food from the Sea Chapters
April	2	Risks, Benefits, and Consequences of Seafood Consumption II Lyon Arboretum Field Trip	*Oceanography* Food from the Sea Chapters
	4		
	6	No Class – Good Friday	
	9	Board of Water Supply Field Trip	
	11		
	13	Non-Renewable Energy: Nuclear Power and Fossil Fuels	
	16	Diamond Head Tide Pools Field Trip	
	18	Renewable Energy: Wind, Water, Geothermal	
	20	Renewable Energy: Biofuels from the Sea	*TBD*

	23	Aquaculture I Lo'I Field Trip	*TBD*
	25	The Ocean's Ecosystem Services	*Van Beukering et al.: Total Economic Value of Bermuda's Coral Reefs – Valuation of Ecosystem Services*
		An Inconvenient Truth	*Video*
	27	*An Inconvenient Truth*	*Video*
	30	Learning Assessment, Course Evaluation. Zoo Field Trip	
May	2	International Law of the Sea Exit Quiz (doesn't contribute to grade)	*Laws, Living Marine Resources: Chapter 13, Law of the Sea, others TBD*
	4	Review for Final Exam	
	7-10	**Final examination**	