Biology 496, Special Topics Seminar (Ocean Health and Human Health: OH^3)

Term: Spring 2012
Days: Thursday
Room: Henry Hall 106
Time: 5:30 – 6:20 PM
Credit: 1 semester hour
Phone: 739-8543
Instructor:
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Office: TBD
Office Hours: TBD; or by appt

Required textbook: *Oceanography* Vol. 19, No. 2, June 2006, Special Issue on The Oceans and Human Health, plus supplemental materials provided by the instructor.

Course description: The oceans are the life-blood of the planet. They provide us with food and water, recreation and tourism, other material goods, and means of transportation, and the economic benefits associated with all of these. They also provide us with chemical compounds of both industrial and medical value. As the largest, most important, single source of biological activity, water, weather, ecosystem diversity, and biomass production on our planet, the oceans are inextricably linked to the health of each and every one of us who inhabit both coastal and inland areas. While we reap the benefits of the oceans, we also challenge them through resource depletion, pollution, global climate change, and coastal development. In this seminar course, we will examine the ways in which the health of the world's oceans and the health of the world's humans are intricately interlinked.

Course objectives: This seminar will expose students to the various facets of the rapidly developing and highly interdisciplinary field of Oceans and Human Health. The instructor will guide seminar participants to and through readings in the primary and review literature from fields of meteorology, oceanography, marine ecology, fisheries biology, drug discovery, biofuels, and global climate change. By the end of the course, the students will be able to critically evaluate information presented in this literature, and will use this ability to produce and present a seminar presentation on an Oceans and Human Health topic.

Course requirements: Grading will be based on a student's participation during class (30%); quiz scores (40%), and on a platform presentation on a topic of mutual interest to the student and the instructor (30%).

Class Participation	Show Up and Speak Up	**30%**
Quizzes	Four - You'll Need to Be There to Take Them	**40%**
Presentations	A Platform Presentation on a Topic of Interest	**30%**

Final grade: Your letter grade will be based on the following point distribution.

Points earned	**Percent of total**	**Letter grade**
180 - 200	90 – 100%	A
160 - 179	80 – 89%	B
140 - 159	70 – 79%	C
120 - 139	60 – 69%	D
≤ 119	≤ 60%	F

Tentative Topic Schedule and Assigned Readings.

Date	*Week*	*Discussion Topic*	*Reading*
19-Jan	1	Introductions and Entry Quiz (doesn't contribute to grade)	*Oceanography* Introduction
26-Jan	2	Background Oceanography and Meteorology	Laws, Background Oceanography
2-Feb	3	Hurricanes and Tsunamis	*Oceanography* Hurricane & Tsunami Chapters
9-Feb	4	How the Oceans Make Fish: Quiz #1	Laws, Limitation of the Marine Fish Catch
16-Feb	5	How We Harvest the Ocean	Laws, Fishing Methods
23-Feb	6	Tragedy of the Commons: Quiz #2	Hardin, *Tragedy of the Commons*; Butler, ToC Averted
1-Mar	7	Risks, Benefits, and Consequences of Seafood Consumption	*Oceanography* Food from the Sea Chapters
8-15	8	Harmful Algal Blooms	*Oceanography* HABs Chapters; Bienfang et al., 2010
15-Mar	9	Model Marine Organisms: Quiz #3	*Oceanography* Sentinel Species
22-Mar	10	Marine Biodiscovery	*Oceanography* Marine Pharma
29-Mar	11	No class – Spring Break	
5-Apr	12	No class – Holy Thursday	
12-Apr	13	Oil From Algae	TBD
19-Apr	14	Ecosystem Services and Global Climate Change: Quiz #4	*Oceanography* Climate Change; Van Beukering Bda Reefs
26-Apr	15	**Presentations 1,** and Exit Quiz (doesn't contribute to grade))	
3-May	16	**Presentations 2** and Conclusions	