Syllabus for Marine Biology, Biology 251 Winter Semester, 2008

Instructor: Ray Heithaus heithaus@kenyon.edu 427-5393
Office: Higley 202 Office Hours: M 11-12 1:30-2:30, Tuesday 9:40-11 or by appointment
(Note: my other class is taught Wednesday afternoons)

Texts: Marine Biology. An Ecological Approach, Sixth Edition, by J. W. Nybakken (MB)

Summary of topics and readings, by week:

Week	Topic	Reading Assignment
Jan 15	Introduction, basic oceanography & climate change	MB ch 1
Jan 22	Biology of open oceans: productivity & its limits	MB 2
Jan 29	Biology of open oceans: consumers & diversity	MB 3
Feb 5	Food from the oceans: population dynamics models	supplemental, MB 500-517
Feb 12	Deep-sea ecology	MB 4
Feb 19	Benthic habitats of continental shelves	MB 5
Feb 26	Biodiversity regulation in benthic habitats	supplemental materials
March 18	Intertidal Ecology	MB 6
March 25	Ecological theories of food webs and interactions	supplemental materials
April 1	Critical boundaries: estuaries and marshes	MB 8
April 8	Critical boundaries: coral reef habitats	MB 9 (pp 407-453), 10
April 15	Critical boundaries: mangrove fringe	MB 9 (pp 453-469, 518-520)
April 22	Climate change - ocean acidification	supplemental materials
April 29	Fisheries and human exploitation, revisited	supplemental materials

Overview and Student Responsibilities

Ocean ecosystems are critical to people in many ways – even to those of us with 400-mile commutes to the nearest coastline. Oceans influence climate and weather, provide resources, and are sources of biological diversity (with both utilitarian and aesthetic benefits). In this course, you will learn the major characteristics of different ocean ecosystems and the organisms that inhabit them. You will examine patterns in the context of more general biological principles. You will explore the techniques used to better understand oceanic systems, which challenge us in terms of large scale and difficult access.

Summary of tests and assignments:

Date Due	Assignment	Percentage of grade with final	Percentage of grade, no final
Feb 2	Paper summary 1	5	5
Feb 7	Hour test 1	15	20
Feb 12	Population dynamics report	15	15
March 18	Hour test 2	15	20
April 8	Paper summary 2	5	5
April 24	Hour test 3	15	20
all semester	Class attendance, participation in discussion	10	15
May 6	Final exam (optional) - 1:30 pm	20	
	TOTAL	100	100

Because much of your grade is based on writing, please be sure to review the regulations regarding plagiarism. In particular, paraphrasing must be avoided and proper citation of sources is expected.

If you have a physical, psychological, medical or learning disability that may impact your ability to carry out assigned course work, I urge that you contact the Office of Disability Services at 5453. The Coordinator of Disability Services, Erin Salva (salvae@kenyon.edu), will review your concerns and determine, with you, what accommodations are appropriate. All information and documentation of disability is confidential

All students are encouraged to ask for help outside of class, if you wish to pursue a topic or if you are having problems with any course material. My office hours are given at the beginning of the syllabus; if you have classes that conflict with those times please arrange to meet another time. "Drop-in's" are encouraged. Times that regularly are committed to other activities for me are Monday 2-4 pm, afternoons on Wednesday & Thursday.

Biology 251 will expose you to a comprehensive overview of marine biology, with emphasis on basic principles. Further study in marine biology, however, should include more "hands-on" experience. To learn more about marine organisms and habitats, you are encouraged to explore summer or semester programs "off campus." Summer or semester-long periods of intensive study are especially valuable. Kenyon has several affiliations that promote such study along a coast. The Marine Science Education Consortium includes Kenyon; courses are taught through Duke University at their Beaufort Marine Laboratory. We also participate in the Semester in Environmental Science, which provides courses at the Marine Biological Laboratory in Woods Hole. Kenyon is an affiliate institution with the School for Field Studies, with marine oriented programs in Magdalena Bay (Mexico) and South Caicos Island (British West Indies). Finally, a former Kenyon professor works at the Shannon Point Marine Center in Anacortes, Washington; she encourages Kenyon students to attend sessions along the Pacific Ocean there. Numerous other programs are available, as well.