

Course Description and Syllabus
Oceanography Section 1 (GEOL 21080)
Kent State University
Fall 2005
(Revised Syllabus following Hurricane Katrina)

<http://www.personal.kent.edu/~jortiz/ocean/sec1mwf.html>

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Lecture: M,W,F 12:05-12:55 pm, McGilvrey 302
Office Hours: M 10:00-11:30am, R 3:20-4:30pm, or by appointment.

Course Rationale and Objectives: The ocean comprises about 70% of the Earth's surface area and plays a critical role in the cycling of energy and matter between the Earth's physical, chemical, and biological systems. Despite this, many people are unaware of how this vast body of water impacts the world around them. This course will emphasize the interdisciplinary nature of oceanography by exposing the student to the basic principles of geological, chemical, physical, and biological oceanography. Relationships among these systems and between the ocean and human populations will be emphasized. Students should complete the course with a greater understanding of how the sea "works" as a system and a more scientific view of the world around them.

Text: *Oceanography: An Invitation to Marine Science*, 4th or 5th Edition by Tom Garrison (5th edition available at the campus bookstore or DuBois Bookstore). A number of copies of the textbook are also available on 2-hr/overnight and 3-day reserve from the University Library.

Course web site: <http://www.personal.kent.edu/~jortiz/ocean/sec1mwf.html>

Many helpful resources are available on the course web site. Students are advised to familiarize themselves with the web site early in the semester and then to make use of these resources throughout the semester. Please see the instructor if you need help accessing the web site. This web site lets you check your grades online and contains information about:

<i>Class Schedule, Reading Assignments, Online Notes</i>	<i>How to Succeed in this Course (Study Tips)</i>
<i>Grading Policy</i>	<i>What do I need to know? (Study Questions)</i>
<i>Academic Calendar</i>	<i>Careers in Oceanography</i>
<i>Accommodation for Students with Special Needs</i>	<i>Careers in Geology</i>
<i>FAQs About This Course</i>	<i>Just for Fun: Nonfiction, Literature, Art</i>
<i>Announcements (as needed)</i>	<i>and Music Inspired by the Sea</i>

Note that as with all internet resources, access to or availability of the website cannot be guaranteed. Exams will not be rescheduled. Please use the resources available on the web site in advance of exams. To check your grades, using your university email name and password, login to flashline (<http://flashline.kent.edu>) and go to "My Courses", or go directly to WebCT (<http://class.kent.edu>).

Office Hours and Consultation with the Instructor: I want you to do well in this course! I welcome questions from all students either in person, by email, or by phone. Whether you are doing well in the course, find it challenging, or are on academic probation, attending office hours can help make the course a more enriching experience. To ensure your own privacy when sending electronic messages, please use your university email

account. Include your first and last name on any electronic correspondence. You should however, include no more than the first five digits of your student ID number (SSN) on any electronic correspondence. Please cc a copy of any important messages that you send to the instructor back to yourself so that you have a record.

University Policies: The following University policies apply to anyone enrolled in this course:

1. **Enrollment Status:** Students are responsible for ensuring that they are properly enrolled in their classes. You are advised to review your official class schedule during the first two weeks of the semester and prior to the drop and withdrawal dates to ensure that you are properly enrolled in this class and section.
2. **Academic Honor Code:** All students in the course are expected to abide by the academic honor code, as specified in the University's "Digest of Rules and Regulations". The use of other's intellectual property without giving them appropriate credit is a serious academic offense. This includes misrepresenting the source, nature or other conditions of your academic work to get undeserved credit. It is the University's policy that cheating or plagiarism can result in receiving a failing grade for the work or course or other more serious disciplinary action. Repeat offenses can result in dismissal from the University.
3. **Drop and Withdrawal:** For Fall 2005, the last day to drop from the class without receiving a grade of "W" is September 11, 2005. The last day to withdraw from the class with a grade of "W" is November 6, 2005. For more information, see the Fall semester withdrawal page on the registrar's web site.
4. **Students with disabilities:** In accordance with University policy, if you have a documented disability and require accommodations to obtain equal access to this course, please contact the instructor at the beginning of the semester or when given an assignment for which an accommodation is required. Students with disabilities must verify their eligibility through the Office of Student Disability Services (SDS) in the Michael Schwartz Student Services Center (330-672-3391).
5. **Final Exam Dates:** Please check the final exam schedule for the classes in which you are enrolled. In the event that you have a conflict with another scheduled exam, the instructor will make suitable arrangements. Students who have conflicts or more than three examinations on the same day should consult with the Dean of his or her college at the earliest possible time for assistance in making alternative arrangements.

Grading Policy: Students are expected to attend class, do the reading, and consult the web site throughout the term. These steps will help you to learn the material covered on the exams. There will also be several, in-class activities given during the term. They will allow you to gauge your progress and provide you with credit for class participation. Grades will be based on a subset of the assigned work as follows:

Midterm exams (best two of three, 26% each)	52%
Cumulative Final Exam	36%
<u>In-class activities/Personal Response System/Extra Credit</u>	<u>15%</u>
Total	103%

In-class activities: Several unannounced in-class activities will be given during the term. These activities will give students the opportunity to experiment with the concepts presented during the lecture given on the same day as the activity. Activities will take the form of paper worksheets or class surveys using a personal response system ("clickers"). Because make-ups will not be permitted for the in-class activities, only the first 80% of the activities will count toward your base grade for the course. Students who participate in more than 80% of the in-class activities will have the additional activity scores count as extra credit (up to a total of 3% extra). It is thus to your advantage to participate in as many activities as possible. If you do well on the activities they will help to boost your overall grade in the class by adding to your class score and improving your comprehension and retention of the material.

Turning Point Classroom Response System

- During some of the in-class activities we will use TurningPoint Response Cards ("clickers").
- These devices will be on loan to you during the entire term.
- Bring them to each class period. You will need them to participate in some of the in-class activities for class credit. They must be returned in good working order at the end of the class or you will be required to purchase the device (\$36).

Exams: Students are expected (and it is in your best interest!) to take all three exams. Each exam will consist of short answer and multiple-choice questions. The questions may involve the interpretation of maps, diagrams, and graphs. The midterm exams will give students an opportunity to demonstrate their knowledge of the material presented. Only the scores from the top two exams will count toward your final grade. While the mid-term exams will be non-cumulative, the final exam will be cumulative. Exam scores may be curved at the discretion of the instructor, but each student has the potential to succeed in this course. Students are expected to pick up their graded exam papers in class when they are returned, or to make arrangements to do so at office hours. Exam dates are provided in the syllabus and online on the class website.

Make-up Exams: Students are expected to manage their academic and personal activities responsibly during the term. Students who miss an exam must provide a legitimate written excuse in a timely manner in order to receive a make-up exam. Make-up exams will consist of several essays and short answer questions that cover the same material as the in-class multiple-choice exam. Legitimate excuses for missing an exam include written documentation for the following: conflict with another Kent State University academic activity (such as an off campus field trip), your own illness, a death in the family, and military or intercollegiate athletic commitments. If you are involved in military or official university athletic activities, review the exam schedule at the beginning of the term and consult with the instructor prior to the exam if you have a conflict. If you have an illness, personal crisis or family tragedy that results in missing an exam, you must contact the instructor by phone or email no later than 48 hours after the scheduled start time of the exam. It is very important that you provide your name and a telephone number where you can be reached in your phone or email message.

How grades are calculated: Grades for each exam are calculated on a curve determined from the individual histogram of scores for each exam. The histogram and cutoff values for each letter grade are posted electronically to the class web site as links on the class schedule web page. Grades can be accessed online using WebCT as described on the class website. Your point score on each in-class activity or exam is interpolated to an equivalent gpa. Exams are also assigned a letter grade on this basis. The cutoff values for the in-class activity gpa and exam gpa scales are listed below.

An in-class activity score of:	4	3	2	1	0
is worth a gpa of:	4	3	2	1	0

An exam letter grade of:	A+	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
is worth a gpa of:	4.10 to 4.30	3.71 to 4.09	3.50 to 3.70	3.29 to 3.49	2.71 to 3.28	2.50 to 2.70	2.23 to 2.49	1.71 to 2.20	1.50 to 1.70	1.29 to 1.49	0.71 to 1.28	0.50 to 0.70	0

A weighted average of your highest two midterm exam scores, your final exam, and your in-class activities is then calculated based on the weighting values listed above using the following equation:

$$\text{Class GPA} = 0.52 * (\text{Average Midterm GPA}) + 0.36 * (\text{Final Exam GPA}) + 0.12 * (\text{Average In-class Activity GPA}) + 0.03 * (\text{extra credit})$$

Students who have participated in at least 80% of the in-class activities will have their scores on any additional in class activities count for extra credit worth up to an additional 3% of their grade.

Your Class GPA is then converted to a letter grade using the table above. Because of the extra credit opportunity, and the fact that only the highest two exams, contribute to your score, each student has the potential to do well in the class if their performance remains strong or improves during the term. To help you gauge your progress during the term (and to minimize round off error) I calculate mid-semester grades on a plus/minus scale. Note however, that your final grade for the course will be reported on the official university grade scale of: A, B, C, D, F by merging the plus/minus categories for each letter grade. Student who never attend, or stop attending will receive grades of NF or SF in accordance with university policy.

Class Schedule and Reading Assignments

Oceanography Section 1

Week	Date	Lecture Number and Title	Readings from Garrison 5 th ed.*
1	Aug 29	M: 1. What is Oceanography?	Ch 1, Sec 1-3
	Aug 31	W: 2. Hurricanes and Storm Surge	Ch 8, Sec 17-18
	Sept 2	F: 3. Earthquakes and Earth Structure	Ch 3, Sec 2-6
2	Sept 5	M: Labor Day, no class	--
	Sept 7	W: 4. There are Stripes on the Bottom of the Sea	Ch 3, Sec 14-18, 25-30
	Sept 9	F: 5. Plate Tectonics: The Story of a Dynamic Earth	Ch 3, Sec 7-13, 18
3	Sept 12	M: 6. Plate Boundaries: Seams in the Crust	Ch 3, Sec 20-24
	Sept 14	W: 7. Building a tropical Paradise: Hot Spots	Ch. Ch 3, Sec 28
	Sept 16	F: 8. Marine Sediments: Memory of the Sea	Ch 5, Sec 1-8, 20
4	Sept 19	M: 9. Why is the Sea Salty?	Ch 6, Sec 1-2, Ch 7 Sec 1-6, 9-11
	Sept 21	W: 10. Marine Pollution	Ch 18 Sec 2-5,7-8,14
	Sept 23	F: 11. Review for Exam I	--
5	Sept 26	M: Exam I	--
	Sept 28	W: 12. The Atmosphere: Driving force for the Ocean	Ch 8, sec 2-7
	Sept 30	F: 13. The Winds go Round: Atm/Spinning Planet	Ch 8, Sec 8-10,16
6	Oct 3	M: 14. Sailing the Seas: Wind Driven Circ.	Ch 9, Sec 1-5, 11-14
	Oct 5	W: 15. Sea Ice and the Density-driven Circulation	Ch 9, Sec 17-23, Ch 6, Sec 6-7, 14-19
	Oct 7	F: 16. Sea, Sky, Land: The Climate Connection	Ch 6, Sec3-5,8,11,13; Ch 8, Sec11,13
7	Oct 10	M: 17. Climate Change and Life in the Greenhouse	Ch 18, Sec 22
	Oct 12	W: 18. Seas of Change: The Arctic/Future Climate	Ch 6 Sec 12; plus online link
	Oct 14	F: 19. From Supertankers to Gravity Games	Ch 10 Sec 1-11, 13-15
8	Oct 17	M: 20. The Indian Ocean Tsunami	Ch 10, Sec 24-29
	Oct 19	W: 21. Review for Exam II	--
	Oct 21	F: Exam II	--
9	Oct 24	M: 22. Celestial Rhythms: Tides	Ch 11 Sec 2-8, 10, 15
	Oct 26	W: 23. Where Sea Meets Land: Coastlines	Ch 12 Sec 2-7, 30-33; Ch 6 Sec 20
	Oct 28	F: 24. Engineering the Shore	Ch 12 Sec 9-11, 13-15, 18, 34, Ch 10 Sec 16-17
10	Oct 31	M: 25. Life in the Ocean	Ch 13, Sec 2-4, 6,25-26, 28
	Nov 2	W: 26. Challenges of the Marine Environment	Ch 13, Sec16-18,29, Ch 15 Sec 21, 23-25
	Nov 4	F: 27. Marine Plants: Grasses of the Sea	Ch 13, Sec 5, Ch 14, 2, 4-6,9,11-12,14-18
11	Nov 7	M: 28. Spineless Wonders: Marine Invertebrates	Ch 15, Sec 1-9
	Nov 9	W: 29. Animals with Backbone: Marine Vertebrates	Ch 15, Sec 10-19
	Nov 11	F: Veterans Day, No class	--
12	Nov 14	M: 30. Review for Exam III	--
	Nov 16	W: Exam III	--
	Nov 18	F: 31. Charismatic Megafauna: Marine Mammals	Ch 15, Sec 35-38; Ch 17 Sec 21
13	Nov 21	M: 32. Blue Water Communities	Ch 16 Sec 2-4,6, 16-17, Ch 15 Sec 25
	Nov 23	W: Thanksgiving Break,	--
	Nov 25	F: no classes	--
14	Nov 28	M: 33. Rocky Intertidal Zone/Estuaries	Ch 16 Sec 10,13
	Nov 30	W: 34. Kelp Forests	Ch 16 Sec 11, plus online link
	Dec 2	F: 35. Life in Extreme Environments	Ch 4 Sec 14
15	Dec 5	M: 36. Nature's Gardens: Coral Reef	Ch 16 Sec 5, 15, 21; Ch 15 Sec 5; Ch 12 Sec 23-24
	Dec 7	W: 38. Sustainable Seas: Marine Fisheries	Ch 17 Sec 1, 17-20, 24
	Dec 9	F: 39. Review for Final Exam	--
End of class sessions			
16	Dec 13	Final Exam, McGilvrey Hall Room 302, 10:15 - 12:30 p.m.	

*Readings from Garrison 4th ed. are available on the class website. Any changes to the readings will be announced in class and listed on the class web (see: <http://www.personal.kent.edu/~jortiz/ocean/schedule.html>).