

Course Description and Syllabus
Oceanography (GEOL 21080)
Kent State University
Fall 2006

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Lecture: Tu/Th 11 am – 12:15 pm, Bowman 133

Office Hours: Monday 9:30-11:00 am, Wednesday 1:00-2:30 pm, and 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 relationships 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*, by Tom Garrison. Students may use either the 4th or the 5th edition. ISBN numbers for specific editions are available on the class website (see below for url). 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/~dwitter/oce/f2006/>

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 contains information about:

Class Schedule, Reading Assignments, Online Notes
Study Questions for Each Lecture
Study Tips
Grading Policy/How Grades are Calculated
Check Your Grades Online Using WebCT Vista
Academic Calendar (Fall 2006)
Announcements (As needed)

Academic Resources
Accommodation for Students with Special Needs
Careers in Oceanography
Careers in Geology
Just for Fun (Nonfiction, Literature, Art and Music
Inspired by the Sea)

Note that as with all internet resources, access to or availability of the web site cannot be guaranteed. Exams will not be rescheduled if the website is unavailable. Please use the resources available on the web site in advance of exams.

Consultation with the Instructor: The instructor welcomes questions from students either in person, by email or by phone. Please include your first and last name on any electronic correspondence. To ensure your own privacy, do not include your social security number on any electronic correspondence. Because the instructor uses email anti-spam filters, please include an informative subject line in any email correspondence. Students are encouraged to send email from their KSU email account.

Succeeding in this Course

The grading policy and class resources are designed to ensure that each student has the potential to succeed in this course. At the beginning of the semester, students are encouraged to review the “Study Tips” on the course website. These tips include suggestions for getting the most out of attending class, reading the text, using online resources, and maximizing performance on our multiple-choice exams. The Study Tips webpage also includes information about identifying your learning style and formulating an efficient learning strategy.

Students who are struggling with the class are encouraged to consult with the instructor as early as possible, to allow for changes in strategy that will help produce a successful outcome for the semester. Please note that in past semesters, overall course grades have been strongly correlated with class attendance. In general, students with good attendance greatly outperform students with poor attendance.

Grading Policy

Students are expected to attend class, do the reading, consult the online resources provided by the instructor, take the exams, and participate in in-class activities.

Grades are based on:	Midterms (best two of three, 26% each)	52%
	In class activities (includes extra credit)*	15%
	<u>Final Exam</u>	<u>36%</u>
	Total	100% (plus 3% available as extra credit)

Exams: Exams will be multiple choice format and may involve the use of maps, diagrams and graphs. Midterms are non-cumulative. The lowest of your three midterm scores will be dropped when computing your course grade. The final exam is cumulative, with about 60% covering material that was not covered on the midterms (i.e., Marine Mammals through Lake Erie) and about 40% emphasizing major concepts from earlier parts of the course (i.e., Introduction through Spineless Wonders). The final exam is required (it cannot be one of the exams that are dropped). Midterms are passed back and discussed in class to help students prepare for the final. Student arriving late for a scheduled in-class exam will receive an essay exam (rather than a multiple choice exam).

In-Class Activities: In-class activities will be held periodically. These activities are designed to reinforce important concepts and will usually involve work in small groups. Activities will usually focus on material presented on the day of the activity but may occasionally involve integrating new material with information presented earlier in the course. Activities are due during the class period in which they are assigned. No make-ups are permitted for in-class activities, but only a portion (80%) of these activities count toward the base part of your grade for the course. Points from the remaining 20% of the in-class activities will count as extra credit.

Final Exam: The final exam is a required element of this course and is scheduled for Thursday Dec 14, 12:45 pm – 3:00 pm in Bowman 133. Students are expected to arrange any end-of-semester travel so that they will be available to take the final exam at this time. A make-up final exam is available only to students who have a scheduling conflict with a final exam for another course or who have more than three final exams scheduled for the same day. Please see the instructor early in the semester if either of these situations applies to you.

Make-up Exams: Students who miss a midterm for reasons other than official University travel or active military service will have that exam count as their "dropped" midterm. Students who miss a midterm due to official University travel or active military service must provide official documentation in order to receive a make-up test. Because exam questions are not collected at the end of the exam period, all make-up tests are in essay form. If you are involved in the military or official athletic activities, review the exam schedule early in the semester and consult with the instructor prior to the examination date if you have a conflict.

Electronic Devices: The use of electronic devices during exams is prohibited (including, but not limited to, cell phones, laptops, iPods, MP3 players and PDAs). Any student found using an electronic device during an exam will receive a failing grade for the course and will be reported to the University Administration.

How Grades are Calculated: Point scores for each graded item are converted to a Grade Point (GP) scale, and to an equivalent letter grade to facilitate assignment of overall course grades. Exam scores may be curved, at the discretion of the instructor. The scale for the in-class activity grade points and exam grade points are listed below.

An in-class activity score of:	4	3	2	1	0
Is worth a GP of:	4	3	2	1	0

A letter grade of:	A+	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
Corresponds to a GP of:	4.30 to 4.50	3.70 to 4.29	3.50 to 3.69	3.30 to 3.49	2.70 to 3.29	2.50 to 2.69	2.30 to 2.49	1.70 to 2.29	1.50 to 1.69	1.30 to 1.49	0.70 to 1.29	0.50 to 0.69	0.00

Your overall grade for the course is calculated based on a weighted average of you two highest midterm GPs, your final exam GP, and the GPs from your in-class activities, as follows,

$$\text{Course grade points} = 0.26 * (\text{Sum of two highest midterm GPs}) + 0.36 * (\text{Final Exam GPs}) + 0.15 * (\text{Average of all in-class activity GPs})$$

At the end of the semester, your course grade points is converted to a letter grade and reported on the official University grading scale, which will include plus and minus categories. Students who never attend or who stop attending will receive grades of NF or SF in accordance with University policy.

Students who participate in more than 80% of the in-class activities will have the remaining activity points count for extra credit. Note that, because of this extra credit opportunity, and the fact that only the two highest exams count toward your score, each student has the potential to do well if their performance remains strong or improves during the term.

Accessing Your Exam and In-Class Activity Grades: Grade points for each exam and in-class activity are posted to WebCT (<http://vista.kent.edu/>) as soon as they are available. Posted grade points include the effect of a curve (if any) and are the values used in the “course grade points” formula above to compute your semester grade.

University Policies: The following University policies apply to all students in this course:

1. Students have the responsibility to ensure that they are properly enrolled in their classes. Please review your official class schedule during the first two weeks of the semester to ensure that you are properly enrolled in this class and section.
2. Academic Honesty: The use of the intellectual property of others without giving them appropriate credit is a serious academic offense. This includes misrepresenting the source, nature, or conditions of your academic work to get undeserved credit. It the University's policy that cheating or plagiarism will result in receiving a failing grade for the work or course. Repeat offenses result in dismissal from the University. See the University's "Digest of Rules and Regulations" for additional information about these University policies.
3. For Fall 2006, the last day to withdraw from the class without receiving a grade of "W" is September 10, 2006. The last day to withdraw from the class with a grade of "W" is November 5, 2006.
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. 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 instructor and the Dean of his or her college at the earliest possible time for assistance in making alternative arrangements.

**Class Schedule - Oceanography Sec. 1 (Tu/Th)
Fall 2006**

Week	Date	Lecture Topic	Reading* (exact sections will be announced in class and posted on the class website)
1	Aug 29	Introduction to Oceanography	Ch 1
	Aug 31	Earthquakes and the Structure of the Earth	Ch 3
2	Sept 5	Seafloor Magnetism, Seafloor Spreading: Developing the Theory of Plate Tectonics	Ch 3, 4
	Sept 7	Plate Tectonics and the Dynamic Earth	Ch 3
3	Sept 12	Plate Tectonics and Ancient Oceans	Ch 3, Ch 4
	Sept 14	Seawater and the Salt in the Sea	Ch 6, Ch 7
4	Sept 19 Sept 21	Hot Spots/Review for Exam I Exam I	Ch 3
5	Sept 26	Marine Pollution	Ch 18
	Sept 28	The Atmosphere: Driving Force for the Ocean	Ch 8
6	Oct 3	Sailing the Seas: Wind-Driven Ocean Circulation	Ch 9
	Oct 5	Sea Ice and Density-Driven Ocean Circulation	Ch 9, Ch 6
7	Oct 10	Climate Change and Life in the Greenhouse	Ch 18
	Oct 12	Tsunami/Review for Exam II	Ch 11 (4 th Ed), Ch 10 (5 th Ed)
8	Oct 17 Oct 19	Exam II From Supertankers to Gravity Games: Ocean Waves	Ch 10
9	Oct 24	Celestial Rhythms: Tides	Ch 11
	Oct 26	Where Sea Meets Land: Coastlines and Beaches	Ch 6, Ch 12
10	Oct 31	Challenges of the Marine Environment	Ch 6, Ch 13, Ch 15
	Nov 2	Primary Producers: Salad Bar of the Sea	Ch 14, Ch 13 (5 th Ed)
11	Nov 7	Spineless Wonders (Marine Invertebrates)	Ch 15
	Nov 9	Charismatic Megafauna (Marine Mammals)/ Review for Exam III	Ch 6, Ch 15, Ch 17
12	Nov 14 Nov 16	Exam III Open Ocean Communities	Ch 15, Ch 16
13	Nov 21	Coastal Marine Communities	Ch 16
	Nov 23	Thanksgiving (No Class)	
14	Nov 28	Nature's Gardens: Coral Reefs	Ch 12, Ch 15, Ch 16
	Nov 30	Hot Vents, Cold Seeps: Life in Extreme Environments	Ch 4, Ch 16, Ch 14 (4 th Ed), Ch 13 (5 th Ed)
15	Dec 5	Sustainable Seas: Marine Fisheries	Ch 9, Ch 14, Ch 17
	Dec 7	Review for Final Exam	
16	Thurs Dec 14	Final Exam (12:45 – 3:00 pm, Bowman 133)	

* Readings will usually not include the entire chapter. Specific section numbers will be posted on the class web site, <http://www.personal.kent.edu/~dwitter/oce/f2006/> and announced during lecture.

Oceanography Fall 2006 (Tu/Th)

Important Dates (Mark Your Calendar!)

In-Class Review Sessions	Tuesday September 19 Thursday October 12 Thursday November 9
Midterm Exams	Thursday September 21 Tuesday October 17 Tuesday November 14
Final Exam	Thursday Dec 14, 12:45 pm – 3:00 pm Bowman 133

Geology and Earth Science Programs at Kent State University

While most students take this class as an LER for another major, oceanography provides undergraduates who have not committed to a major with an excellent introduction to Geology and Earth Science, and serves as an entry point to majors offered by the Department of Geology.

Departmental Degree Programs - Departmental offerings include four-year programs leading to the Bachelor of Science and Bachelor of Arts degrees in Geology as well as the Bachelor of Arts degree in Earth Science. The atmosphere within the department is personalized and informal with major emphasis placed on teaching as well as on research. Most undergraduate major classes are small (10-30 students). Close faculty-student relationships are established by participation in various field trips and several annual student-faculty social events, including the fall picnic and the spring banquet. The Department maintains a number of scholarships that are awarded annually to undergraduates at various levels within the program. Student Organizations, such as the Kent State Geological Society, are an important aspect of the culture of the Department and provide students with opportunities for developing leadership skills and for participating in extracurricular activities.

Geology Minor Program – This streamlined program provides motivated students with the opportunity to customize their course work to meet their particular intellectual interests.

Career Outlook and Job Placement - The Department of Geology plays an active role in placing its graduates by helping them with preparation of resumes, providing material on job interview techniques, securing job leads, and facilitating contacts between graduates and prospective employers. Program graduates have entered all major employment areas for geologists and the placement picture has been extremely good, with virtually 100% of recent graduates finding professional employment or entering nationally recognized graduate programs shortly after earning their Bachelors degree. Departmental graduates are employed in a wide variety of settings, including environmental consulting companies, engineering testing firms, geochemical laboratories, groundwater consulting firms, and governmental and academic organizations.

If you are interested in finding out more majoring or minoring in Geology, please contact the instructor or see the Department of Geology's website: <http://dept.kent.edu/geology/>