

Course Description and Syllabus
Oceanography (GEOL 21080)
Kent State University
Spring 2007

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

Office Hours: 1:30-3 pm Tuesday, 10am -noon Wednesday, 1:30-3 pm Thursday, 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. 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/s2007/>

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 (Spring 2007)
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. In exceptional circumstances (e.g., a student missing multiple weeks of class due to a documented chronic illness or military service), the instructor may make an alternative arrangement in lieu of in-class activities. In these cases, students should contact the instructor as soon as possible.

Final Exam: The final exam is a required element of this course and is scheduled for Tuesday May 8, 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, active military service or documented long-term illness will have that exam count as their "dropped" midterm. Students who miss a midterm due to official University travel, active military service or long-term illness 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, 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.

Summary of Important Exam Policies

(see above for details)

1. If you miss a midterm for any reason other the official University travel, military service or documented long-term illness, the missed exam will count as your "dropped" midterm. Appropriate documentation is required to obtain a makeup exam.
2. The final exam is required and will be held on Tuesday May 8 from 12:45 - 3:00 pm. Students are expected to arrange any end-of-semester travel so that they will be available to take the final exam at this time.
3. It is each student's responsibility to check their finals schedule early in the term and notify the instructor in the event of a conflict with another scheduled exam.
4. All makeup exams will be in essay form.
5. Students who arrive late for an in-class exam will be given an essay exam (rather than a multiple choice exam).

**Class Schedule - Oceanography Sec. 1 (Tu/Th)
Spring 2007**

Week	Date	Lecture Topic	Reading* (exact sections will be announced in class and posted on the class website)
1	Jan 16	Introduction to Oceanography	Ch 1
	Jan 18	Earthquakes and the Structure of the Earth	Ch 3
2	Jan 23	Seafloor Magnetism, Seafloor Spreading: Developing the Theory of Plate Tectonics	Ch 3, 4
	Jan 25	Plate Tectonics and the Dynamic Earth	Ch 3
3	Jan 30	Plate Tectonics and Ancient Oceans	Ch 3, Ch 4
	Feb 1	Seawater and the Salt in the Sea	Ch 6, Ch 7
4	Feb 6	Hot Spots/Review for Exam I	Ch 3
	Feb 8	Exam I	
5	Feb 13	Marine Pollution	Ch 18
	Feb 15	The Atmosphere: Driving Force for the Ocean	Ch 8
6	Feb 20	Sailing the Seas: Wind-Driven Ocean Circulation	Ch 9
	Feb 22	Sea Ice and Density-Driven Ocean Circulation	Ch 9, Ch 6
7	Feb 27	Climate Change and Life in the Greenhouse	Ch 18
	Mar 1	Tsunami/Review for Exam II	Ch 11 (4 th Ed), Ch 10 (5 th Ed)
8	Mar 6	Exam II	
	Mar 8	From Supertankers to Gravity Games: Ocean Waves	Ch 10
9	Mar 13	Celestial Rhythms: Tides	Ch 11
	Mar 15	Where Sea Meets Land: Coastlines and Beaches	Ch 6, Ch 12
10	Mar 20	Challenges of the Marine Environment	Ch 6, Ch 13, Ch 15
	Mar 22	Primary Producers: Salad Bar of the Sea	Ch 14, Ch 13 (5 th Ed)
11	Apr 3	Spineless Wonders (Marine Invertebrates)	Ch 15
	Apr 5	Charismatic Megafauna (Marine Mammals)/ Review for Exam III	Ch 6, Ch 15, Ch 17
12	Apr 10	Exam III	
	Apr 12	Open Ocean Communities	Ch 15, Ch 16
13	Apr 17	Coastal Marine Communities	Ch 16
	Apr 19	Nature's Gardens: Coral Reefs	Ch 12, Ch 15, Ch 16
14	Apr 24	Hot Vents, Cold Seeps: Life in Extreme Environments	Ch 4, Ch 16, Ch 14 (4 th Ed), Ch 13 (5 th Ed)
	Apr 26	Sustainable Seas: Marine Fisheries	Ch 9, Ch 14, Ch 17
15	May 1	Lake Erie: Inland Sea in Our Backyard	TBA
	May 3	Review for Final Exam	
16	Tues May 8	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/s2007/> and announced during lecture.

Oceanography Spring 2007 (Tu/Th)

Important Dates (Mark Your Calendar!)

In-Class Review Sessions	Tuesday February 6 Thursday March 1 Thursday April 5
Midterm Exams	Thursday February 8 Tuesday March 6 Tuesday April 10
Final Exam	Tuesday May 8, 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/>

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. For Spring 2007, the last day to withdraw from the class without receiving a grade of "W" is January 28, 2007. The last day to withdraw from the class with a grade of "W" is March 25, 2007.
3. 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 Accessibility Services (SAS) in the DeWeese Health Center (330-672-3391).
4. 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.
5. All students are required to comply with the University's administrative policy and procedures regarding student cheating and plagiarism (see below). Failure to do so will result in a failing grade for work in question or for the course (at the discretion of the instructor) and reporting of the student to the University administration.

Statement on Academic Dishonesty Excerpted from the University's Administrative policy and procedures regarding student cheating and plagiarism. Policy #3342-3-07

(A) Policy statement. It is the policy of the university that:

- (1) Students enrolled in the university, at all its campuses, are to perform their academic work according to standards set by faculty members, departments, schools and colleges of the university; and
- (2) Cheating and plagiarism constitute fraudulent misrepresentation for which no credit can be given and for which appropriate sanctions are warranted and will be applied.

(B) Intent and scope of the policy.

- (1) In providing this policy, the university affirms that acts of cheating and plagiarism by students constitute a subversion of the goals of the institution, have no place in the university and are serious offenses to academic goals and objectives, as well as to the rights of fellow students.
- (2) It is the intent of this policy to provide appropriate sanctions, to provide fair and realistic procedures for imposing those sanctions, to provide safeguards for any student suspected of cheating or plagiarism, and to coordinate the policy with procedures of the code of student conduct, rule 3342-4-15 of the Administrative Code and of this register.
- (3) This policy applies to all students of the university, graduate and undergraduate, full or part-time, whose conduct is of such a nature prohibited by the policy. Other offenses of a nonacademic nature are covered by the code of student conduct, rule 3342-4-15 of the Administrative Code and of this register.

(C) Definitions. As used in this rule:

- (1) **"Cheat"** means intentionally to misrepresent the source, nature, or other conditions of academic work so as to accrue undeserved credit, or to cooperate with someone else in such misrepresentation. Such misrepresentations may, but need not necessarily, involve the work of others. As defined, cheating includes, but is not limited to:
 - (a) Obtaining or retaining partial or whole copies of examination, tests or quizzes before these are distributed for student use;
 - (b) Using notes, textbooks or other information in examinations, tests and quizzes, except as expressly permitted;

- (c) Obtaining confidential information about examinations, tests or quizzes other than that released by the instructor;
 - (d) Securing, giving or exchanging information during examinations;
 - (e) Presenting data or other material gathered by another person or group as one's own;
 - (f) Falsifying experimental data or information;
 - (g) Having another person take one's place for any academic performance without the specific knowledge and permission of the instructor;
 - (h) Cooperating with another to do one or more of the above; and
 - (i) Using a substantial portion of a piece of work previously submitted for another course or program to meet the requirements of the present course or program without notifying the instructor to whom the work is presented.
 - (j) Presenting falsified information in order to postpone or avoid examinations, tests, quizzes, or other academic work.
- (2) **"Plagiarize"** means to take and present as one's own a material portion of the ideas or words of another or to present as one's own an idea or work derived from an existing source without full and proper credit to the source of the ideas, words, or works. As defined, plagiarize includes, but is not limited to:
- (a) The copying of words, sentences and paragraphs directly from the work of another without proper credit;
 - (b) The copying of illustrations, figures, photographs, drawings, models, or other visual and nonverbal materials, including recordings, of another without proper credit; and
 - (c) The presentation of work prepared by another in final or draft form as one's own without citing the source, such as the use of purchased research papers.