

Marine Science 307/Geoscience 307  
**Introduction to Oceanography**  
**Spring 2012**

**Instructors:** Dr. Karin Akre (1<sup>st</sup> half of semester)

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Meeting time: **LECTURE Thursday 12:00 – 2:00 p.m., JGB 2.324**

Your **LAB SECTION** meets weekly in WEL 5.110. You must attend the correct laboratory section (the one for which you are registered) in order to get credit.

**Teaching Assistants:**

Leslie Patterson

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**Laboratory Coordinator:** Heather A. Herrick heather.herrick@mail.utexas.edu

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**Official course description:** Introduction to the sciences of oceanography: geological, physical, and biological. Two lecture hours and two laboratory hours a week for one semester.

**Prerequisites:** none

**Other course statements:** This course may not be counted toward the Bachelor of Arts degree with a major in geological sciences, the Bachelor of Science in Geological Sciences (Option I), the Bachelor of Science in Geological Sciences (Option II), or the Bachelor of Science in Geological Sciences (Option III).

### Course Goal

The primary goal of this course is to foster an appreciation for the ocean and its precious resources. Additionally, by enhancing their knowledge of ocean processes and marine resources, students can think critically about the important environmental issues facing our society including climate change, overfishing, and water pollution.

### Course Objective

This course is designed for non-science majors as an introductory and multi-disciplinary exploration of the marine environment. We will explore the physical, chemical, geological, and biological processes that influence ocean characteristics and discuss how the ocean directly influences human society including its connections with climate and coastal economics.

### Textbook

*An Introduction to the World's Oceans*, 10th edition, by Sverdrup and Armbrust (ISBN-13 9780073376707). Here are the textbook web sites, where you can find study guides, additional links, etc.

<http://catalogs.mhhe.com/mhhe/viewProductDetails.do?isbn=0073376701>

<http://highered.mcgraw-hill.com/sites/0073376701/>

Also, you *must purchase a course packet for the laboratory* at the UT Copy Center in Welch Hall, WEL 2.228.

### Course web site

The **Blackboard** site for this class (see <https://courses.utexas.edu>) will be used extensively. Copies of PowerPoint slides presented in lecture and laboratory sections will be posted here for you to print and take notes on. We will also post announcements, study guides, etc. on the site.

Every week, beginning January 23, you will be **required** to complete a **pre-lecture quiz** on Blackboard. Each quiz will consist of five multiple-choice questions about the chapter(s) you will learn that week. Also, one of the questions may be asked from the *Science and the Sea*<sup>TM</sup> radio/podcast script of the previous week (<http://scienceandthesea.org>). Each week's quiz will be available on Blackboard (look under "Assignments") beginning at noon on Monday. You must complete each week's quiz by 12:00 noon on Thursday. The assignment is open book and you can take as long as you need to complete it (except that it needs to be done by the deadline). Make sure you click "**submit**" at the bottom of the page when you are done. Without this step your answers are not processed as "Submitted" but stay as "In Progress". These are easy points!!

Support for using Blackboard is provided by the ITS Help Desk (FAC200-B) at 475-9400, Monday through Friday 8 a.m. to 6 p.m.

**iclickers**

We will be using an in-class response system called “iclicker”. It is a response system that allows you to respond to questions posed during class, and you will be graded on that feedback and/or your in-class participation. You are required to purchase an iclicker at the Co-Op and register it through the iclicker web site. In order to receive this credit, you will need to register your iclicker remote online **within the first two weeks** of class. You must come to class at least once and voted on at least one question in order to complete this registration properly. Once you have voted on a question in this class, go to <http://www.iclicker.com/registration>. Complete the fields with your first name, last name, student ID, and remote ID. Your student ID should be **your UTEID**. The remote ID is the series of numbers and sometimes letters found on the bottom of the back of your iclicker remote. iclicker will be used in every class, and you are responsible for bringing your remote daily." There is no separate registration fee.

Here's how to register:

1. Log on to iClicker web site (<http://www.iclicker.com>).
2. Click “REGISTER”.
3. Enter your (1) First name, (2) Last name, (3) Student ID (your UTEID), and (4) Clicker ID (from the back of your remote).
4. Click “SUBMIT”.

Each week, at various points during lecture, we will ask several questions to which you will respond using your iclickers. Your ***participation in these in-class quizzes will be graded*** as follows:

A. If you bring your iclicker, answer the question, and get it correct, you get full credit (1 point)

B. If you bring your iclicker, answer the question, and get it wrong, you get 0.8 points.

C. If you bring your iclicker but it does not work, you may hand your answer to the TA's on an index card immediately following each question, including your full name and the unique number for your lab section, and you will get the same credit as for A or B above (But, you must have it in class with you!)

*\* Note that for scenario C, you must have purchased the iclicker and registered it in the class database. If you do not purchase and register an iclicker, you will receive no credit for in-class quizzes.*

*Always remember to bring your clicker and extra batteries (AAA)!*

***Problems with your iclicker?*** Call the ITS Help Desk (FAC200-B, 475-9400), DIHA support (888-938-8881), or iclicker's tech support line (1-866-209-5698, [support@iclicker.com](mailto:support@iclicker.com)). There is a spare receiver at the ITS Help Desk on which you can test your receiver. The CO-OP store also has one.

**Course Requirements and Grading**

Your grade for the course will be determined as follows:

- 25% - Midterm exam (2-hour exam on first half of course: Chs. 1-9)
- 25% - Final exam (2-hour exam on second half of course: Chs. 10-18)
- 10% - Blackboard Pre-lecture assignments (see description above)
- 10% - In-class iclicker quizzes (see description above)
- 30% - Laboratory Average

The Laboratory grade in turn is determined as follows:

- 80% - Lab Assignments (quizzes and weekly lab exercises)
- 20% - Laboratory Practical

More information on lab grading is given in the Lab Manual and will be explained in detail by your TA on the first day your lab section meets.

Final letter grades for the course will be assigned as follows, after rounding numerical grades to half-numbers (Note: new grading system as of Fall 2009)

A : 92.5 and above	C : 72.5 – 76.4
A-: 89.5 – 92.4	C-: 69.5 – 72.4
B+: 86.5 – 89.4	D+: 66.5 – 69.4
B : 82.5 – 86.4	D : 62.5 – 66.4
B-: 79.5 – 82.4	D-: 59.5 – 62.4
C+: 76.5 – 79.4	F : less than 60

Exceptions to these grades will not be made after the final exam has been graded, unless a grading error by the professor or teaching assistant, is verified. Extra credit to improve grades will not be allowed.

**Missed work**

All missed quizzes (pre-lecture quizzes and in-class clicker quizzes) will receive a grade of zero. In the case of an anticipated, valid absence from a lab or exam, for example a religious holiday or university-sponsored event in which your participation is required, you must inform your TA and arrange for make-up work at least two weeks in advance. An unanticipated absence from the midterm or final exam for documented, valid (e.g., medical, family emergency) reasons can be made up if the instructors are informed within 24 hours.

**The University of Texas Honor Code**

The core values of The University of Texas at Austin are learning, discovery, freedom, leadership, individual opportunity, and responsibility. Each member of the University is expected to uphold these values through integrity, honesty, trust, fairness, and respect toward peers and community.

**Academic Integrity**

We encourage you to discuss course material in and outside of class; this includes consulting with your neighbors during in-class clicker questions. However any work

turned in under your name must represent your own efforts; ***cheating and plagiarism in any form will not be tolerated***. Students are expected to be familiar with definitions of scholastic dishonesty, standards of conduct, and the discipline processes of the University. Please see the Student Judicial Services web site (<http://deanofstudents.utexas.edu/sjs/>) for more information, and don't hesitate to ask us if you have any questions about your own or others' conduct.

### University E-mail Notification Policy

(excerpted from <http://www.utexas.edu/its/policies/emailnotify.html>)

It is the responsibility of every student to keep the University informed of changes in his or her official e-mail address. Consequently, e-mail returned to the University with "User Unknown" is not an acceptable excuse for missed communication. Students are expected to check e-mail on a frequent and regular basis in order to stay current with University-related communications, recognizing that certain communications may be time-critical. It is recommended that e-mail be checked daily, but at a minimum, twice per week.

Official University communications sent by e-mail are subject to the same public information, privacy and records retention requirements and policies as other official University communications.

### Accommodations for Students with Disabilities

The University of Austin provides upon request appropriate academic accommodations for qualified students with disabilities. For more information, contact the Office of the Dean of Students at 471-6259, 471-6441 TTY. In other words, students with disabilities who need special accommodations need to get a letter documenting their disability from the Services for Students with Disabilities (SSD) Office of the Office of the Dean of Students. This letter must be provided to the instructors as soon as possible. We will make every effort to accommodate your needs.

### Lecture schedule, topics, and reading assignments

<i>Date</i>	<i>Topic</i>	<i>Instructor</i>	<i>Reading (textbook)</i>
Jan. 19	Introduction to the course, history of oceanography	Dr. Akre	Ch. 1
Jan. 26	The Earth and its oceans: basics	Dr. Akre	Ch. 2
Feb. 2	Plate tectonics and the shapes of the ocean basins	Dr. Akre	Ch. 3
Feb. 9	The sea floor: what's on the bottom?	Dr. Akre	Ch. 4
Feb. 16	Seawater: properties and composition	Dr. Akre	Chs. 5 and 6
Feb. 17	The structure and motion of the atmosphere: what drives ocean circulation?	Dr. Akre	Ch. 7
Mar. 1	Ocean circulation	Dr. Akre	Chs. 8 and 9
<b>Mar. 8</b>	<b>Midterm exam</b>	Dr. Akre	
Mar. 15	SPRING BREAK		
Mar. 22	Waves and tides	Dr. Shank	Chs. 10 and 11

Mar. 29	Coasts, beaches, and estuaries	Dr. Shank	Ch. 12
Apr. 5	Environmental concerns	Dr. Shank	Ch. 13
Apr. 12	Rules to live by: life in the ocean	Dr. Shank	Chs. 14 & 15
Apr. 19	Just driftin' along: marine plankton	Dr. Shank	Ch. 16
Apr. 26	Life at the top: fishes, marine mammals, and other big critters	Dr. Shank	Ch. 17
May 3	Life on the bottom: the benthos (coral reefs + ...)	Dr. Shank	Ch. 18
May ??	<b>Final Exam (time TBA)</b>	Dr. Shank	

### Laboratory schedule

<b>Week</b>	<b>Laboratory</b>
Jan. 16-20	<b>NO LABS</b>
Jan. 23-27	LAB 1: Navigation
Jan. 30- Feb. 3	LAB 2: Bathymetry
Feb. 6-10	LAB 3: Continental Drift and Plate Tectonics
Feb. 13-17	LAB 4: Sediment Characteristics
Feb. 20-24	LAB 5: Physical and Chemical Properties of Sea Water
Feb. 27 – Mar. 2	LAB 6: Ocean Circulation
Mar. 5-9	LAB 7: Waves and Tides
Mar. 19-23	LAB 8: Marine Biological Processes and Trophic Relationships
Mar. 26 – Mar. 30	LAB 9: Plankton and Introduction to Taxonomy
Apr. 2-6	LAB 10: Fishes and Adaptations to the Marine Environment
Apr. 9-13	LAB 11: Benthos - Bottom Dwelling Invertebrates
Apr. 16-20	LAB 12: Fisheries and the Fish Banks Game
Apr. 23-27	<b>LAB PRACTICAL</b>

**Additional information regarding important University dates/deadlines and final exams is posted in the syllabus section on Blackboard.**