

Marine Science 307/Geoscience 307
Introduction to Oceanography
Fall 2011

Unique Numbers 53905-53975 (MNS 307) and 27310-27380 (GEO 307)

Instructors: **Dr. Dong-Ha Min** (1st half of the semester)

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Office hours: Tuesdays 11 a.m.-1 p.m., Patterson 103

LECTURE: Wednesday 2:00 – 4:00 p.m., JGB 2.324

Your **LAB SECTION** meets weekly in **BIO 12H**. You must attend the correct laboratory section (the one for which you are registered) in order to get credit.

Teaching Assistants:

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

Office: BIO 12G

Phone: 512-232-5696

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, ecology, 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/>

The online or downloadable version can be accessed from:

<http://www.coursesmart.com/007727279X>

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 lecture and laboratory notes will be posted under the Course Documents folder for you to print and take notes on. We will also post the syllabus, announcements, assignments, blogs, and discussion forum on the site. The grades of pre-lecture assignments, clicker quizzes, blogs, labs, midterm and final exam will be posted on the site.

Pre-lecture assignment

Every week, beginning August 31, 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 study that week. One or two of the questions will be asked from one of the previous ***Science and the Sea*** radio/podcast episodes (<http://scienceandthesea.org>). Each week's quiz will be available on Blackboard (look under "Assignments") **beginning at noon on Sunday**. ***You must complete each week's quiz by 12:00 noon on Wednesday.*** 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”. Please do not forget to complete the quizzes because they offer 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.

In-class i>clicker quiz

We will be using an in-class response system called “i>clicker”. You are required to purchase an **i>clicker remote** for in-class quiz participation. i>clicker is a response system that allows you to respond to questions we pose during class, and you will be graded on that feedback and/or your in-class participation. In order to receive this credit, you will need to register your i>clicker remote at the Blackboard **within the first two weeks** of class. You must have 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 the class, go to the Blackboard course site. 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 i>clicker remote. i>clicker will be used every day in class, and you are responsible for bringing your remote daily. Some students forget to register even after they have purchased and even used the remote in the class, causing extra work and confusion to the instructors. There may be a penalty for those students after a few reminders. For those who have used i>clickers in the past, all students are required to register at the beginning of each school year. Registrations are kept for the Fall and Spring semesters and the database is cleared in the late summer just before the start of the school year. Any student that registered in the Spring semester or in the early summer are required to register again.

“i>clicker”

You are required to purchase a clicker at the Co-Op (New \$40, Used \$30) and register it through the Blackboard course site. There is no separate registration fee. Here’s how:

1. Log on to the Blackboard course site.
2. Go to “Blackboard Tools” menu.
3. Click “Register your i>clicker remote ID”
4. Enter your “i>clicker remote ID”

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

- A. If you bring your clicker, and answer more than 75% of the questions, you will receive full credit (100 points). If you do not answer more than 75% of the questions, you will receive half credit (50 points).
- B. If you bring your clicker but it does not work, or if you forget your clicker entirely, you can receive half credit by signing your full name and providing your UTEID on a signup sheet (You may receive zero credit for the particular

- session if it happens more than 3 times during the semester).
- * *Note, you must purchase the clicker and register it. If you do not purchase and register a clicker, you will receive no credit for in-class quizzes.*
 - * *Note, we will start to use the clickers from the first class meeting.*
 - * *Always remember to bring your clicker and extra batteries (AAA).*

Problems with your clicker? Call the ITS Help Desk (FAC 200-B, 475-9400, www.utexas.edu/its/helpdesk/forms/emailform.php), or i>Clicker's tech support line (1-866-209-5698, support@iclicker.com). What if you bought a used clicker but the serial number on the back is missing? What if your clicker seems to have a problem? There is a spare receiver at the ITS Help Desk on which you can test your remote. The CO-OP store also has one.

Course blogs

We will make an **Introduction to Oceanography course blogs** in Blackboard. **Each student** is expected to post **at least 10 short blog entries during the 8/29 (Mon)-12/2 (Fri) period**. Students may write a short paragraph about their new learning or new enlightenment/perspectives based on the new knowledge learned from the class, textbook, lab, or other sources (e.g. Science and the Sea podcasts, New York Times Science articles, etc.). The typical blog entry would consist of a short paragraph of text, and any relevant URL link or graphic image with proper citation or source information. See the example blog entry posted in the Blackboard blog site. Make sure you write a title of your entry in the title box, and enter the contents in the text editor. Please "attach image" **INSIDE** the text editor, instead of outside the editor so your attached graphic can be readily viewed on the posting. Always write your name at the bottom of the content with your section#, so TAs can keep track of your postings. You can change the size of the image after you attach it, but consider keeping its size less than 400x600 (or 600x400). The posting will be made with your name, and anonymous posting or comment is not allowed. You may add comments to other students' posts, but please be courteous and positive in your feedback. Any inappropriate or offensive comments will be removed.

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)
- 08% - Blackboard Pre-lecture assignments (see description above)
- 07% - In-class clicker quizzes (see description above)
- 05% - Course blogs (see description above)
- 30% - Laboratory Average

The lab 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.

A : 93 and above
A-: 90 – 92.5
B+: 86 – 89.5
B : 83 – 85.5
B-: 80 – 82.5
C+: 75 – 79.5
C : 70 – 74.5
C-: 60 – 69.5
D+: 52 – 59.5
D : 45 – 52.5
D-: 40 – 44.5
F : less than 40

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 assignments 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 (University Honor Code: <http://registrar.utexas.edu/catalogs/gi09-10/ch01/index.html>).

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 or labs. 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.

Religious Holy Days

By UT Austin policy, you must notify us of your pending absence **at least fourteen days prior to the date of observance of a religious holy day**. If you must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, you will be given an opportunity to complete the missed work within a reasonable time after the absence.

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 Division of Diversity and Community Engagement, Services for Students with Disabilities (Office of the Dean of Students) at 471-6259, or 471-6441 TTY (<http://www.utexas.edu/diversity/ddce/ssd/>). 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.

Prohibition of Sexual Harassment of Students

It is the policy of the University of Texas at Austin to maintain an educational environment free from sexual harassment and intimidation. Sexual harassment is expressly prohibited and offenders are subject to disciplinary action (<http://www.utexas.edu/student/registrar/catalogs/gen-info/appD.html>). The Office of the Dean of Students has been given the primary responsibility for responding to questions about and receiving complaints of sexual harassment of students.

Emergency Evacuation Policy

Occupants of buildings on The University of Texas at Austin campus are required to evacuate buildings when a fire alarm is activated. Alarm activation or announcement requires exiting and assembling outside. Familiarize yourself with all exit doors of each classroom and building you may occupy. Remember that the nearest exit door may

not be the one you used when entering the building. **Students requiring assistance in evacuation shall inform their instructor in writing during the first week of class.** In the event of an evacuation, follow the instruction of faculty or class instructors. Do not re-enter a building unless given instructions by the following: Austin Fire Department, The University of Texas at Austin Police Department, or Fire Prevention Services office.

Lecture schedule, topics, and reading assignments

<i>Date</i>	<i>Topic</i>	<i>Instructor</i>	<i>Reading (textbook)</i>
Aug. 24	Introduction to the course, History of oceanography	Dr. Min	Ch. 1
Aug. 31	The Earth and its oceans: basics	Dr. Min	Ch. 2
Sep. 07	Plate tectonics and the shapes of the ocean basins	Dr. Min	Ch. 3
Sep. 14	The sea floor: what's on the bottom?	Dr. Min	Ch. 4
Sep. 21	Seawater: properties and composition	Dr. Min	Chs. 5 and 6
Sep. 28	The structure and motion of the atmosphere: what drives ocean circulation?	Dr. Min	Ch. 7
Oct. 05	Ocean circulation	Dr. Min	Chs. 8 and 9
Oct. 12	Midterm exam	Dr. Min	
Oct. 19	Waves and tides	Dr. Akre	Chs. 10 and 11
Oct. 26	Coasts, beaches, and estuaries	Dr. Akre	Ch. 12
Nov. 02	Environmental concerns	Dr. Akre	Ch. 13
Nov. 09	Rules to live by: life in the ocean	Dr. Akre	Chs. 14 & 15
Nov. 16	Just driftin' along: marine plankton	Dr. Akre	Ch. 16
Nov. 23	Life at the top: fishes, marine mammals, and other big critters	Dr. Akre	Ch. 17
Nov. 30	Life on the bottom: the benthos	Dr. Akre	Ch. 18
Dec. 7-10, 12-13	Final Exam (time TBA)	Dr. Akre	

Laboratory schedule

Week	Laboratory
August 22 - 26	NO LABS
Aug. 29 – Sep. 02	LAB 1: Navigation
September 05 – 09	LAB 2: Bathymetry
September 12 – 16	LAB 3: Continental Drift and Plate Tectonics
September 19 – 23	LAB 4: Beach Profiles and Sediment Characteristics
September 26 – 30	LAB 5: Physical and Chemical Properties of Sea Water
October 03 – 07	LAB 6: Ocean Circulation
October 10 – 14	LAB 7: Waves and Tides

October 17 – 21	LAB 8: Marine Biological Processes and Trophic Relationships
October 24 – 28	LAB 9: Plankton and Introduction to Taxonomy
Oct. 31 – Nov. 04	LAB 10: Fishes and Adaptations to the Marine Environment
November 07 – 11	LAB 11: Benthos - Bottom Dwelling Invertebrates
November 14 – 18	LAB 12: Fisheries and the Fish Banks Game
November 21 – 25	NO LABS – Thanksgiving Holiday
Nov. 28 – Dec.02	LAB PRACTICAL - last week of classes

** NO LABS on Mondays

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