

EES-170: Blue Planet: Introduction to Oceanography

Summer 2013 (6/20-8/1)

GENERAL INFORMATION

Meeting Times: This is an online course. To access the course visit <https://elearning.uky.edu/webapps/portal/frameset.jsp> and log in to Blackboard with your LINK BLUE user name and password.

Instructor: Dr. Rebecca Freeman

Email: rebecca.freeman@uky.edu

Teaching Assistant:

Contacting us through email:

The quickest and most efficient way for us to help you is through email. We will usually respond to email within a few hours during the daytime, and always within 24 hours.

Please be aware that if you email us from your gmail/aol/yahoo/etc. personal account, UK email is likely to consider it spam and we may not get your email. It is better to use your UK account. You may also use the Send Email option in Blackboard.

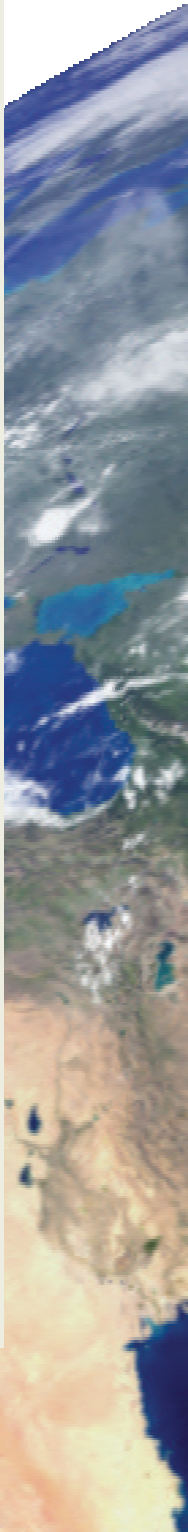
Required Materials: An Introduction to the World's Oceans, Keith A. Sverdrup and E. Virginia Armbrust, 10th edition. ISBN 978-0-07-337670-7; ISBN 0-07-337670-1. The textbook offers many online resources that can be helpful: <http://highered.mcgraw-hill.com/sites/0073376701/>. This textbook is also available as an e-textbook.

Several exercises require the use of the free, simple software Google Earth and Geo-MapApp. It is your responsibility to download the software and become moderately proficient in the basic applications of it.

Download Google Earth at <http://www.google.com/earth/index.html>

Download GeoMapApp at <http://www.geomapapp.org/>

During the semester we will also watch two movies, Blue Planet: Deep Sea and Blue Planet: Tidal Seas. Both are available from amazon.com for instant rental for 1.99 each.



Course Description: This class is a survey of oceanography, including the geologic evolution of the ocean floor, the composition and dynamics of ocean water, and interaction of the lithosphere with the hydrosphere. We will also discuss ocean-atmosphere interaction and oceanic controls on climate dynamics. We will explore marine life and ecosystems and the impact of human activity on marine ecosystems.

Learning Outcomes of this Course: Upon completion of this course, students will be able to:

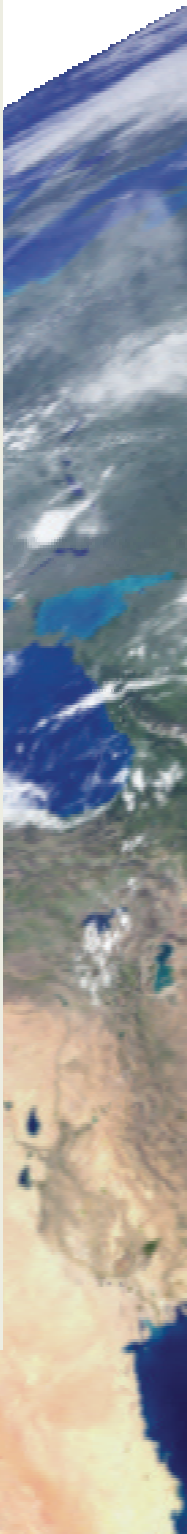
- Comprehend the properties and behavior of marine systems as demonstrated by performance on objective examinations.
- Demonstrate the ability to clearly explain the relationship among the hydrosphere, lithosphere, biosphere, and atmosphere, through short-answer essay questions
- Analyze and interpret simple but meaningful data sets that quantify aspects of ocean behavior (past, present, and future).
- Evaluate the accuracy and objectivity of scientific information presented in various media formats (television, video, print, electronic).
- Relate ocean dynamics to long term climate variations such as global warming and local weather phenomena such as droughts

ASSIGNMENT SCHEDULE

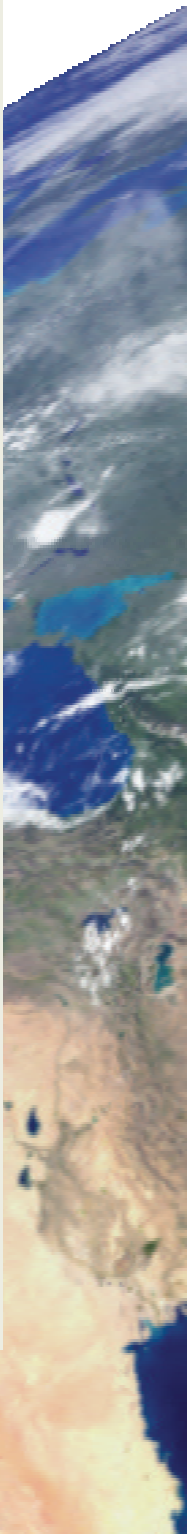
Each activity is to be completed by 5pm Eastern Standard Time on the date listed. For lectures, completing the associated on-line quiz constitutes finishing the assignment. For homework Exercises, uploading your completed work constitutes finishing the assignment. All lectures and assignments for the week will be posted on the previous weekend and must be turned in by the due date, although feel free to turn them in early.

Expect to spend a minimum of four hours every week day working on this material, and more time as needed. The textbook is to be used as a supplemental resource, and relevant reading assignments are given at the beginning of each lecture.

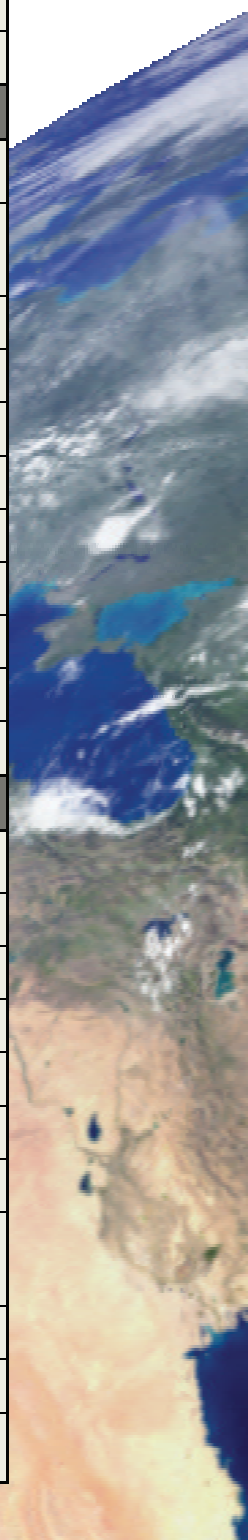
The suggested order for working through a lecture is A) Listen to and watch lecture. B) Look up material in textbook to get further explanation of concepts you don't understand. C) Make a study guide, notes, or an outline of what you think is important as you review the slides. (The lectures will also be available as slides-only files, without audio.) D) Take online quiz.



DUE ON:	Week One
6/20	Lecture 1: The Water Planet
	<i>Exercise 1: Quiz over Syllabus</i>
6/21	Lecture 2: Mapping the Planet, Mapping the Ocean
	<i>Exercise 2: Introduce Yourself</i>
	<i>Exercise 3: Latitude and Longitude</i>
DUE ON:	Week Two
6/24	Lecture 3: Features of the Planet: Layers
	Lecture 4: Features of the Planet: The Rock Cycle & the Crust
6/25	Lecture 5: Plate Tectonics: A History
	Lecture 6: Plate Tectonics: Divergent Plate Boundaries
6/26	<i>Exercise 4: Calculate the rate of seafloor spreading</i>
	Lecture 7: Plate Tectonics: Convergent Plate Boundaries
6/27	Lecture 8: Transform Plate Boundaries & Mantle Plumes
	<i>Exercise 5: Learn how to use Google Earth</i>
6/28	Lecture 9: The Seafloor and its Sediments
	Lecture 10: Resources on the Seafloor
DUE ON:	Week Three
7/1	Lecture 11: Water
	<i>Exercise 6: Review the properties of water</i>
7/2	Lecture 12: The Chemistry of Seawater
7/3	Lecture 13: The Atmosphere & its Relationship to the Hydrosphere
	<i>Exercise 7: Read and write about increasing CO₂ in the ocean</i>
7/4	HOLIDAY! OFF FOR THE FOURTH OF JULY!
7/5	Lecture 14: What drives deep ocean circulation?
	Lecture 15: Deep Circulation of the World's Oceans



DUE ON:	Week Four
7/8	Lecture 16: Shallow Ocean Circulation
	Lecture 17: Eddies, Langmuir Cells; Rapid Climate Change
7/9	Lecture 18: The Formation and Anatomy of Waves
	<i>Exercise 8: Use Google Earth to explore the features of the seafloor</i>
7/10	Lecture 19: The Interaction Between Waves and Coasts
7/11	Lecture 20: How Tides Affect the Ocean
	<i>Exercise 9: Use Google Earth to explore relationships between ocean current, sea sur-</i>
7/12	Lecture 21: Erosion & Deposition Along Coastlines
	Lecture 22: Primary & Secondary Coastlines
DUE ON:	Week Five
7/15	Lecture 23: Longshore Drift & Landforms Associated with Erosion & Deposition Along a Shore
	Lecture 24: The Beach Budget and Dealing with Coastal Erosion
7/16	Lecture 25: Estuaries
	<i>Exercise 10: Use Google Earth to explore features of the shoreline.</i>
7/17	Lecture 26: Estuary Case Studies: Chesapeake Bay and Lake Pontchartrain
	Lecture 27: Ocean Pollution
7/18	Lecture 28: The Gulf of Mexico Dead Zone; Plastic Trash
	<i>Exercise 11: Learn how to use GeoMapApp to explore and map the seafloor.</i>
7/19	Lecture 29: Marine Wetlands; Ocean Dumping
	Lecture 30: Oil Spills, Invasive Species
DUE ON:	Week Six
7/22	Lecture 31: Ocean Environments & the Organisms that Live in Them
	Lecture 32: Aspects of Life in the Ocean
7/23	Lecture 33: The Ecology of the Ocean
	<i>Exercise 12: Use GeoMapApp to explore life in extreme places.</i>
7/24	Lecture 34: The Ecology of the Ocean: Food Webs & the Biological Pump
	Lecture 35: Life in the Ocean: The Phytoplankton
7/25	Lecture 36: Life in the Ocean: The Zooplankton and Bacterioplankton; Problems with Plankton
	<i>Exercise 13: Watch and answer questions about Blue Planet: Tidal Seas</i>
7/26	Lecture 37: Life in the Ocean: The Nekton (Whales!)
	Lecture 38: Life in the Ocean: The other Nekton



DUE ON:	Week Seven
	Lecture 39: Life in the Ocean: The Benthos (What lives on the seafloor?)
7/29	Lecture 40: Life in the Ocean: The Benthos (How do organisms live on the seafloor?)
7/30	<i>Exercise 14: Use East Pacific Rise Data and GeoMapApp to test your hypothesis about</i>
7/31	<i>Exercise 15: Watch and answer questions about Blue Planet: Deep Sea</i>
8/1	Last day of Class: Last Day to Resolve Issues

POLICIES: GRADING

Activity	Percentage of Overall Grade
Lecture Quizzes- three dropped	60%
Homework Exercises- two dropped	40%

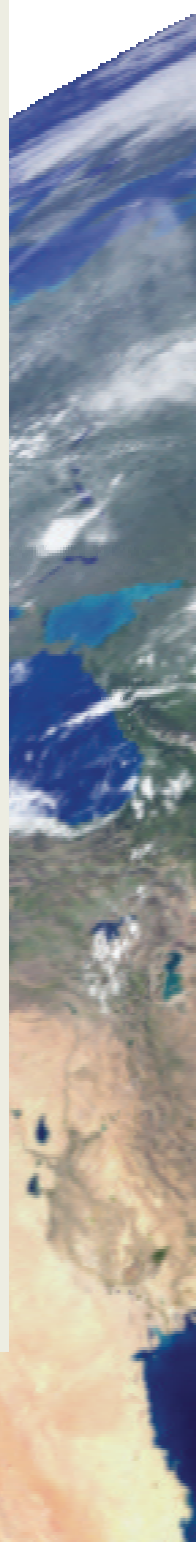
Lecture Quizzes: These will count as 60% of the grade.

There will be a short on-line quiz after each lecture. You can use notes and books but be aware that they are timed, so if you don't know the material well, **you will not have time to look it up**. Additionally, many of the questions are application questions with answers not easily found via Google.

Three of the Lecture Quizzes will be dropped, so no make-ups will be given, *even for excused absences* (except university-related travel).

Homework Exercises: These will count as 40% of the grade.

Homework exercises will be posted on Blackboard and you will submit your work on Blackboard. Submissions via email will not be graded. If you have problems submitting an assignment it is your responsibility to let your instructor know. Assignments **MUST** be submitted as Microsoft Word files. All filenames should use alpha-numeric characters (a-z, 0-9) before the file extension. Example: AdamsSamExercise2.doc. Blackboard does not accept file names with characters like !@#%\$.



Two of the Homework Exercise Grades will be dropped, so no make-ups will be given, even for excused absences (except university-related travel).

Midterm Grades: Midterm grades will be posted in myUK if that option is made available. (<http://www.uky.edu/Registrar/AcademicCalendar.htm>) You should also constantly monitor your grade on Blackboard.

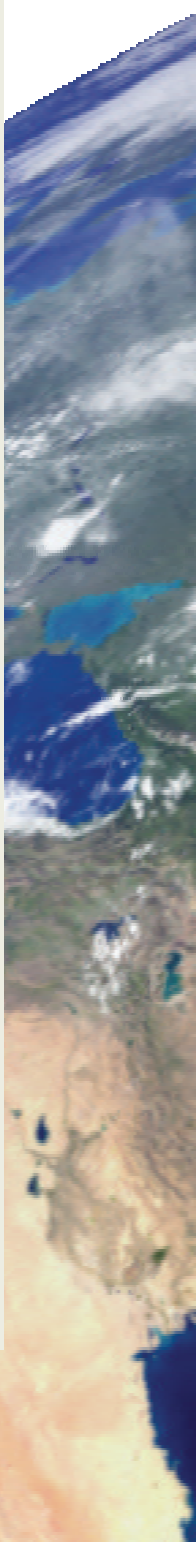
Assignment of Final Grade: I assign grades on the following scale: 90–100% is an A; 80–89% is a B; 70–79% is a C; 60–69% is a D; below 60% is failing.

IS YOUR COMPUTER READY FOR AN ONLINE COURSE?

Minimum technology requirements: Complete the following steps to make sure your computer is correctly configured and the necessary software is installed. Note: You may not be able to access course material if you do not complete these steps.

1. Go to this site and check the minimum hardware, software, and browser requirements: <http://wiki.uky.edu/blackboard/Wiki%20Pages/Bb9%20Hardware%20and%20Software%20Requirements.aspx>
2. Internet Explorer is NOT recommended for Blackboard. Firefox is the recommended Internet browser for the course. Go to <https://download.uky.edu/> to download a free version of Firefox. Log in with your LINK BLUE id and password and search for **Firefox**.
3. Go to <http://java.com/en/> and click on the free Java Downloads button. Run the installer to get the latest version.
4. You will also need Flash, Adobe Acrobat Reader, Windows Media Player and Quicktime, and Adobe Shockwave. Go to <http://wiki.uky.edu/blackboard/Wiki%20Pages/Browser%20Eye%20Chart.aspx> to see if they are working properly on your computer. If they are not, you can download them from this website.

Computer troubles? If you experience technical difficulties contact the Customer Service Center at 859-218-HELP (4357) or by e-mail at helpdesk@uky.edu. Please also inform the course instructor when you are having technical difficulties.



POLICIES: ACADEMIC ACCOMMODATION DUE TO DISABILITY

If you have a documented disability that requires academic accommodations, please see me as soon as possible during scheduled office hours. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (Room 2, Alumni Gym, 257-2754, email address: jkarnes@email.uky.edu) for coordination of campus disability services available to students with disabilities.

POLICIES: STUDENT RESPONSIBILITIES

Absences: Keeping up with assignments is essential to earning a good grade. Several of the Lecture Quizzes and Homework Exercises are dropped, therefore there are no make-ups **including for excused absences** (except for university-sponsored trips). I encourage you to take responsibility for your own grade and to make your own decisions regarding when, *and if*, it is necessary to skip assignments.

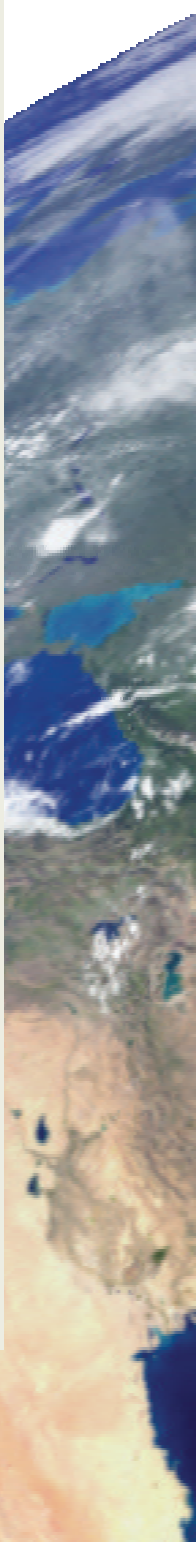
Problems associated with your computer, procrastination, or forgetfulness are not acceptable excuses for late submission of assignments. It is YOUR responsibility to make sure you access and submit the assignments in time. Computers do have a tendency to crash at the worst possible moment, so you should think of a back-up plan ahead of time, just in case.

Students anticipating an absence for a major religious holiday are responsible for notifying the instructor in writing of anticipated absences due to their observance of such holidays no later than the last day in the semester to add a class. Information regarding dates of major religious holidays may be obtained through the religious liaison, Mr. Jake Karnes (859-257-2754).

Students are expected to withdraw from the class if more than 20% of the assignments scheduled for the semester are missed (excused or unexcused) per university policy.

Online Conduct: Students are expected to maintain decorum that includes respect for other students and the instructor, to regularly log in to the class, and to display an attitude that seeks to take full advantage of the educational opportunity.

Virtual communication and discussion “in cyberspace” occur in a social environment where normal rules of social interaction apply. Unacceptable messages include those that harass, threaten, belittle, ridicule, express hatred for, or aggression towards others. Discussion board and other electron-



ic communication for this course should relate only to the course subject matter.

Contributions to discussion boards and synchronous chat are the intellectual property of the authors. Students who quote another person should always acknowledge the source of that quote. Do not copy private messages to another person without the author's explicit permission.

Academic Honesty: Per university policy, students shall not plagiarize, cheat, or falsify or misuse academic records. Students are expected to adhere to University policy on cheating and plagiarism in all courses. The minimum penalty for a first offense is a zero on the assignment on which the offense occurred. If the offense is considered severe or the student has other academic offenses on their record, more serious penalties, up to suspension from the university may be imposed.

Plagiarism and cheating are serious breaches of academic conduct. Each student is advised to become familiar with the various forms of academic dishonesty as explained in the Code of Student Rights and Responsibilities. Complete information can be found at the following website: <http://www.uky.edu/Ombud>. A plea of ignorance is not acceptable as a defense against the charge of academic dishonesty. It is important that you review this information as all ideas borrowed from others need to be properly credited.

Part II of Student Rights and Responsibilities (available online <http://www.uky.edu/StudentAffairs/Code/part2.html>) states that all academic work, written or otherwise, submitted by students to their instructors or other academic supervisors, is expected to be the result of their own thought, research, or self-expression. In cases where students feel unsure about the question of plagiarism involving their own work, they are obliged to consult their instructors on the matter before submission.

When students submit work purporting to be their own, but which in any way borrows ideas, organization, wording or anything else from another source without appropriate acknowledgement of the fact, the students are guilty of plagiarism. Plagiarism includes reproducing someone else's work, whether it be a published article, chapter of a book, a paper from a friend or some file, or something similar to this. Plagiarism also includes the practice of employing or allowing another person to alter or revise the work which a student submits as his/her own, whoever that other person may be.

Students may discuss assignments among themselves or with an instructor or tutor, but when the actual work is done, it must be done by the student, and the student alone. When a student's assignment involves research in outside sources of information, the student must carefully acknowledge exactly what, where and how he/she employed them. If the words of someone else are used, the student must put quotation marks around the passage in question and add an appropriate indication of its origin. Making simple changes, while leaving the organization, content and phraseology intact, is plagiarism. However, nothing in these Rules shall apply to those ideas which

are so generally and freely circulated as to be a part of the public domain (Section 6.3.1).

Please note: Any assignment you turn in may be submitted to an electronic database to check for plagiarism.

General Conduct: The university, college, and department has a commitment to respect the dignity of all and to value differences among members of our academic community. There exists the role of discussion and debate in academic discovery and the right of all to respectfully disagree from time-to-time. Students clearly have the right to take reasoned exception and to voice opinions contrary to those offered by the instructor and/or other students (S.R. 6.1.2). Equally, a faculty member has the right—and the responsibility—to ensure that all academic discourse occurs in a context characterized by respect and civility. The accepted level of civility would not include attacks of a personal nature or statements denigrating another on the basis of race, sex, religion, sexual orientation, age, national/regional origin or other such irrelevant factors.

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