

Syllabus: Ocean Sciences

Geosciences 412A

Spring Semester, 2007

Tues.-Thurs., 9:30-10:45, GS 213

Instructors:

Julia Cole – Professor, Gould-Simpson 345, jecole@email.arizona.edu, 626-2341
Office Hours: Monday 2-3, and by appointment (open door policy)

Jessica Conroy - Teaching Asst., Gould-Simpson 350, jconroy@email.arizona.edu
Office hours: Thursday 1-2 PM and additional times for specific exercises;
also by appointment.

TEXT: P.R. Pinet, *Invitation To Oceanography* 4th ed. plus selections from the scientific and popular literature.

WEB SITE: The class web site can be found at <http://www.geo.arizona.edu/geo4xx/geos412A>. You can also access this through the Dept. of Geosciences list of course websites. At this site you can find all lecture outlines, handouts, assignments, etc. The readings section (and perhaps others) will be password-protected and the password given out in class. Please check the website regularly; updates and important announcements will be posted on the home page.

COURSE PHILOSOPHY AND GOALS: This course offers an overview of the ocean sciences for undergraduate students with some scientific background. This course will broaden the exposure of UA undergraduates to marine science in a cross-disciplinary context. Students considering a career or graduate school in marine science will find this class a useful preview of the different areas of marine science, and students interested in natural or environmental sciences will gain a better understanding of the many linkages between the ocean and the broader natural world. We will cover the role of the ocean in diverse components of the Earth system, including geological, biological, climatic, and human aspects. Examples of themes we'll cover include:

- The origin and nature of the ocean basins
- Waves, tides, tsunamis and coastal processes
- The organisms that live in the ocean, their ecological communities and their interactions
- The ocean's role in climate variability and climate change
- Marine resources and human influences on the oceans

The prerequisite for this class is at least one year of a natural science class for majors (not NATS). Assignments will include quantitative problem sets and web-based data analyses.

GRADING: I base final grades strictly on a points system. The final grade depends on your performance on a midterm and final exam (20% each), on your completion of homework assignments given throughout the semester (50%) and on an in-class

presentation you will give toward the end of the semester (10%). I also require attendance on a 3-day field trip to San Carlos, Mexico (this is wrapped up in the 50% "homework" part). A less than fun makeup assignment will be possible if you really can't make the trip, but I strongly discourage this option. Final letter grades will be given on a percentage basis, according to a standard curve:

90-100% = A
80- 89% = B
70- 79% = C
60- 69% = D
<60% = E

CLASS FORMAT: Each week, I will give two 75-minute lectures. Some weeks the "lecture" may actually be a discussion or demonstration. The last 3 lecture periods will be devoted to student presentations (see below) To do well in class you must attend lecture and take notes. The homework substitutes for a lab, for which you are receiving credit but which we could not schedule originally because of uncertainty as to whether this course would be assigned a TA. Jessica (your TA) will hold scheduled times when she will be available to answer questions. For a small number of homework assignments we will also schedule times when you can access equipment or supplies that may be needed to complete the assignment. We also have one 3-day field trip required of all students to San Carlos, Mexico, tentatively scheduled for April 20-22 (Fri.-Sun.) on which we will collect data used in subsequent exercises (details to follow).

STUDENT PRESENTATIONS On the last 3 days of classes (Apr 24, 26 and May 1) each of you will be required to give a presentation on a subject of your choice related to Gulf of California oceanographic, resource or environmental issues. The presentation must be based on at least 2 refereed journal articles (preferably more), in which you synthesize original research work that has been done on your chosen topic. You should prepare your talk using Powerpoint and distribute a handout (with bibliography) to the class. Presentations grades (worth 10% of your final grade) will be based on technical content, organization, and preparedness. Please see me no later than April 3 to discuss a topic.

LEARNING AND TESTING DISABILITIES: If you have a disability that requires specific accommodations, please inform me through the Disability Resource Center, and I will work with you to provide the accommodations that you need.

ACADEMIC DISHONESTY:

The guiding principle of academic integrity is that your submitted work must be your own.

I expect you to be familiar with the UA Code of Academic Integrity (<http://w3.arizona.edu/~studpubs/policies/cacaint.htm>) and I expect that you agree to abide by it. If you do not agree with the definitions, principles, policies and procedures set out in this code, you must drop this course. Your continued

enrollment in this course indicates that you agree to follow the UA Code of Academic Integrity.

Conduct prohibited by the Code consists of all forms of academic dishonesty, including, but not limited to: cheating, fabrication, facilitating academic dishonesty, and plagiarism as set out and defined in the Code of Conduct, ABOR Policy 5-308-E.10 and F.1; submitting an item of academic work that has previously been submitted without fair citation of the original work or authorization by the faculty member supervising the work; modifying work to obtain additional credit in the same class unless approved in advance by the faculty member; failure to observe rules of academic integrity established by a faculty member for a particular course. For homework assignments, it is allowable to work with another classmate to understand the problems but the written answers should be in your own words (i.e. not copied between students).

Any attempt to commit an act prohibited by these rules shall be subject to sanctions to the same extent as completed acts.

If you cheat in my class, I will impose some or all of the following sanctions: loss of up to twice the credit for the work involved, reduction in grade, a failing grade in the course. I may also recommend suspension or expulsion to a University Hearing Board, which may impose other sanctions. Group study is permitted, but all materials submitted for credit must reflect your own independent work. Collaboration on assignments is permitted, but answers must be in your own words and reflect your own independent efforts! Homework sets that are identical or nearly identical will be treated as evidence for academic dishonesty on the part of all students involved.

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