

GLG 140: Introduction to Oceanography
Instructor: Dr. Nan Schmidt

Fall 2006 T/Th 8:40-11:20am
Room SCI 136

Contact Info: Office hours: Tues/Thurs 8:10-8:40am in SCI 136 or by appointment.
nan.schmidt@pima.edu, office phone 206-7140, or leave message at Math &
Science Office, 206-6031, 2nd floor of the Tortolita Building. Website
address: <http://dtc.pima.edu/~nschmidt>

Required Texts: Pinet, P.R. 2006. *Invitation to Oceanography*. Fourth Edition. Jones and
Bartlett Publishers, Sudbury, MA.

GLG 140 Intro to Oceanography Lab Manual and Notes

Course Description: Introduction to the study of oceans. Includes scientific measurements,
lab techniques, and the scientific method, introduction to oceanography, geological, chemical,
physical and biological oceanography, and the human presence in the ocean. See
<http://www.pima.edu/courses/lists> and click on *Geology* to view complete course outline &
objectives.

Instructional Delivery: Two connected lecture and lab sessions per week. Most sessions will
contain both lecture and lab activities; lab is designed to support or teach content—it is not
a separate entity. Exams will cover both lecture and lab content.

Attendance: You are expected to come to class on time and stay for the entire class period.

Acceptable Behavior: You are expected to abide by the College's Student Rights and
Responsibilities (<http://www.pima.edu/~coadmissions/studresp.htm>). Breaches in
scholastic ethic (e.g. cheating and plagiarism [see attachment]) will be dealt with severely.
You are expected to do your own work, be honest, and not be disruptive or disrespectful of
others. Please be courteous in class; turn off cellular phones, beepers, headphones, etc.

Evaluation: In order to determine whether this course is meeting its objectives, a variety of
classroom assessment techniques will be used. These may include but are not limited to
multiple choice, short answer, or essay tests regarding your comprehension of the material
presented in class, group or individual oral reports, discussions, brainstorming,
demonstrations of laboratory techniques, and group or individual written reports.

Because this course fulfills a general education requirement, I also will use assessment
techniques to determine whether your skills have improved in at least one of the following
areas: oral and written communication, critical inquiry, or global awareness.

Grades: Grades are calculated on the standard scale (A=90-100%, B=80-89%; C=70-79%;
D=60-69%; F=<60%). A Grade Tracking Sheet is provided.

Posting of Grades: Grades will be posted anonymously using a personal identification number
(PIN) supplied by the student. Posting grades allows students to track their grade throughout
the semester (and to double-check my bookkeeping). If you do not wish your grades to be
posted in this manner, please inform the instructor.

Lab Policies: In keeping with state regulations for laboratory safety, you must wear
approved safety goggles when it is called for in the laboratory (we will provide these), you

must keep the lab space free of food and drinks, and you must dispose of all sharp instruments, glassware, and chemicals in the prescribed manner. Only registered students are allowed to attend classes.

Make-up and Late Assignment Policy: Tests are given in the first 30 minutes of class and cannot be made up unless prior arrangements are made with your instructor. Unless otherwise stated, late assignments are penalized 25% of the grade and only will be accepted **within one week past the due date** of the assignment. The make-up policy for labs depends on the type of lab (hands-on activity, interactive computer simulation, class participation activity, etc.) and will be announced in class.

Americans with Disabilities Act: Pima Community College District strives to comply with the provisions of Title III of the Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973. Students with disabilities requiring special accommodations are strongly encouraged to notify the instructor at the beginning of the semester so that appropriate verification and identification of reasonable accommodations may be made in a timely manner. Accommodations cannot be made without verification of need. One or more field trips are planned tentatively during the course. A reasonable accommodation will be provided unless it creates an undue hardship or is not possible. Total participation may be denied for education and safety reasons, and an alternative activity will be provided.

Official Withdrawal (W): **November 6** is the last day to change to "Audit" or to withdraw with a grade of "W." Students who fail to attend 3 consecutive classes without notifying the instructor may be withdrawn.

Special Withdrawal (Y): Y grades may be given at the instructor's discretion following a **written request** by the student on the approved form. I generally do not give out Y grades. A Y grade may have no immediate effect on your grade point average, but may affect 1) your financial aid and/or veteran's certification status and 2) your admission into limited enrollment programs at other institutions.

Incomplete (I): The incomplete grade (I) is given to the student who is on track all semester but is unable to complete the final portion of the course due to an unforeseen event. A grade of "I" will only be given if all following requirements are met.

- You must have a grade average of C or better.
- You must have completed at least 75% of the coursework.
- You must provide valid documentation showing a medical or other reason for needing an incomplete.

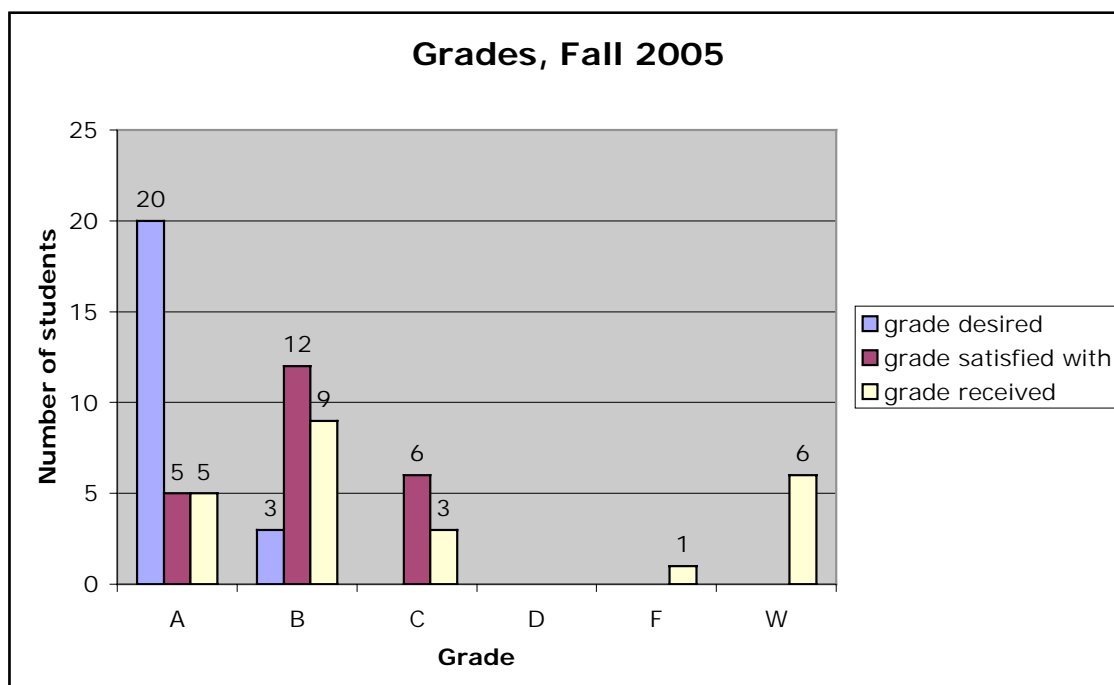
The final decision for awarding an "I" rests with the instructor. Being behind or overwhelmed with work is NOT a valid reason for an "I." To receive a grade of "I," the student must make the request to the instructor, Nan Schmidt, and fill out the required forms. The last day to request an "I" is the same as the final exam.

Course Objectives:

Upon completion of the course, the student will be able to do the following:

1. Perform activities to demonstrate improvement in the general education goals of communication and global awareness.
2. Demonstrate the correct use of a microscope and the ability to measure mass, length, and volume in metrics using appropriate scientific measurement tools.
3. Use the scientific method to design and conduct an experiment.
4. Discuss the history and significance of oceanography.
5. Describe how scientists study the oceans.
6. Discuss the relationship of plate tectonic theory to ocean basins.
7. Compare and contrast marine sediments, their origins, and their relationship to ocean basins.
8. Discuss the roles of salinity, density, and dissolved gases in the ocean.
9. Describe and contrast wind-driven ocean currents and thermohaline circulation.
10. Discuss the types and motions of waves in the ocean.
11. Identify the models of and types of tides on Earth.
12. Compare and contrast nearshore environments, such as estuaries and coral reefs, and human impacts on them.
13. Identify the basic biological habitats in the ocean, their associated biota, and their role in ocean productivity.
14. Discuss how humans use and alter the oceans.

Just FYI



Week of	Tuesday	Thursday	Chapters covered
Aug. 21	No class	Course Info, Lecture 1, Map activity	1, 2
Aug. 28	Lab 1: Scientific Method	Test 1, Lecture 2	3
Sep. 4	Lab 2: Sea-floor mapping	Test 2, Lecture 3, finish Lab 2	4
Sep. 11	Lab 3: Sediment analysis: part 1	Test 3, Lecture 4, Density activity, work on Lab 3	5
Sep. 18	Lab 4: Sediment analysis, part 2, Controversy Report Question due	Test 4, Lecture 5, Currents and winds activity, work on Lab 4	6
Sep. 25	Test 5, Lecture 6, work on Controversy Report	Lab 5: Where am I, Again?	7, 8
Oct. 2	Test 6, Lecture 7, Blue Ocean show	Lab 6: Survey of marine organisms	9
Oct. 9	Test 7, Lecture 8, Jeopardy questions due	Lab 7: Food webs and trophic dynamics; Ecobeaker: Islands and natural selection	10
Oct. 16	Test 8, Lecture 9, work on Lab 7	Lab 8: Jeopardy!; Controversy Outline due	11
Oct. 23	Test 9, Lecture 10, extra credit Barnacles?	Lab 9: Ecobeaker: Island Biogeography; work on Controversy Report	12
Oct. 30	Test 10, Lecture 11, extra credit Food Webs?	Lab 10: Ecobeaker: Oil Spills, work on Controversy Report	13
Nov. 6	Test 11, Lecture 12, Revised Controversy Outline due	Lab 11: Fisheries	14
Nov. 13	Test 12, Lecture 13, extra credit Eating Fish?	Lab 12: Habitat Lab, Part 1; Jeopardy, II! questions due	15
Nov. 20	Test 13, Lab 13: Habitat Lab, Part 2	Thanksgiving holiday	
Nov. 27	Lab 14: Jeopardy, II!, work on final presentations	Work on final presentations, help with Powerpoint	
Dec. 4	Final Presentations	Final Presentations, review for Optional Comprehensive Final	
Dec. 11	Optional Comprehensive Final	No class	

GLG 140 Intro to Oceanography Grade Tracking Sheet, Fall 2006

Tests/Assignments: 12 (out of 13 offered) @ 40 pts each = 480 pts.

Test 1 _____	Test 6 _____	Test 11 _____
Test 2 _____	Test 7 _____	Test 12 _____
Test 3 _____	Test 8 _____	Test 13 _____
Test 4 _____	Test 9 _____	
Test 5 _____	Test 10 _____	

Laboratories and other work: 260 pts.

Class Activities = 3 @ 5 pts each = 15 pts

Mapping _____ Density _____ Winds/Currents _____

Laboratories = 160 pts

14 (out of 15 offered, can't drop labs 3 or 4).

- 1. Scientific Method 10 pts _____
- 2. Sea-Floor Mapping 10 pts _____
- 3. Sediment Analysis Part 1 20 pts _____
- 4. Sediment Analysis Part 2 20 pts _____
- 5. Where am I? 10 pts _____
- 6. Survey of Marine Organisms 10 pts _____
- 7. Ecobeaker: Islands & Natural Selection 10 pts _____
- 8. Food Webs and Trophic Dynamics 10 pts _____
- 9. Jeopardy! Game 10 pts _____
- 10. Ecobeaker: Island Biogeography 10 pts _____
- 11. Ecobeaker: Oil Spills 10 pts _____
- 12. Fisheries Lab 10 pts _____
- 13. Habitat Lab Part 1 10 pts _____
- 14. Habitat Lab Part 2 10 pts _____
- 15. Jeopardy, II! 10 pts _____

Controversy Report and Presentation = 85 pts

Controversy Question (5 pts) _____

Controversy Outline (40 pts) _____

Presentation (40 pts): _____

OPTIONAL COMPREHENSIVE FINAL EXAM

Any points above 70 on the final will be added to your total exam points _____

EXTRA CREDIT ACTIVITIES

Miscellaneous extra credit activities _____

FINAL GRADE:

Total points earned _____/740 total points possible = _____ * 100 = _____%

A = 740-666 B = 665-592 C = 591-518 D = 517-444 F < 444