OCEANOGRAPHY 100: OCEANOGRAPHY LECTURE (TTh)

Palomar College — Spring 2013

Instructor: Mr. Al Trujillo

Course Content

As a survey course, the content provides a foundation in science by examining oceanographic concepts, including the study of geologic, chemical, physical, and biologic oceanography. We will learn about how all the various disciplines of science are applied to the ocean in unique ways. Some topics include:

- Is the ocean's bottom really more important than the moon's behind?
- Where is Earth becoming unzipped?
- Why are diatoms the most important things you've (probably) never heard of?
- Why is iodine a "necessary nutrient"?
- What does an El Niño have to do with the price of eggs?
- How big was the biggest wave in recorded history?
- When was the last time syzygy was experienced?
- What is the best thing to do if you're caught in a rip current?
- Are San Diego County beaches starved?
- Is dilution the solution to ocean pollution?
- How likely is it to be attacked and killed by a shark?
- Which whales have a moustache?

This interdisciplinary science course has a wide diversity of subject matter (which is one of the reasons I like teaching it). The key point is to gain an understanding and appreciation of the dynamic processes that control the world's oceans (*how the oceans work*).

Contact Information

Instructor's Office: EC–808C Escondido Center
Office Hours: MW 8:00-9:00 am online via e-mail; Tu 10:45-11:45am and 1:15-2:15 pm; 1 live office hour online TBA weekly; and also by appointment
Office Phone: (760) 744–1150 ext. 2734
Instructor's e-mail address: atrujillo@palomar.edu
Instructor's Website: http://www2.palomar.edu/users/atrujillo/
Course Blackboard site: http://www.palomar.edu/blackboard/

If you leave me a message, I will try to respond to it within 24 hours but not later than 48 hours. Please keep me informed about significant events that affect your attendance in class. I tend to work with students who keep me informed; otherwise, I'm not very forgiving about students missing important class meetings. If you need to talk to someone on the San Marcos campus when I am not around, contact the Earth, Space, and Aviation Sciences Office at (760) 744-1150 ext. 2512. Brenda, the department secretary, is on campus weekdays from 7:30 a.m. to 4:00 p.m.

Teaching Philosophy

I truly believe that each student determines his or her own grade. In reality, I'm not the main factor in the outcome of your grade—you are. I encourage you to work hard to achieve the grade that you want, and to utilize me as your instructor to help facilitate your learning. This course is hard work but I will try my best to make the course interesting and worthwhile. I love teaching and I'm interested in helping you learn about the science of oceanography.

Textbooks and Other Supplies

1. Required: *Essentials of Oceanography 10th Edition*, Trujillo and Thurman (© 2011) (new editions include access to the Online Study Guide and Student Animations CD). Note that there are many purchase options (e.g. regular bound text, loose-leaf version, eText); see the document "Suggested Options for Purchasing Oceanography 100 Lecture Textbook."
2. Required: Access to the *Essentials of Oceanography* Online Study Guide (comes free with a new textbook; otherwise, it can be purchased online for $30 or $93.85 with e-text)

Textbooks and Other Supplies (cont.)

Since I am the lead author for the textbook for this course, I will rely extensively on material from the textbook. Textbooks should be brought to each class meeting (to refer to figures in the text as they are discussed in class), as well as a few colored pencils or colored markers (for annotating drawings done in class).

Point Totals

5 Exams @ 40 points each	= 200 points
8 Internet Assignments @ 10 points each	= 80 points
1 Writing Assignment: Article Review	= 50 points
1 comprehensive Final Exam @ 100 points	= 100 points
TOTAL	430 points

Exam Info and Make-up Policy

All exams will covers 3 chapters in the textbook and consists of a total of 40 multiple choice and true-false questions plus map locations that will be submitted on a scan-tron answer sheet. You'll need to bring a scan-tron (#882, 100 questions) and a #2 pencil to each exam. We will have an exam every third week during the last 30 minutes of class (see schedule below). The Final Exam is comprehensive (covers all chapters) and consists of a total of 100 multiple choice and true-false questions from all parts of the course plus map locations. Make-up exams for any missed exam will be on the final exam date, immediately after the final exam.

Internet Assignments

Internet assignments will relate to topics covered in class and consist of a project to be completed outside of normal class time. These assignments require you to have Internet access either at home or at any publicly available place (such as at Palomar's library). The Internet assignments will be posted at the course Blackboard site and you must upload your assignment online by the due date. The due date of each Internet assignment will vary; generally, you'll have about one week to complete each one.

Writing Assignment

The writing assignment consists of writing a 1500-word (minimum) paper about a topic in oceanography of your choosing using 5 current articles. You will need to submit your assignment at the course Blackboard site through the SafeAssignment software program that checks for Web plagiarism. See the Writing Assignment and plagiarism handouts for more details.

Handouts

During the semester, you will receive several handouts from me. I will have the handout for the class meeting that the handout is used plus the next class meeting. After that time, it is your responsibility to get any handouts from another student for any missed class. In addition, it is your responsibility to get any notes and assignments from another student for any missed class.

Grading Scale

A = 90%
B = 80%
C = 65%
D = 55%
F = below 55%

I may lower this grading scale for your benefit, but I will not raise it. I don't have a problem giving out a lot of high grades, as long as students are willing to work for them.

Extra Credit

There will be a few opportunities to earn extra credit points during the semester. In the past, extra credit points have be awarded for attending talks given by speakers, for participating in beach clean-up days, for reviewing a chapter in the textbook or the Online Study Guide, for computer projects, for in-class quizzes, and for other oceanography-related activities. Class attendance is important for knowing when extra credit opportunities become available (no make-ups on any missed extra credit!).

Classroom Etiquette: Attendance, 2-Minute Rule, Preparation, and Cell Phone Usage

Class time is valuable to me and I try to make efficient use of the time we have together. I highly recommend that you attend class regularly—you won't be able to succeed in this class if you don't. Please arrive on time for class meetings. Beginning the second week of the semester, I will enforce a "*2-minute rule*"—**don't disturb the class by arriving more than 2 minutes late.**

Also, you'll need to be well prepared when you come to class. This means bringing supplies that will be used that day and reading the required material beforehand. We will be doing several group projects in class together so you'll be working with classmates on a regular basis. Since your group will depend on you doing your part, your group will be displeased if you are not prepared and they may decide to work with others.

I encourage you to ask questions in class, but unnecessary talking will not be allowed. I'm not so concerned about your lack of attention in class, but I know that your talking does bother other students who are here trying to learn. In addition, it annoys other students when you rustle papers and notebooks trying to get ready to leave near the end of class time. Don't worry, I will let you out of class on time. Only rarely will you ever get out of class early. Also, please **turn off your cell phone** or other portable electronic device before you arrive in class; otherwise, if it rings or is used during class time, it becomes my property for an undetermined period of time.

Field Trips

Field trips are not offered in conjunction with the lecture portion of this course. However, the optional one-unit Oceanography 100 Lab course is very field-oriented and I would encourage you to enroll in the lab course concurrently (during the same semester that you take the lecture). Many former students comment on how much taking the lab facilitates their success in lecture.

Late Adds

Only students who are officially registered may participate in this class. If you are given a permission code to add this class, you must officially add the class prior to the next class meeting. If you have difficulty using the college's computerized enrollment system to add, please notify the instructor immediately. The deadline for adding any class or using a permission code to add is the end of the second week of classes. **Under no circumstance will students be allowed to add this class after the add deadline.**

Disabilities

If you have a disability that requires some accommodation, please contact me and provide documentation within the first two weeks of class. Reasonable accommodation will be made.

Academic Dishonesty

You are expected to act honorably and in accordance with the Palomar College Student Code of Conduct (see the Palomar College Student Handbook). Cheating of any type will not be tolerated. If you cheat on any exam or assignment, you will be given 0 points for that exam or assignment and you will also be expelled from class. Further, the incident will be reported to the Department Chair, Dean of Sciences, and the Director of Student Affairs.

Student Learning Outcomes

A successful student should be able to meet the following Student Learning Outcomes (SLOs):

- Describe characteristic processes and landforms associated with tectonic plate boundaries.
- Compare and contrast the oceanic and atmospheric characteristics of El Niño and La Niña.
- Describe the seasonal pattern of phytoplankton productivity for tropical, middle latitude, and polar oceans.

Course Schedule (tentative): *TTh 11:45 class (Escondido Center)*

Semester Week Number	Calendar Date	Topic	Calendar Date	Topic[1]	Textbook Chapter[2]
1	Tues. Jan 22	Syllabus & Web Resources; What Is Oceanography?	Thurs. Jan 24	Geographic locations; Ch. 1 (lightly)	Preface; Intro; 1
2	Tues. Jan 29	Plate Tectonics and the Ocean Floor	Thurs. Jan 31	Chapter 2 continued	2
3	Tues. Feb 5	Marine Provinces	Thurs. Feb 7	Chapter 3 continued; **Exam #1** (Ch's 1, 2, 3)	3
4	Tues. Feb 12	Marine Sediments	Thurs. Feb 14	Chapter 4 continued	4
5	Tues. Feb 19	Water and Seawater	Thurs. Feb 21	Chapter 5 continued	5
6	Tues. Feb 26	Air-Sea Interaction	Thurs. Feb 28	Chapter 6 continued; **Exam #2** (Ch's 4, 5, 6)	6
7	Tues. Mar 5	Ocean Circulation	Thurs. Mar 7	Chapter 7 continued	7
8	Tues. Mar 12	Waves & Water Dynamics	Thurs. Mar 14	Chapter 8 continued	8
9	Tues. Mar 19	Tides	Thurs. Mar 21	Chapter 9 continued; **Exam #3** (Ch's 7, 8, 9)	9
★★★★★★★★ **Spring Break: No classes this week!** ★★★★★★★★					
10	Tues. Apr 2	The Coast: Beaches & Shoreline Processes	Thurs. Apr 4	Chapter 10 continued	10
11	Tues. Apr 9	The Coastal Ocean	Thurs. April 11	Chapter 11 continued;	11
12	Tues. Apr 16	Marine Life and The Marine Environment	Thurs. April 18	Chapter 12 continued **Exam #4** (Ch's 10, 11, 12)	12
13	Tues. Apr 23	Biological Productivity and Energy Transfer	Thurs. April 25	Chapter 13 continued	13
14	Tues. Apr 30	Animals of the Pelagic Environment	Thurs. May 2	Chapter 14 continued	14
15	Tues. May 7	Animals of the Benthic Environment	Thurs. May 9	Chapter 15 continued; **Exam #5** (Ch's 13, 14, 15)	15
16	Tues. May 14	The Oceans and Climate Change	Thurs. May 16	Chapter 16 continued	16
17	**FINAL EXAM WEEK**: Comprehensive final exam (Chapters 1-16) plus map locations on: **Thursday May 23 @ noon**				All

[1]Note that all exams will always be during the last 30 minutes of class on **Thursdays**

[1]Textbook chapters assigned above are to be read prior to discussing the topic in class. To do well in this course, it is imperative that you keep up on the reading!

And Finally… Don't hesitate to contact me to discuss any questions you may have about the course.

Welcome aboard!