

OCEANOGRAPHY COURSE SYLLABUS

Lecture Hours: 3 (1919.00)

Message phone: (760) 757-2121 x7879 (San Elijo Campus office)

Office Hours: 11:00 AM – 12:00 noon Wednesdays, SEC 503

E-mail address: pfarquharson@miracosta.edu

Instructor's class website: <http://oceanography.geology-guy.com/>

Required Textbook

Essentials of Oceanography, 2008, Alan Trujillo & Harold Thurman, Ninth Edition, Prentice-Hall. ISBN-10: 0132401223 / ISBN-13: 978-0132401227

Optional Regional Resource Books

The Rise and Fall of San Diego: 150 Million Years of History Recorded in Sedimentary Rocks, Patrick L. Abbott, 1999, Sunbelt Publications. ISBN: 0-932653-31-6

Instructor Availability

I am a friendly, helpful, approachable person. My office hours will be on the San Elijo Campus on Wednesdays from 11:30 AM until 12:30 PM. For other communications, E-mail is preferred, with backup method of the telephone.

Short Description (Fall 2009 Course Schedule)

"The scientific study of the ocean. Topics include the formation and evolution of the ocean basins, atmosphere-ocean interactions, waves, tides, coastal oceanography, and an introduction to the study of marine life, including plankton, fishes, and marine mammals. CSU; UC"

Course Description (2008-09 MCC Catalog)

"This course explores the major processes and features of the world's oceans. Topics include the origin and history of the ocean basins, atmospheric circulation and weather, ocean circulation, and the dynamics of waves, tides, and coastlines. The course also reviews marine life (including plankton, nekton, benthos, and marine mammals), explores the oceans as a resource for people, and considers human impacts on marine environments."

Course Prerequisites

None

Student Learning Outcomes ("SLO's")

Students will be able to:

- Explain the theory of plate tectonics and relate it to the formation of major sea floor features.
- Reconstruct the circulation patterns of atmosphere and ocean circulation systems, and analyze their interrelationships.
- Describe the major principles involved in the formation and behavior of waves and tides, and evaluate their effects on coastal processes.
- Summarize the major physical properties of the oceans and evaluate how each one affects marine communities and marine life.

Instructor's Course Objectives

I hope to help you to discover:

- Key concepts and developments in evolution of ocean science.
- Continental shelves, ocean basins, selected trenches.
- Nature and character of sea floor sediments.
- Wave and tide motions.
- Basic principles of physics and chemistry as they apply to ocean composition and behavior.
- Plant and animal relationships within the oceanic environment.
- Identification and comparison of estuarine and intertidal communities.

- Major ecological problems associated with the sea.
- Evaluation of impact of humans on fragile interfaces of ocean environment.

How You Will Succeed in this Course

- Read the text assignments earnestly, **before** class meetings, paying close attention to:
 1. the pictures and their captions – understanding the authors' intentions in the text figures could be helpful when test-time comes
 2. the chapter summaries, review questions, and key terms (should be obvious, but...)
 3. the textbook web site (<http://www.prenhall.com/trujillo>), which has practice questions, and further links to more oceanographic web "stuff".
 4. the possibility of a "pop" quiz here and there during the semester, to help keep everyone honest...
 5. the videos - they are NOT "fluff" - the material contained in them is fodder for evaluation
- Attend all lectures assiduously and **take notes** relentlessly – there will be homework assignments and test questions derived from the lectures that are not based solely on the text or videos.
- Be unremitting in your quest for knowledge about the planet you live on – start paying attention to your surroundings.
- Be curious. If you don't understand a concept, please ask questions. There are numerous styles of learning, and there are various paths to your enlightenment.

General Requirements

- Attendance is very important and **required**. Important material will be covered in each class session. As a result, an absence from even one class meeting will mean catching up on a great deal of information. A student with more than two (2) missed class meetings (3 hours) may be dropped from the class. Excessive absence drops will not be reinstated. If you decide to stop attending, you are responsible for administratively dropping the class.
- ***PLAN TO ARRIVE EARLY FOR CLASS!!*** I understand that, occasionally, things run late. However, do not make a habit of arriving late or leaving early as it causes a disruption for me and for other students in the class. If you do arrive late, please place any assignments in the appropriate place near the classroom door and quietly take a seat in the rear of the room or nearest the door. Do not disrupt class by turning in homework or picking up handouts during class session.
- If, due to an unforeseen emergency, I am running late for a class, you are required to remain in class for fifteen (15) minutes (unless otherwise notified by the Dean's office). If you do not receive notification to wait for me to arrive, you may leave after 15 minutes with no penalty for absence or assigned work due at that class meeting.
- The last day to add a class is February 6th, and the last day to withdraw from class without receiving a "W" grade is February 6th. Last day to withdraw and receive a 'W' is April 23rd.
- Each student is expected to conduct herself / himself in a professional manner. Inappropriate conduct in the classroom includes talking, eating, drinking, wisecracking, sleeping, inappropriate disruptions, etc. Please respect the rights of others to enjoy a quiet and successful learning environment. If I feel that your behavior is disrupting the class, you will be asked to leave.
- Cellular telephones and pagers, and other noise-makers: turn 'em off!
- Visitors allowed only with instructor approval.
- Tape or digital recordings are encouraged, if it helps you learn.
- Please, do not leave and reenter the class while it is in session. If you must leave class early, let the instructor know before class and sit somewhere close to the door.
- Food and beverages are not allowed in the classroom. Plastic water bottles are allowed but clean up behind yourself.
- Keep all graded papers / exams throughout the semester for study aids and grade determinations.

Academic Misconduct:

Section 41301 of Title V of the California Code of Regulations defines academic misconduct as "cheating or plagiarism in connection with an academic program at a campus." Examples of cheating include using notes or copying others' work during an exam, using old exams and study guides to prepare for an exam, and falsifying data or records for an exercise. Examples of plagiarism include copying other students' answers or, when working in collaborative groups, not stating answers in your own words, based on your own understanding.

Exams

All exams will be completed in Blackboard. Tests will be posted on a Monday, completed by the following Monday, at 11:59 PM. If you miss the 11:59 PM cut-off time, you may turn in a special “make-up” exam, and you will lose 5 points per class period that the test is late.

Exams will be a combination of objective (i.e., multiple choice, fill in the blank, matching, etc.) and short essay questions. Be sure to answer the essays completely, in standard English, and in complete sentences. After you complete the test, go back and check your work, making sure that each objective question has an answer, and that all parts of the essay questions have been answered.

Miss the final exam, receive an “F” in the class.

Pop quizzes can not be made up – you snooze, you lose.

Homework Assignments

In addition to the midterm exams, there will be homework assigned in class that may not be posted to Blackboard or the web site. These assignments may consist of researching some specific subject on the Internet or in the library.

Research Projects

Research projects must be turned in on the due date to qualify for full credit. They must be ready to be graded, and submitted into Blackboard, preferably Microsoft Word or PowerPoint, OpenOffice or Adobe Acrobat (PDF) format. Research projects turned in late will be marked down 10 percent for each week late. Partial weeks will be prorated. **Also, no research project, no passing grade!**

There are two possibilities for the research project: a traditional research paper (“term paper”) on a specific topic of a geological bent, or a photo research paper, which requires imagination, initiative, and considerable research. Details may be found on the class web site, and in Blackboard.

Extra Credit Assignments - NO extra credit assignments will be offered. Please don't ask!!!

Field Trips

Optional field trips may be held to observe local sites of oceanographic interest.

Students with Disabilities

Students with disabilities, whether physical, learning, or psychological, who believe that they may need accommodations in this class, are encouraged to contact Disabled Students Programs & Services as soon as possible to ensure that such accommodations are implemented in a timely manner. Authorization from DSP&S is required before any accommodation can be made. Their phone number is 795-6658 and they are located in Building 3000-Student Services, adjacent to Parking lot 3C.

Grades

Grades are calculated as follows: A = 90-100%, B 80-89%, C 68-79%, D = 55-67%, F = < 54%.

Course grades are calculated on:

Mid-term Exams, Quizzes, Homework → 60% Research Paper → 25% Final Exam → 15%

Video credits (for possible viewing in or out of class):

1. Intelcom, 1992. *Earth Revealed*. Series of 26 half-hour video programs and coordinated books. ISBN 1-55946-443-7.
2. San Diego State University, 2001. *Rise and Fall of San Diego*. Part of Pat Abbott's “Written In Stone” series.
3. San Diego State University, 2004. *Earthquake Country – Los Angeles*. Part of Pat Abbott's “Written In Stone” series.
4. Stephen Low Distribution Inc., 2005. *Volcanoes of the Deep Sea*. A 45-minute IMAX movie showing black smokers and life at various spreading centers as seen from the submersible Alvin.
5. Summerhays Films, 2004. *Ocean Oasis*. A 50-minute IMAX movie highlighting the environment of the Baja California peninsula and the Sea of Cortez. Produced in part by the San Diego Natural History Museum.
6. BBC / Discovery Channels, 2006. *The Big Chill*. Originally shown on BBC2's series *Horizon* in 2003.

Schedule

<i>Month</i>	<i>Date</i>	<i>Day</i>	<i>Chapt</i>	<i>Subject</i>	<i>Milestones, Possible Videos</i>
January	25	Mon		Class and Instructor Introduction	
	27	Wed	1	Introduction to Planet Earth	<u>Introductory Quiz Due</u>
February	1	Mon		Introduction to Planet Earth (cont.)	
	3	Wed	2	Plate Tectonics	
	8	Mon		Plate Tectonics (continued)	
	10	Wed		Plate Tectonics (continued)	"Volcanoes of the Deep Sea" ₅
	15	Mon		<i>HOLIDAY - no class</i>	<u>Lincoln's/Washington's Day</u>
	17	Wed		Plate Tectonics (continued)	
	22	Mon	3	Marine Provinces	
	24	Wed		Marine Provinces (continued)	
March	1	Mon	4	Marine Sediments	<u>Exam 1 Due</u>
	3	Wed		Marine Sediments (continued)	
	8	Mon	5	Water and Seawater	
	9	Wed		Water and Seawater (continued)	
	15	Mon	6	Air / Sea Interaction	
	17	Wed		Air / Sea Interaction (continued)	
	22	Mon	7	Ocean Circulation	<u>Exam 2 Due</u>
	24	Wed		Ocean Circulation (continued)	
	29	Mon		<i>SPRING BREAK - no class</i>	
	31	Wed		<i>SPRING BREAK - no class</i>	
April	5	Mon	8	Waves and Water Dynamics	"The Big Chill" ₈
	7	Wed		Waves and Water Dynamics (continued)	
	12	Mon		Waves and Water Dynamics (continued)	
	14	Wed	9	Tides	
	19	Mon	10	The Coast: Beaches and Shorelines	<u>Exam 3 Due</u>
	21	Wed	11	The Coastal Ocean	
	26	Mon		The Coastal Ocean (continued)	
	28	Wed	12	The Marine Habitat	
May	3	Mon		The Marine Habitat (continued)	"Ocean Oasis" ₆
	5	Wed	13	Biological Productivity / Energy	<u>Research Project Due</u>
	10	Mon	14	Animals of the Pelagic Environment	
	12	Wed	15	Animals of the Benthic Environment	
	17	Mon		Climate Change and the World Ocean	
	19	Wed		The Grand Finale !!!	
	24	Mon		9:30 – 11:30 PM → Room 406	<u>FINAL EXAM PERIOD</u>