

College of the Redwoods Mendocino Coast Campus
Lab in Oceanography
Course Syllabus Fall 2012

Ocean 11 – Section 032467 – 1.0 Units
Friday 1-4;10 PM Room 122

Instructor: Jason Robert Patton

email: Jason-Patton@redwoods.edu

Voicemail: 707.962.2667 (If you leave a voicemail, please state your name, phone, and time that you called, in addition to the topic.)

Office: Room 101

Office Hours: Thursday afternoon by appointment

Required Text: Alan Trujillo & Harold Thurman, Essentials of Oceanography, 10th ed., 2010,
2012 Tide Tables

Required Supplies: three ring binder for class handouts including blank paper for drawing illustrations and notes during class; colored pencils for making illustrations better, USB “thumb” drive.

Contact: Please don't hesitate to email me with any questions, comments, or concerns. I welcome any feedback or suggestions. The best way to contact me for any reason is by sending an email directly to my CR account

Jason-Patton@redwoods.edu .

Alternatively, you may leave me a voice mail message (see phone number at the top of this syllabus). Please do not send messages through the myCR 'messages' application.

Course Description

An exploration of the conceptual material presented in OCEAN 10. Students will acquire practical laboratory and field experience in many oceanographic skills, tests, and procedures. Laboratory exercises will focus on chart reading and navigational skills, basic measurements of seawater chemistry, and other processes. Field experience will include examinations of coastal geology, wave and beach processes, and marine organisms and habitats.

Course Learning Outcomes

1. Make reasonable interpretations of scientific data.
2. Apply the scientific method to the critical evaluation of data and concepts.
3. Identify the underlying concepts and principles of oceanography and apply and interpret them in a variety of marine environments.

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4. Discuss the relationships between physical and chemical environmental factors and the organisms and populations characteristic of an area.
5. Demonstrate the skills necessary to utilize basic instruments, tools, and tests used in oceanography.
6. Discuss the strengths and weaknesses of various data collection techniques, and evaluate the relative merits of specific techniques in different environmental situations.
7. Follow written and oral laboratory instructions.

Grading

Your final grade will be comprised of:

<u>Summary</u>	<u>Points</u>
1 Mid Term and 1 Final Exam	400
Course Notes and Illustrations	180
Lab Activities	200
Final Exam Question	10
Research Poster Outline	40
Research Poster	120
<u>Poster Presentation (~5 minutes)</u>	<u>50</u>
Total	1000

There are 1000 points available and grades are assigned by the percentage of total points as follows:

1000-940=A	939-900=A-	899-870=B+	869-830=B	829-800=B-
799-770=C+	769-730=C	699-670=D+	669-600=D	<599=F

Classroom Conduct

Side conversations among classmates are disrespectful and disruptive to the instructor and your fellow students. Questions or comments about the course material are welcome at all times but should be approached in a respectful manner.

The use of cell phones, iPods, or other items that may distract you, your instructor, or your classmates are not permitted during class. All such devices must be turned off.

You may not leave the room during an exam or quiz unless you are ready to turn in your finished exam.

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Academic Honesty

You are encouraged to work together to review notes from lectures, to work on problems from the text, and to formulate ideas for any take-home assignments. However, all work you turn in must be your own independent, original work.

In the event that any work is copied from another student, zero credit will be given to all students involved (regardless of who copied from whom).

Any sources of information used in your written work must be referenced (regardless of whether the material was copied word-for-word). This includes your text book and all internet sources (reference these by including the name and URL). Any work including un-referenced material from another source (regardless of whether it was copied word-for-word) will be given zero credit.

Academic Misconduct: Cheating, plagiarism, collusion, abuse of resource materials, computer misuse, fabrication or falsification, multiple submissions, complicity in academic misconduct, and/ or bearing false witness will not be tolerated. Violations will be dealt with according to the procedures and sanctions proscribed by the College of the Redwoods. Students caught plagiarizing or cheating on exams will receive an "F" in the course.

Academic dishonesty in any form may be reported to the vice president of CR, as per the student code of conduct available at <http://www.redwoods.edu/District/Board/New/Chapter5/Ap5500.pdf> See in particular page 9, Article VIII which begins "Students are expected to demonstrate qualities of morality, integrity, honesty, civility, honor, and respect."

College of the Redwoods is committed to equal opportunity in employment, admission to the college, and in the conduct of all of its programs and activities.

Tentative Class Schedule*

<u>Date</u>	<u>Topic</u>	<u>Activities</u>
8/31/12	Bathymetry, Charts, and Navigation	Lat/Long & Time
9/7/12	Sea Floor Spreading	Bathymetry & Sonar
9/14/12	No Class	
9/21/12	<u>Research Poster Group Formation</u> ; Coastal Geology	** <u>Field Trip</u> beach survey
9/28/12	<u>Research Poster Presentation Outline Due</u> ; Marine Sediments	Grain Size Analysis

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10/5/12	Rivers and Estuaries	** <u>Field Trip</u> Ten Mile River
10/12/12	Mid Term Exam ; Salinity, Temperature, and Density	T-S Diagrams
10/19/12	Plankton; Planning & Preparation for Cruise	microscopic view of life
10/26/12	** <u>Oceanographic Research Cruise (7AM - 3PM)</u> ; Cruise Data compilation	
11/2/12	Evaluation of Cruise Data	
11/9/12	Ocean Circulation	Water Masses
11/16/12	Ocean Waves; Tsunami	Wave Calculations
11/23/12	Holiday: Thanksgiving Break	
11/30/12	Rocky Shores	** <u>Field Trip</u> tide pools
12/7/12	Marine Life Protection Act	Mapping and "Prediction"
12/14/12	Final Exam ; <u>Student Research Poster Presentations</u> ; <u>Course</u> <u>Notes and Illustrations are due</u>	

*** Note: Instructor reserves the right to make changes to course schedule as deemed necessary.**

** Indicates Field Trip. Be prepared for outdoor conditions such as sun, wind and rain protection.

College of the Redwoods Resources and Information

Disabilities: College of the Redwoods is dedicated to providing access to all classes for persons with disabilities. If you have a verified disability and need accommodation, or suspect you have a disability and wish to be evaluated for eligibility, you are encouraged to speak with Carole Freeman at 707.962.2638.

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Mid-Term/Final Exams: The midterm and final are worth 200 points each. The exams are a mix of multiple choice, true/false, short answer, and essay questions based on the lectures, activities, homework, and course reading. Mid-term exams cover the material since the beginning of the course or the last exam, or whatever is most recent. The final is cumulative and will focus on the “big picture” view that is comprehensive of all subjects covered earlier in the course. Each student is required to submit a multiple-choice question for the Final Exam based on their observations from class and the oceanographic cruise. This question will be submitted by email to the instructor on or before the class of 11/2/12 (10 points).

Missing an exam: All make-up exams should be arranged for in advance when possible. In the event of an emergency or sudden illness that prevents you from attending the exam, you must contact me as soon as possible and arrange a time for the exam to be completed before our next regular class time. If you miss an exam (and do not contact me to make it up) or if you arrange a makeup that you do not take, you will receive a zero for that exam.

Course Notes and Illustrations: Each lab will include handouts (of the presentation for that day) and several on-board illustrations that relate to the specific topic being discussed for that day. You can use the handouts to take notes and your notebook to copy and label any illustrations. You are required to have a three-ring binder containing these handouts at every class. You will turn in your notebooks at the end of the semester along with your activities and homework that has been completed through the semester. Credit is given for careful reproduction of the illustrations including any notes, labels, and graphs.

Lab Activities: Each week we will focus on a specific topic, and use some of the class time to develop these themes. You may need to spend some time out of class completing the lab. These activities are each worth 10-20 points. The lowest score will not be included. Lab activities are due by the beginning of the following class meeting.

Reading: For this course, the Trujillo and Thurman's *Essentials of Oceanography* textbook is a required text. I have not made any specific reading assignments as most students will be taking the companion course, Ocean 10. For those of you not taking Ocean 10, simply read the relevant text for the lab prior to the lab. In class the instructor will clarify the reading suggestions for the succeeding week.

Textbook questions: There is a list of recommended questions at the end of the Trujillo/Thurman chapters for each of our course subjects. These are not graded but it is

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highly recommended that you complete these questions each week. I will answer any questions you have from the textbook questions during class.

Research Poster: Each student is required to present a research poster as part of a group (we will form groups during the third class meeting). The information should come from your own observations, scientific articles on the subject, library and internet research. The research cruise may provide potential sources of data or observations for your poster.

>>>>>>>*****Posters submitted without references will not receive a grade*****<<<<<<<<<

A research poster on a topic of interest to you that is related to Oceanography is required from each student. Your work must include:

- 1) References that need to be from the original source such as the article, interview, or book.
- 2) Text describing the poster contents. This should include an abstract, introduction, methods, results, discussion, and conclusion sections.
- 3) At least one figure/map (with a caption) describing the location of interest.
- 4) At least one image, drawing, or plot with a caption describing what the image/drawing/plot is showing. Figures are sometimes more important than the text, so you may choose to have several figures and illustrations.
- 5) A minimum of three references from original sources, not including your textbook.

We will review the scientific method (and how to use this organizational structure in a presentation) during the course. A general outline with specific research topics for your poster is due at the beginning of class on 9/28/12 (40 points). The outline should have one reference you are considering to use for the paper. This reference does not need to be in the final paper, but it gives me an idea about what sources of information you are considering.

The Final poster is due at the beginning of class on 12/14/12, early submissions are encouraged.

*** Please note that this document is informational and subject to change.**

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Course Expectations

Class will start on time at 1:00 PM. You are responsible to be present for and be attentive to all the material covered in class. If you need to leave the class early, please let me know before the class starts.

This is a college-level science class, and will require a commitment of your time outside of class. This at-home time will enable you to digest the material we cover in class and help when you are asked on the exams to apply these concepts to different problems and applications.

Plan on spending a minimum of at least 6 hours per week on course material outside of class. You are encouraged to set aside a specific time each week outside of class devoted solely to each course:

- o Reviewing lecture notes and in-class exercises each week
- o Reading the textbook
- o Working on the recommended exercises from the textbook
- o Completing lab activities
- o Studying for exams

Note that 6 hours per week at home is the average minimum to pass. Some students may require more time at home just to pass; for some in this course that may be enough to get an A. A student who is very attentive in class, asks questions, and takes careful notes will need less at-home time.

Absences: It is difficult to do well in this class without attending all the lectures. I understand there will be an occasional absence due to illness or emergency, however I consider more than two to three absences per semester excessive. If you do miss a class:

1. Use myCR first to obtain the course slides. The slides will include information about any homework or in-class exercises that were assigned. Most assignments and handouts referenced by the slides will be in your handouts.
2. Next, try to obtain a copy of lecture notes from a classmate since there are many things we cover that are not spelled out directly on the slides or handouts.
3. Read the required reading covering the material you missed, and check your comprehension with the recommended questions at the end of each chapter.
4. After this, feel free to contact me by email or in office hours with any questions.

Final grade active attendance boost: If your final course grade after rounding to the nearest whole number is within 1 point of a grade transition (C to C+, D to C, A- to A, etc.) I will give you the boost needed to obtain the higher grade if you have actively attended most classes and if you turned in labs or other assignments promptly or early.

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More than 2-3 unexcused absences is considered excessive and will disqualify you from this opportunity. Conduct not in accordance with that outlined below will also prevent you from receiving this bonus.

Computer skills: This class will require computer use outside of class. Activities involving the 4 skills listed below will be included throughout the semester. In addition, you will be expected to check myCR regularly for announcements. If any of the items listed below seem foreign to you, you are encouraged to sign up this semester for CIS 100 "Basic Computer Skills", a beginning computer literacy course at CR.

1. Send and receive email from your CR Google email account.
2. Open a web browser, and access a web page if you are given the web address.
3. Log onto and access course material from myCR (handouts, slides, announcements, etc.).
4. Open Microsoft word (.doc) and Adobe .pdf documents to read their contents.

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