

Syllabus for: Ocean-12 – Environmental Oceanography	
Semester & Year:	Spring 2013
Course ID:	OCEAN-12
Section Number:	E2385
Number of Credits/Units:	3
Day/Time:	TTH 11:40PM - 01:05PM
Location:	PS 111
Instructor's Name:	Danny O'Shea
Contact Information:	Office location and hours: PS 111 T Th 9-10 a.m. or by appointment Phone: 707.476.4210 x 4823 Email:danny-oshea@redwoods.edu
Course Description (catalog description as described in course outline): A study of the fundamental principles of oceanography and the resources available from the sea. The basic concepts of physical, chemical, geologic, and biological oceanography will be explored in discussions on marine mineral resources, ocean energy, living resources of the sea, marine pollution, and ocean management.	
Student Learning Outcomes (as described in course outline) : <ol style="list-style-type: none"> 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 physical and chemical processes of oceanography in a variety of different areas. 4. Recognize and discuss the relationships between physical and chemical environmental factors and the organisms and populations characteristic of an area. 5. Discuss the relationships between oceanic processes and local and global climate and weather. 6. Describe in writing the processes involved in the formation of sediments in the ocean and identify the principal source materials for each of the basic types of marine sediments. 7. Recognize the central role that the rapid growth of the human population plays in the exploitation of marine resources. 8. Evaluate the popular media's role in transmitting the theories of science. 	
Special accommodations: College of the Redwoods complies with the Americans with Disabilities Act in making reasonable accommodations for qualified students with disabilities. Please present your written accommodation request at least one week before the first test so that necessary arrangements can be made. No last-minute arrangements or post-test adjustments will be made. If you have a disability or believe you might benefit from disability related services and may need accommodations, please see me or contact Disabled Students Programs and Services. Students may make requests for alternative media by contacting DSPS.	
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. The student code of conduct is available on the College of the Redwoods website at: http://www.redwoods.edu/District/Board/New/Chapter5/Ap5500.pdf	
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Oceanography 12 – E 2385
 T TH 11:40 p.m. – 1:05 p.m.

email: danny-oshea@redwoods.edu.

Office: PS 122

Environmental Oceanography
 Physical Science Room 111

phone: (707) 476-4210 ext 4823 (message only)

Office Hours: Th 9:00 AM or by appointment

Spring 2013

Danny O'Shea

Course Description: Environmental Oceanography is a 3-unit course that examines of the fundamental principles of oceanography and the resources available from the sea. The basic physical, chemical, geologic, and biological concepts of oceanography will be explored with discussions and activities on marine resources, ocean energy, living resources of the sea, marine pollution, and ocean management. The goal of this course is to understand the intricate relationship between human activities and our watery planet. This course meets Tuesday and Thursday in Room PS111 at 11:40 a.m. on the CR main Eureka campus. Material may shift to accommodate events or discoveries that occur during the semester.

Syllabus

Week	Day-Month	Topic	Activities
1	15 - Jan 17 - Jan	Introduction Ocean Basins	1. Nautical Charts & the EEZ
2	22 - Jan 24 - Jan	Seawater Properties	2. Ocean Circulation & Sea Ice
3	29 - Jan 31 - Jan	Atmospheric Circulation Ocean Circulation	Research Outline Due
4	5 - Feb 7 - Feb	Waves Tides	3. Humboldt Bay & Coastal Processes
5	12 - Feb 14 - Feb	Review 1st Exam	1st Exam
6	19 - Feb 21 - Feb	Marine Plankton	4. Phytoplankton & HAB's
7	26 - Feb 28 - Feb	Zooplankton	5. Marine Food Webs
8	5 - Mar 7 - Mar	Ocean Fisheries	6. Seafood Watch
9	12 - Mar 14 - Mar	Spring Break	No Class
10	19 - Mar 21 - Mar	Marine Mammals	7. Video - Hunter on the Sea Wind
11	26 - Mar 28 - Mar	Review 2nd Exam	2nd Exam
12	2 - Apr 4 - Apr	Research Posters	Posters Presentation
13	9 - Apr 11 -Apr	Marine Geology	8. Plate Tectonics Research Paper Due
14	16 - Apr 18 - Apr	Ocean Resources Marine Pollution	9. Minerals of the Sea
15	23 - Apr 25 - Apr	Energy from the Sea	10. Ocean Energy
16	30 – Apr 2 - May	UN Law of the Sea	Notebook Due
17	7 – May	Final Exam	

Office hours:

I am available on the Eureka CR campus on Tuesday and Thursday at 9:00 a.m. You may also set up an appointment to meet at a different time. Contact me is via e-mail at:

danny-oshea@redwoods.edu

If you must, you can also leave a brief voice mail message and the time and date you called at (707) 476.4210 x4823.

Student Learning Outcomes

1. Make reasonable interpretations of oceanographic data.
2. Apply the scientific method to the critical evaluation of data and concepts.
3. Identify the underlying concepts and physical and chemical processes of oceanography in a variety of different areas.
4. Recognize and discuss the relationships between physical and chemical environmental factors and the organisms and populations characteristic of an area.
5. Identify the primary forces responsible for oceanic circulation.
6. Discuss the relationships between oceanic processes and local and global climate and weather.
7. Use their understanding of oceanographic principles to interpret and discuss the processes affecting coastal areas.
8. Explain plate tectonics and discuss multiple lines of scientific evidence that support this theory.
9. Describe in writing the processes involved in the formation of sediments in the ocean, and identify the principal source materials for each of the basic types of marine sediments.

Grading:

Your class attendance and performance on: the midterm and a final exams, group research poster presentation, in-class activities, homework assignments, and participations in the field work determine the grade you receive in this course. There are a total of 1000 points available and grades are assigned by the percentage of total points as follows:

<u>Grading Summary</u>	<u>Points</u>
Mid-term exam and Final	300
Course Notes and Illustrations	200
Research & Poster Presentation	150
Research Paper	150
Activities	100
Online Quizzes	100
Total Points:	1000

Letter Grade:

1000-940=A	939-900=A-	
899-870=B+	869-830=B	829-800=B-
799-770=C+	769-730=C	729-700=C-
699-670=D+	669-600=D	<599=F

Activities, Textbooks and Lecture Notes

A packet containing the Activities is available in the CR bookstore. I will put the activities and lecture notes online so you can access this information by logging onto your "myCR" account at www.redwoods.edu. In addition, a recent copy of an introductory Oceanography textbook is recommended for use in this course and is to be used as a guide for the background reading material. New textbooks are available in the CR bookstore. You are encouraged to seek out other sources of information both in print and online formats and many resources at available in the CR library.

Mid-Term/Final Exams

There are two midterm exam, and a final exam which area each worth 100 points. The exams are multiple choice, short answer and essay questions based on the lectures, activities, homework, course reading and your own observations. The final is cumulative and will concentrate on the interpretation of the case studies discussed throughout the course. A portion of the final exam will be based on the research information presented on the posters.

Course Notes and Illustrations

A portion of your grade is based on a course notebook complete with illustrations based on in-class material. The illustrations are based on material from the texts and online material. Several illustrations will be presented in each class so it is important to attend every class. Your notebook will contain 20-30 pages of illustrations and notes that are presented during class on the topic of the day. The notes corresponding to the illustrations are available from the bookstore and on Blackboard (www.redwoods.edu). Credit is given for your illustrations and notes, which are graded during the last week of classes, before the final.

On-Line Quiz

Each week a multiple choice on-line quiz will be posted on myCR. These quiz questions will also appear on the midterm exams. Note that the questions may be slightly different, so read exam the questions carefully. Each on-line quiz is worth 10 points.

Research Project

Each student is required to submit a 5-7 page research paper with two images on a topic of interest to you. The paper is to be submitted online via the myCR web site. Your information should come from your own observations, scientific articles on the subject, library and internet research.

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

A research project on a topic of interest to you that is related to Oceanography is required from each student. For full credit your research must include:

- 1) **References** (Bibliography, Works Cited, etc.)
- 2) 5-7 pages of original (not copied and pasted) **text**;
- 3) At least one **chart** with a figure number (e.g. Figure 1) and description of the location of interest;
- 4) At least one **image, drawing or graph** complete with a figure number and description;
- 5) A minimum of three **references**, not including your textbook. One of your references must be from the science journal "Science" available in the library or online through myCR under the "Library Resource" link in the Course Tools box.

We will briefly review some basic writing techniques during the course.

A **General outline** with specific research topics for your project is due Jan 31 (20 pts)

The **Final draft** is due by April 11, early submissions are encouraged. Projects are to be submitted as a PDF, online under Assignments link through your myCR account. I will post the student research papers under the Lessons link on the myCR so the students will have the chance to learn from your research. I will enable the Turnitin service so you will be able to see your similarity (to online sources) index.

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

Poster Presentations

Your research paper will culminate in a presentation of a poster to the class during the last two weeks of the course. The poster will be placed in the hall and remain up for the duration of the following semester, after which time you may retrieve your work if you choose. The poster must include a Title, an Introduction, the main Themes discussed in your research paper, a Conclusion, and References. The Title should grab the viewers attention and be able to be read from a distance of 1-meter. The Introduction should be a few sentences, listing the topics addressed in the poster. The Themes are to include a chart and diagrams, graphs, or images with short descriptions for each item. The conclusion should inform the viewer of the current status, or offer solutions, to any issues raised. The References should be located in the lower right hand corner, and include the source of your information and can be a smaller font size. The final exam will be based in part on questions from the student posters.

Attendance/Participation

Participation is very important and absence will reflect negatively on your performance and final grade. Showing up late is very disruptive so please come to class on time. Likewise, if you need to leave the class early, please let me know before the class starts. Eating, drinking, texting, and chatting are social activities, and are best done outside the class. Thank-you.

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