Syllabus for: Introduction to Oceanography	
Semester & Year:	**Fall 2015**
Course ID and Section Number:	**OCEAN-12-E-8220 (037065)**
Number of Credits/Units:	**3**
Day/Time:	**Tuesday, Thursday 11:40 AM - 1:05 PM**
Location:	**Humanities Bldg, Room HU125**
Instructor's Name:	**Danny O'Shea**
Contact Information:	**danny-oshea@redwoods.edu**

Course Description: **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:

1) Use the formal methodology of the scientific method as an inquiry-based tool to critically evaluate oceanic phenomena.

2) Describe the transfer of energy between different elements of the Earth's geologic, oceanic, atmospheric, and biological systems.

3) Analyze changes to the global ocean and climate systems in the context of anthropogenic influence and societal impacts.

4) Describe the origin of oceanic resources (such as marine life, energy resources, and minerals) and the consequences of resource management choices.

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://redwoods.edu/District/Board/New/Chapter5/AP%205500%20Conduct%20Code%20final%2002-07-2012.pdf

Additional information about the rights and responsibilities of students, Board policies, and administrative procedures is located in the college catalog and on the College of the Redwoods homepage.

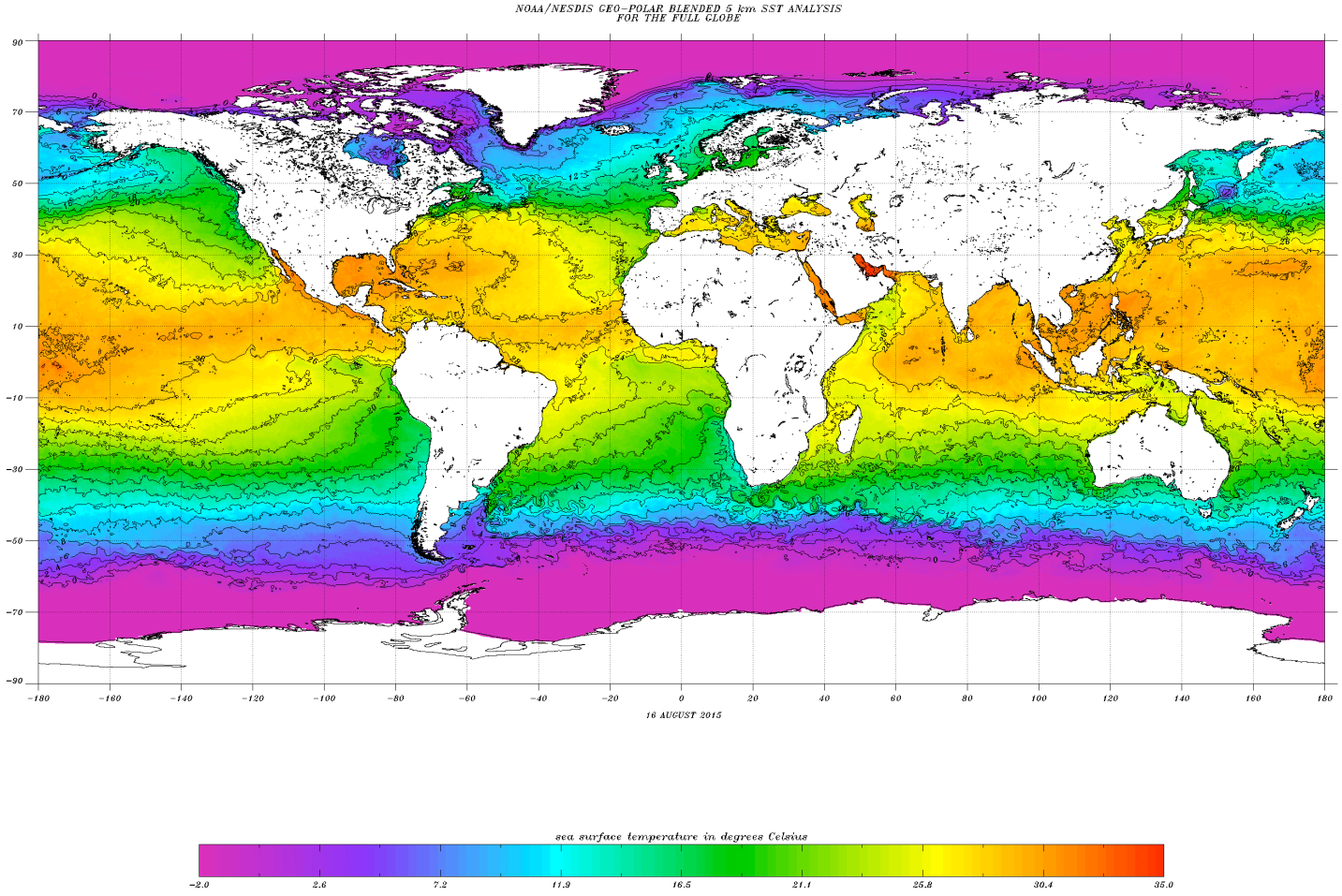
College of the Redwoods is committed to equal opportunity in employment, admission to the college, and in the conduct of all of its programs and activities.

Environmental Oceanography

Oceanography 12 / E - 8220

College of the Redwoods

Fall 2015



Syllabus

Instructor Danny O'Shea

Oceanography 12 / E - 8220 Fall 2015 Tues & Thurs 11:40 a.m. – 1:05 p.m.
Environmental Oceanography Danny O'Shea Room HU 125
Office HU 125A email: danny-oshea@redwoods.edu

Course Description: Environmental Oceanography is the 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 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 is a 3-unit course that meets Tuesday and Thursday in Room HU 125 on the CR main Eureka campus at 11:40 a.m. The course will follow the syllabus outlined below, however, material will shift to accommodate events or discoveries that occur during the semester.

Syllabus

Week	Day - Month	Topic	Course Notes	Activities
1	25 - Aug 27 - Aug	The Ocean	1 2	1. Nautical Charts & the EEZ
2	1 - Sep 3 - Sep	Seawater	3 4	2. Ocean Circulation
3	8 - Sep 10 - Sep	Waves Tides	5 6	3. Storm waves Research Outline Due
4	15 - Sep 17 - Sep	Coastlines Review	7 8	4. Humboldt Bay 1st Exam Review
5	22 - Sep 24 - Sep	Exam I Marine Productivity	9	5. Phytoplankton & HAB's
6	29 - Sep 1 - Oct	Zooplankton & Corals	10	6. Marine Food Webs
7	6 - Oct 8 - Oct	Ocean Fisheries	11	7. Seafood
8	13 - Oct 15 - Oct	Marine Mammals	12	8. Video
9	20 - Oct 22 - Oct	Review		2nd Exam Review
10	27 - Oct 29 - Oct	Exam II Marine Geology	13	9. Plate Tectonics
11	3 - Nov 5 - Nov	Ocean Resources Marine Pollution	14 15	10. Minerals of the Sea Research Project Due
12	10 - Nov 12 - Nov	Energy from the Sea	16	Ocean Energy
13	17 - Nov 19 - Nov	Student Research		Student Presentations
14	24 - Nov 26 - Nov	Thanksgiving		No Class
15	1 - Dec 3 - Dec	UN Law of the Sea	17	Notebook Due
16	8 - Dec	Final		

Office hours:
I am available on the Eureka CR campus on Tuesday and Thursday at 1:05 p.m. or by appointment in Room HU125A. You can email me to set up an alternative time to meet if you are unable to danny-oshea@redwoods.edu

Student Learning Outcomes
1) Use the formal methodology of the scientific method as an inquiry-based tool to critically evaluate oceanic phenomena.
2) Describe the transfer of energy between different elements of the Earth's geologic, oceanic, atmospheric, and biological systems.
3) Analyze changes to the global ocean and climate systems in the context of anthropogenic influence and societal impacts.
4) Describe the origin of oceanic resources (such as marine life, energy resources, and minerals) and the consequences of resource management choices.

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:

Grading Summary	Points
Mid-term exams & Final	300
Course Notes and Illustrations	300
Research Project	150
In-class Activities	150
Online Quizzes	100
Total Points:	**1000**

Letter Grade:

1000-900=A
899-800=B
799-700=C
699-600=D

Activities, Textbooks and Lecture Notes
A packet containing the Activities is available online at redwoods.edu. A recent edition of an introductory Oceanography textbook is required for use in this course. Several versions are available in the library. 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 complete a simple, oceanographic research project using the scientific method as a model of investigation. This project is based an instructor-approved, student-designed topic that is of currently importnant. The project is composed of 5 parts: I) A research question ; II) Background information; III) Data analysis and sampling methods; IV) Results and Discussion; V) Conclusion and Future research questions. and needs to include with 2 images with description 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. An outline is due the third week of the semester and is to be turned in online. No late work accepted.

>>>>>>>>*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 reference 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 Sept 11 (20 pts)

The **Final draft** is due by November 6, early submissions are encouraged. Projects are to be turned in online as a .pdf. I will post your research project on the MyCR website so other in the class students will have the chance to learn from your research. I will enable the Turniitin service so you will be able to see your similarity (to online sources) index.

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

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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