

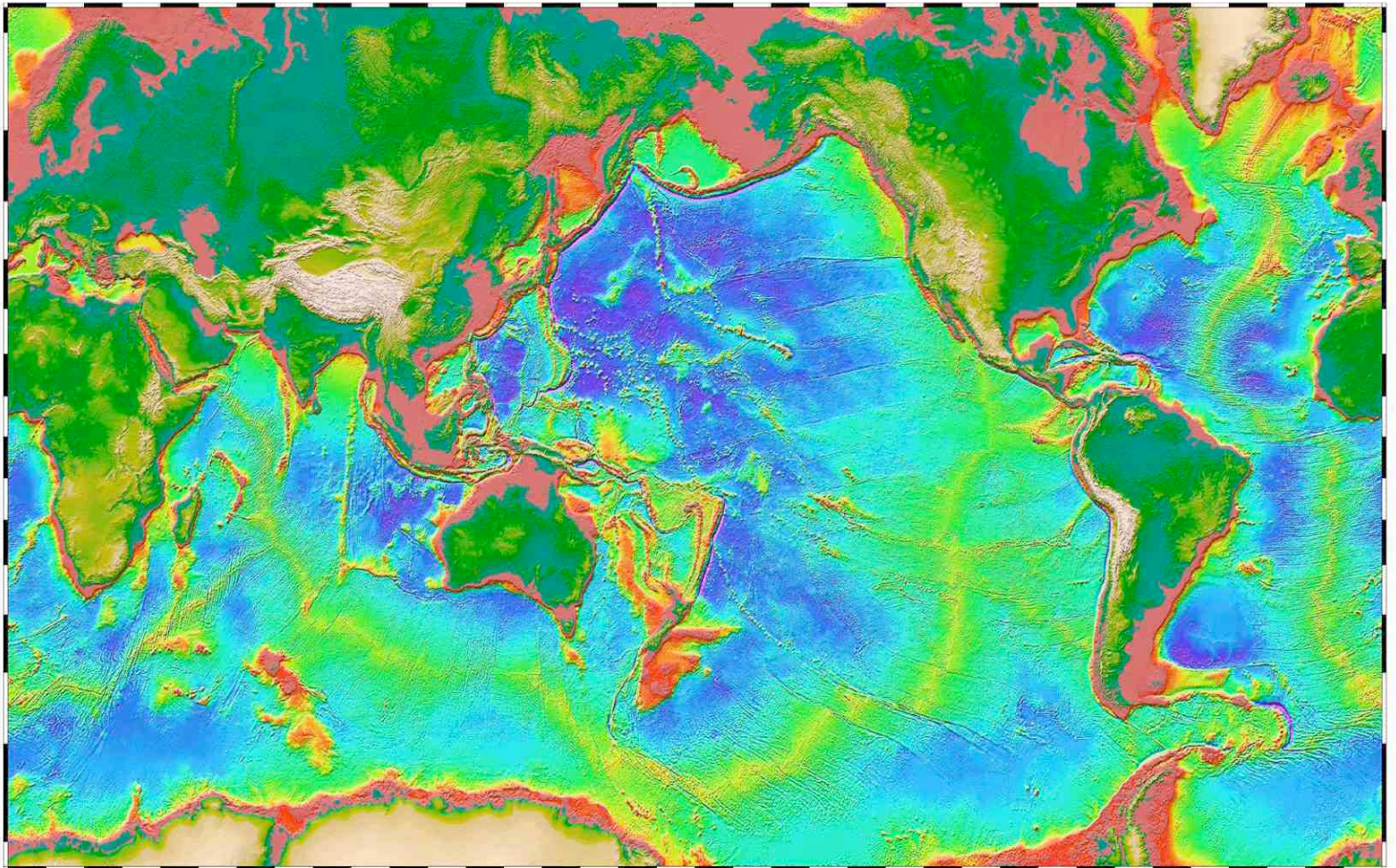
<b>Syllabus for: Introduction to Oceanography</b>	
<b>Semester &amp; Year:</b>	<b>Fall 2013</b>
<b>Course ID and Section Number:</b>	<b>OCEAN-10-E3785 / OCEAN-10-E3786 (033785) / (033786)</b>
<b>Number of Credits/Units:</b>	<b>3</b>
<b>Day/Time:</b>	<b>Tuesday, Thursday 10:05AM - 11:30AM</b>
<b>Location:</b>	<b>Humanities Bldg, Room HU125</b>
<b>Instructor's Name:</b>	<b>Danny O'Shea</b>
<b>Contact Information:</b>	<b>danny-oshea@redwoods.edu</b>
<b>Course Description: An introduction to the Earth's ocean including marine environments, geology, plate tectonics, fundamental chemical and physical properties of seawater, atmospheric-oceanic relationships, oceanic circulation, coastal environments and biological productivity.</b>	
<b>Student Learning Outcomes:</b>	
<ol style="list-style-type: none"> <li><b>1) Use the formal methodology of the scientific method as an inquiry-based tool to critically evaluate oceanic phenomena.</b></li> <li><b>2) Describe how energy is transferred between different elements of the Earth's geologic, oceanic, atmospheric, and biological systems.</b></li> <li><b>3) Apply oceanographic principles to describe how coastal materials and landscapes change over time.</b></li> <li><b>4) Apply concepts of physics and chemistry to quantitatively explain variations in the characteristics of the oceanic environment.</b></li> </ol>	
<b>Special accommodations:</b> 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.	
<b>Academic Misconduct:</b> 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.	
<p>The student code of conduct is available on the College of the Redwoods website at:  <a href="http://redwoods.edu/District/Board/New/Chapter5/AP%205500%20Conduct%20Code%20final%2002-07-2012.pdf">http://redwoods.edu/District/Board/New/Chapter5/AP%205500%20Conduct%20Code%20final%2002-07-2012.pdf</a></p> <p>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.</p>	
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.	

# **Introduction to Oceanography**

**Oceanography 10 – E 3785 / 3786**

**College of the Redwoods**

**Fall 2013**



**Syllabus**

**Instructor Danny O'Shea**

**Oceanography 10 E-3785 & E-3786**  
**Introduction to Oceanography**

**Fall 2013**  
**Danny O'Shea**  
**e-mail: [danny-oshea@redwoods.edu](mailto:danny-oshea@redwoods.edu)**

**TTh 10:05 a.m. – 11:30 a.m.**  
**Room HU 125**

**Course Description:** This Earth Science course is an introduction to the oceans including marine geology, plate tectonics, and the physical and chemical properties of seawater, oceanic-atmospheric circulation, marine environments, and biological productivity. The goal of this course is to understand the biogeochemical relationships of the Earth's Ocean. This 3-unit course meets Tuesday and Thursday in Room PS111 on the CR main Eureka campus at 10:05 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

<u>Week</u>	<u>Day-Month</u>	<u>Topic</u>	<u>Reading</u>	<u>In-Class Activities</u>	<u>Online Quiz</u>
1	27 - Aug 29 - Aug	Origins Exploration	1	1) Charts, Latitude Longitude & Time	1
2	3 - Sep 5 - Sep	Plate Tectonics Ocean Basins	2 3	2) Plate Boundaries & Marine Geology	2
3	10 - Sep 12 - Sep	Seafloor Sediments Review	4	3) Mantle Plumes & the Hawai'ian Hot Spot	Research Outline Due
4	17 - Sep 19 - Sep	1 <sup>st</sup> Exam Water & Salts	1 - 4 5	Exam # 1 4) Seawater Chemistry	3
5	24 - Sep 26 - Sep	Seawater Chemistry Physical Properties	5	5) Pressure, pH & CO <sub>2</sub>	
6	1 - Oct 3 - Oct	Atmospheric Circulation	6	6) Coriolis Effect	4
7	8 - Oct 10 - Oct	Ocean Circulation	7	7) Ocean Circulation	5
8	15 - Oct 17 - Oct	Research Paper Due 2 <sup>nd</sup> Exam	5 - 7	Review Exam # 2	Research Paper Due
9	22 - Oct 24 - Oct	Ocean Waves	8	8) Ocean Wave Prediction	6
10	29 - Oct 31 - Oct	Tides	9	9) Ocean Tides	
11	5 - Nov 7 - Nov	Deltas & Coastlines	10		7
12	12 - Nov 14 - Nov	3 <sup>rd</sup> Exam Life in the Ocean	6 -11 12	Exam # 3 10) Life in the Ocean	8
13	19 - Nov 21 - Nov	Plankton Marine Animals	13 14		9
14	26 - Nov 28 - Nov	Marine Biology Thanksgiving	15	No Class	Notebooks Due
15	3 - Dec 5 - Dec	Marine Resources Marine Pollution	16		10
16	12 - Dec	Final Exam	1 - 16	Final Exam	

Textbooks are available in the CR Bookstore and are to be used as a background reading to improve your general understanding of the material. Read the chapters before you come to class. Any recent edition of an Introductory Oceanography textbook will suffice, however, you will need to cross reference the chapter from the syllabus and outline available on the myCR website ([www.redwoods.edu](http://www.redwoods.edu)).

Taken with the laboratory, Oceanography 11, this course is transferable to CSU and UC schools as a science class with a laboratory.

My office hours are Tuesday 9:00 p.m. – 10:00 a.m., or by appointment. The best way to contact me is via e-mail at: [danny-oshea@redwoods.edu](mailto:danny-oshea@redwoods.edu)

**Course Learning Outcomes:**

- 1) Use the formal methodology of the scientific method as an inquiry-based tool to critically evaluate oceanic phenomena.
- 2) Describe how energy is transferred between different elements of the Earth’s geologic, oceanic, atmospheric, and biological systems.
- 3) Apply oceanographic principles to describe how coastal materials and landscapes change over time.
- 4) Apply concepts of physics and chemistry to quantitatively explain variations in the characteristics of the oceanic environment.

**Grading:**

Your performance on: the three midterm, and cumulative final exams, research paper; in-class activities, online quizzes, readings, and class participation determine the grade you receive. 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      729-700=C-      699-670=D+      669-600=D  
 <599=F

**Grading Summary:**

	<b>Points</b>
➤ 3 Midterms and 1 Final:	400
➤ Course Notes and Illustrations	180
➤ Research outline and report	120
➤ Activities	150
➤ Online Quiz	150
<b>Total Points:</b>	<b>1,000</b>

**Mid-Term/Final Exams**

The 3 midterms and final are worth 100 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. The final is cumulative and will concentrate on physical, chemical, and geological topics relevant to the biological topics covered during the last several weeks of the course. Each student is required to submit a multiple-choice question for the final exam based on the information presented by the student during the last two weeks of class.

**Course Notes and Illustrations**

Each lecture will include several illustrations that relate to the specific topic being discussed for that day. Credit is given for careful reproduction of the illustrations including any notes, labels, and graphs. You will turn in your notebook toward the end of the semester along with your activities and homework that has been completed through the semester.

**Reading**

You will need an Introductory Oceanography textbook to successfully complete the Ocean-10 course. New textbooks are very expensive, so I have set up this course so that any recent (published since c.a. 2000) edition of an Introductory Oceanography textbook will suffice. You will need to read the chapter(s) to be discussed **BEFORE** you come to class. This will make the lectures more interesting, and improve your learning experience. A course outline is posted on myCR so that you can review topics covered in the classroom. I strongly encourage you to investigate other sources of information, such as, news feeds, journal articles, and other media.

**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 activities. There are 10 activities throughout the course, each worth 15 points.

**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 15 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 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 13 (20 pts)

The **Final draft** is due by October 18, 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 Turnitin 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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