

<b>Syllabus for Laboratory in Oceanography– Eureka Campus</b>		
<b>Semester &amp; Year</b>	<b>Spring 2017</b>	
<b>Course ID and Section #</b>	<b>OCEAN-11 E-1159 / E-1160</b>	
<b>Instructor's Name</b>	<b>Danny O'Shea</b>	
<b>Day/Time</b>	<b>Tuesday, Thursday 11:40AM - 01:05PM</b>	
<b>Location</b>	<b>Humanities Bldg, Room HU125</b>	
<b>Number of Credits/Units</b>	<b>1</b>	
<b>Contact Information</b>	<i>Office location</i>	<b>HU 125A</b>
	<i>Office hours</i>	<b>T Th 08:30 – 10:00</b>
	<i>Phone number</i>	<b>n/a</b>
	<i>Email address</i>	<b>danny-oshea@redwoods.edu</b>
<b>Textbook Information</b>	<i>Title &amp; Edition</i>	<b>Laboratory in Oceanography</b>
	<i>Author</i>	<b>Daniel C. O'Shea</b>
	<i>ISBN</i>	<b>n/a</b>
<p><b>Course Description: An exploration of the conceptual material presented in OCEAN-10. Students will acquire practical laboratory and field experience using oceanographic skills, tests, and procedures. Laboratory exercises focus on chart reading, measurements of seafloor movement, seawater chemistry, wave celerity, and microscopic analysis. Field experience includes examination of coastal geology, wave and beach processes, habitats and marine organisms. Note: This course includes field trips to various marine and coastal areas. The College does not provide transportation.</b></p>		
<p><b>Student Learning Outcomes:</b></p> <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) Demonstrate the skills necessary to utilize basic instruments, tools, and tests used in oceanography.</b></li> <li><b>3) Apply classification systems to organize and identify marine features and organisms.</b></li> </ol>		
<p><b>Special Accommodations</b></p> <p>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 <a href="#">Disabled Students Programs and Services</a>. Students may make requests for alternative media by contacting DSPS at 707-476-4280.</p>		
<p><b>Academic Support</b></p> <p>Academic support is available at <a href="#">Counseling and Advising</a> and includes academic advising and educational planning, <a href="#">Academic Support Center</a> for tutoring and proctored tests, and <a href="#">Extended Opportunity Programs &amp; Services</a>, for eligible students, with advising, assistance, tutoring, and more.</p>		

### **Academic Honesty**

In the academic community, the high value placed on truth implies a corresponding intolerance of scholastic dishonesty. In cases involving academic dishonesty, determination of the grade and of the student's status in the course is left primarily to the discretion of the faculty member. In such cases, where the instructor determines that a student has demonstrated academic dishonesty, the student may receive a failing grade for the assignment and/or exam and may be reported to the Chief Student Services Officer or designee. The Student Code of Conduct (AP 5500) is available on the College of the Redwoods website at:

[www.redwoods.edu/district/board/new/chapter5/documents/AP5500StudentConductCodeandDisciplinaryProceduresrev1.pdf](http://www.redwoods.edu/district/board/new/chapter5/documents/AP5500StudentConductCodeandDisciplinaryProceduresrev1.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 website.

### **Disruptive Classroom Behavior**

Student behavior or speech that disrupts the instructional setting will not be tolerated. Disruptive conduct may include, but is not limited to: unwarranted interruptions; failure to adhere to instructor's directions; vulgar or obscene language; slurs or other forms of intimidation; and physically or verbally abusive behavior. In such cases where the instructor determines that a student has disrupted the educational process a disruptive student may be temporarily removed from class. In addition, he or she may be reported to the Chief Student Services Officer or designee. The Student Code of Conduct (AP 5500) is available on the College of the Redwoods website at:

[www.redwoods.edu/district/board/new/chapter5/documents/AP5500StudentConductCodeandDisciplinaryProceduresrev1.pdf](http://www.redwoods.edu/district/board/new/chapter5/documents/AP5500StudentConductCodeandDisciplinaryProceduresrev1.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 website.

### **Emergency Procedures for the Eureka campus:**

Please review the campus evacuation sites, including the closest site to this classroom (posted by the exit of each room). The Eureka **campus emergency map** is available at:

([http://www.redwoods.edu/Eureka/campus-maps/EurekaMap\\_emergency.pdf](http://www.redwoods.edu/Eureka/campus-maps/EurekaMap_emergency.pdf)). For more information on Public Safety, go to <http://redwoods.edu/safety/> In an emergency that requires an evacuation of the building:

- Be aware of all marked exits from your area and building.
- Once outside, move to the nearest evacuation point outside your building:
- Keep streets and walkways clear for emergency vehicles and personnel.
- Do not leave campus, unless it has been deemed safe by the Incident Commander or campus authorities. (CR's lower parking lot and Tompkins Hill Rd are within the Tsunami Zone.)

**RAVE** – College of the Redwoods has implemented an emergency alert system. In the event of an emergency on campus you can receive an alert through your personal email and/or phones at your home, office, and cell. Registration is necessary in order to receive emergency alerts. Please go to <https://www.GetRave.com/login/Redwoods> and use the "Register" button on the top right portion of the registration page to create an account. During the registration process you can elect to add additional information, such as office phone, home phone, cell phone, and personal email. Please use your CR email address as your primary Registration Email. Your CR email address ends with "redwoods.edu." Please contact Public Safety at 707-476-4112 or [security@redwoods.edu](mailto:security@redwoods.edu) if you have any questions.

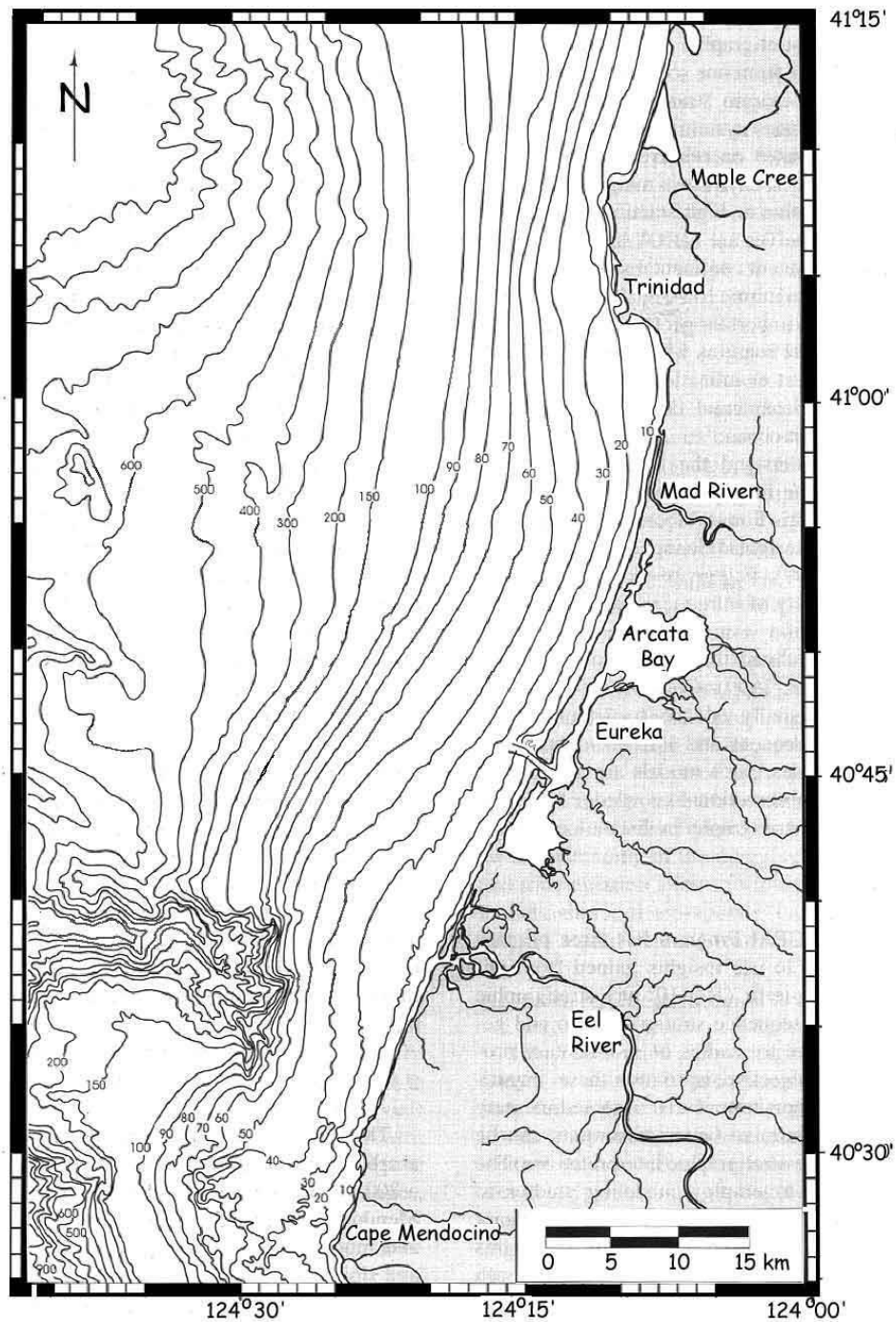
*College of the Redwoods is committed to equal opportunity in employment, admission to the college, and in the conduct of all of its programs and activities.*

# Laboratory in Oceanography

OCEAN-11 E-1159 / E-1160

College of the Redwoods

Spring 2017



## Syllabus

Instructor Danny O'Shea

**Oceanography 11 031159 / 031160****Spring 2016****TTh 11:40 a.m. – 1:05 p.m.****Laboratory in Oceanography****Danny O'Shea****Room HU 125****Office HU 125A Office Hours: 08:30 am- 10:00am****e-mail: [danny-oshea@redwoods.edu](mailto:danny-oshea@redwoods.edu)**

**Course Description:** Oceanography 11 a one-unit laboratory course that augments the conceptual material presented in the Introduction to Oceanography (OCEAN-10) course. 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.

### Syllabus

<u>Week</u>	<u>Day-Month</u>	<u>Laboratory</u>	<u>Topics</u>
1	17 - Jan 19 - Jan	1) Latitude, Longitude & Time	Nautical Charts
2	24 - Jan 26 - Jan	2) Plate Tectonics Magnetic Reversals	*Hookton Sl Sampling Plate Tectonics,
3	31 - Jan 2 - Feb	3) Coastal Marine Sediments	*Hookton Sl Sampling Grain Size Analysis
4	7 - Feb 9 - Feb	4) Coastal Geology & South Humboldt Bay	* <b>Field Trip: Table Bluff:</b> Beach Survey
5	14 - Feb 16 - Feb	5) Salinity Temperature & Density	*Hookton Sl Sampling T – S Diagrams
6	21 - Feb 23 - Feb	6) Marine Weather	*Hookton Sl Sampling Marine Weather Charts
7	28 - Feb 2 - Mar	7) Water Masses & Ocean Circulation	*Hookton Sl Sampling Water Stratification
8	7 - Mar 9 - Mar	8) Ocean Waves	*Hookton Sl Sampling Ocean Wave Prediction
9	14 - Mar 16 - Mar	<b>Spring Break</b>	<b>No Lab</b>
10	21 - Mar 23 - Mar	9) Tsunami	*Hookton Sl Sampling Depth of Tsunami Travel
11	28 - Mar 30 - Mar	10) Seiche, Tides and Amphidromes	*Hookton Sl Sampling Tides
12	4 - Apr 6 - Apr	11) Estuaries	* <b>Field Trip to Arcata Marsh</b>
13	11 - Apr 13 - Apr	12) Primary Producers	*Hookton Sl Sampling Phytoplankton
14	18 - Apr 20 - Apr	13) Zooplankton and Benthos	*Hookton Sl Sampling Zooplankton
15	25 - Apr 27 - Apr	14) Marine Adaptations	*Hookton Sl Sampling Ocean Animals
16	2 - May 4 - May	<b>Final Project</b>	Poster Presentation * <b>Field Trip: South Jetty</b>

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

## Course Learning Outcomes

1. Use the formal methodology of the scientific method as an inquiry-based tool to critically evaluate oceanic phenomena.
2. Demonstrate the skills necessary to utilize basic instruments, tools, and tests used in oceanography.
3. Apply classification systems to organize and identify marine features and organisms.

## Grading:

Your performance on: the weekly laboratories, and field trips, group poster and presentation and lab participation determine the grade you receive. There are 1000 points available and grades are assigned by the percentage of total points as follows:

**1000 - 900=A** | **899 - 800=B** | **799 - 700=C** | **699 - 600=D** | **<599=F**

<b>Grading Summary:</b>	<b>Points</b>
➤ Laboratories	600 (40 pts each lab)
➤ Lab journal and Illustrations	200 (25 pts each entry)
➤ Poster and Presentation	200
<b>Total Points:</b>	<b>1,000</b>

Oceanography -11/ Laboratory in Oceanography augments the Ocean-10 course, and culminates with a poster and presentation of the real-time oceanographic data collected during the semester. The oceanographic observations are derived from a variety of sources currently available for the Humboldt County coastline. The laboratory develops skills reading charts, using digital data loggers, collecting field observations, and interpreting laboratory and microscope data to evaluate and produce the final product. A primary goal of this class is to produce, as a group, a final project in the form of a poster that describing the region, the general oceanography setting, the type of substrates (mud, sand, rock), the influence of physical forces (winds, waves, currents,...) on water quality (temp, salinity, clarity), and the succession of the phyto- and zooplankton during the semester. The project will be worked on during the lab along with a series of demonstrations (labs) designed to help visualize some of the complex processes seen in the field. The product will be designed, written and completed by the students with assistance from the faculty and staff at College of the Redwoods.

Field sampling will take place each week with trips to Hookton Slough to collect water quality data, note oceanographic observations and collect plankton samples. You will need a journal to record your observations, insights and ideas from each field trip, and to contribute to the final project. Your notebook will record the basic observations, winds, temperatures, floods, etc. that occur during the semester and be part of your final grade. This data set will be summarized and put together by you toward the end of the semester.

Grading is based on lab attendance, field trip participation, lab notebook and your contribution to the final poster project. In order to successfully complete the lab work you will need a notebook, calculator, ruler, and writing supplies with an optional set of colored pencils (I have some). You will need to bring appropriate clothing for protection from Sun, Wind, and Rain during the field trips to South Humboldt Bay Area.

The following is a list of parameters to be included as part of the final poster.

- 1) Topographic and Bathymetric Profiles of the coastal hills, bay and ocean
- 2) Environmental description of the bay, sand spit, sea cliffs, and coastal seafloor
- 3) Beach survey the South Spit of Humboldt Bay 2 separate times in several locations
- 4) A plot of the tides and rainfall runoff and the water clarity of the South Humboldt Bay
- 5) Time series of the temperature, salinity, Secci depth
- 6) Observations of sea state conditions and the marine weather
- 7) Collection and identification of plankton samples
- 8) Observation of abundance and change of migratory fish, mammals, birds.

The poster will be a compilation of the field data, observations, events, and collected during the semester. The final product is a group effort, however, the grading will be based on the contribution of each individual. There are several components need to be included and so there is ample opportunity to contribute to the final poster. Some of the primary components that will go into the poster are: **Title, Figures, Graphs, Illustrations, Figure captions, Poster Layout, Data processing, Research, References, and Final Production.**

**Faculty Initiated Drop**

If you miss more than 3 laboratory meetings over the course of the semester you will be dropped from this course. If you have an emergency situation arise, please let me know why you are unable to attend the class.