

| Syllabus for Laboratory in Oceanography– Eureka Campus | | |
|--|---|--|
| Semester & Year | Spring 2018 | |
| Course ID and Section # | OCEAN-10 E-3390 / E-4293 | |
| Instructor's Name | Danny O'Shea | |
| Day/Time | Tuesday, Thursday 8:30AM – 9:55 AM | |
| Location | Humanities Bldg, Room HU125 | |
| Number of Credits/Units | 3 | |
| Contact Information | <i>Office location</i> | HU 125A |
| | <i>Office hours</i> | T 11:30 – 12:30 or by appointment |
| | <i>Phone number</i> | n/a |
| | <i>Email address</i> | danny-oshea@redwoods.edu |
| Textbook Information | <i>Title & Edition</i> | Oceanography Notes |
| | <i>Author</i> | Daniel C. O'Shea |
| | <i>ISBN</i> | n/a |
| Course Description | | |
| <p>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.</p> | | |
| Student Learning Outcomes | | |
| <p>1) Use the formal methodology of the scientific method as an inquiry-based tool to critically evaluate oceanic phenomena.</p> <p>2) Describe how energy is transferred between different elements of the Earth's geologic, oceanic, atmospheric, and biological systems.</p> <p>3) Apply oceanographic principles to describe how coastal materials and landscapes change over time.</p> <p>4) Apply concepts of physics and chemistry to quantitatively explain variations in the characteristics of the oceanic environment.</p> | | |
| Special Accommodations | | |
| <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 Disabled Students Programs and Services. Students may make requests for alternative media by contacting DSPS at 707-476-4280.</p> | | |
| Academic Support | | |
| <p>Academic support is available at Counseling and Advising and includes academic advising and educational planning, Academic Support Center for tutoring and proctored tests, and Extended Opportunity Programs & Services, for eligible students, with advising, assistance, tutoring, and more.</p> | | |

Academic Honesty

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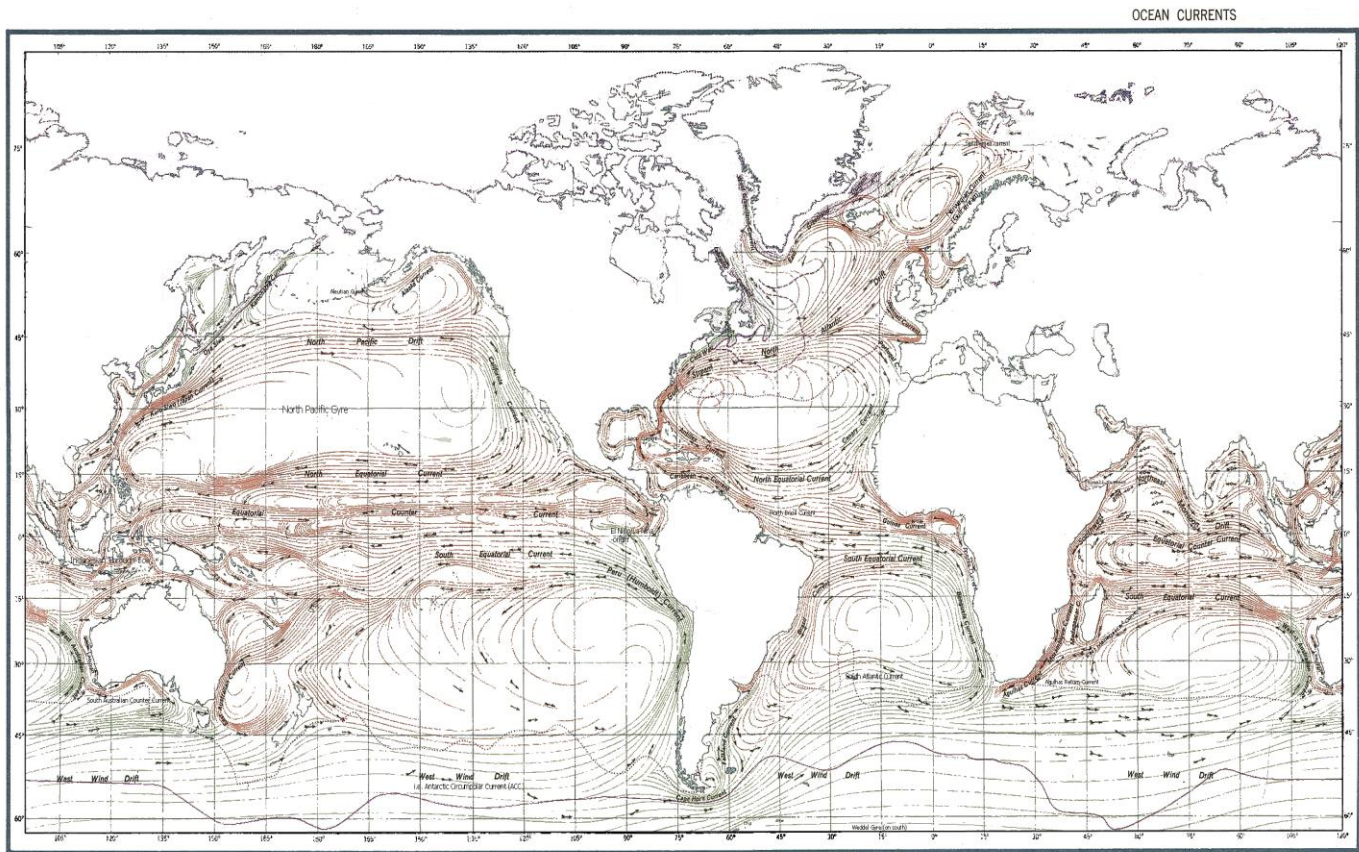
(http://www.redwoods.edu/Eureka/campus-maps/EurekaMap_emergency.pdf). For more information on Public Safety, go to <http://redwoods.edu/safety/> In an emergency that requires an evacuation of the building:

- 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.)

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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 - E3390 / E4293
College of the Redwoods
Spring 2018



Syllabus
Instructor Danny O'Shea

Oceanography 10 – E3939/E4293
Introduction to Oceanography
Danny O'Shea

Spring 2018
Room HU 125
e-mail: danny-oshea@redwoods.edu

TTh 8:30 a.m. – 9:55 a.m.
Office HU 125A

Course Description: This course is an introduction to the Earth's oceans and includes the study of marine geology, plate tectonics, and the physical and chemical properties of seawater, oceanic-atmospheric circulation, marine environments, and biological productivity and marine ecology. Through this course you will gain a scientific perspective of how marine systems modify the oceans, shorelines and how energy is transferred through biogeochemical cycles in the Earth's Ocean. This 3-unit course meets Tuesday and Thursday in Room HU125 on the CR main Eureka campus at 08:30 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>Chapter*</u> | <u>In-Class Activities</u> | <u>Online Quiz</u> |
|-------------|----------------------|--|-----------------|--|--------------------|
| 1 | 16 - Jan 18 - Jan | Introduction Exploration | 1 | 1) Charts, Latitude Longitude & Time | 1 |
| 2 | 23 - Jan 25 - Jan | Ocean Basins | 2 | 2) Plate Boundaries & Marine Geology | 2 |
| 3 | 30 - Jan 1 - Feb | Plate Tectonics <u>Research Outline Due</u> | 3 | 3) Hawai'ian Hot Spot | 3 |
| 4 | 6 - Feb 8 - Feb | Seafloor Sediments 1 st Exam | 4 1-4 | Exam Review | 4 |
| 5 | 13 - Feb 15 - Feb | Water & Salinity Seawater Chemistry | 5 | 4) Seawater Chemistry 5) Pressure, pH & CO ₂ | 5 |
| 6 | 20 - Feb 22 - Feb | Physical Oceanography Atmospheric Circulation | 6 | 6) Coriolis Effect | 6 |
| 7 | 27 - Feb 1 - Mar | Ocean Circulation | 7 | 7) Ocean Circulation | 7 |
| 8 | 6 - Mar 8 - Mar | 2 nd Exam | 5 - 7 | Exam Review | |
| 9 | 13 - Mar 15 - Mar | Spring Break | | No Classes | |
| 10 | 20 - Mar 22 - Mar | Ocean Waves | 8 9 | 8) Ocean Wave Prediction | 8 |
| 11 | 27 - Mar 29 - Mar | Tides | 10 | 9) Ocean Tides Research Paper Due | 9 |
| 12 | 3 - Apr 5 - Apr | Thanksgiving | | No Class | |
| 13 | 10 - Apr 12 - Apr | Coastlines / Deltas 3 rd Exam | 6 -10 | Exam Review | |
| 14 | 17 - Apr 19 - Apr | Life in the Ocean Plankton | 11 12 | 10) Life in the Ocean | 10 |
| 15 | 24 - Apr 26 - Apr | Marine Animals | 13 | | |
| 16 | 1 – May 3 – May | Biological Oceanography Ocean Ecology | 14 15 | | Notebooks Due |
| 17 | 10 - May | Final Exam | 1 - 15 | Final Exam | |

Office Hours: Tuesday 11:45 – 13:30 or by appointment. Room 125A.
The best way to contact me is via e-mail at: danny-oshea@redwoods.edu

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. 2005) edition of an Intro 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 Canvas 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.

Textbooks may be available at local bookstores, online and are required as a background reading to improve your general understanding of the material. Any recent edition of a Introductory Oceanography textbook will suffice, however, you will need to cross reference the chapter from the syllabus and outline available on the Canvas website (www.redwoods.edu). **Read each chapter before you come to class.**

Taken with the laboratory, Oceanography-11, this course is transferable to CSU and UC schools as a science class with a laboratory. Ocean-11 is offered in the Spring semester only.

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 4 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:

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

Grading Summary:

| | Points |
|----------------------------------|---------------|
| ➤ 3 Exams and 1 Final: | 400 |
| ➤ Course Notes and Illustrations | 150 |
| ➤ Research outline and report | 150 |
| ➤ Activities | 150 |
| ➤ Online Quiz | 100 |
| ➤ Participation | 50 |
| Total Points: | 1,000 |

Exams

There are 3 exams the semester, and a cumulative final exam, each that is **100 points**. 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.

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.

Faculty Initiated Drop

If you miss more than 3 class 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.

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