

Syllabus for: Introduction to Oceanography – Eureka Campus

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|--|---------------------------------|---|
| Semester & Year | Spring 2016 | |
| Course ID and Section # | Ocean-10 039199 / 039201 | |
| Instructor's Name | D. O'Shea | |
| Day/Time | T Th / 10:05 – 11:30 | |
| Location | HU125 | |
| Number of Credits/Units | 3 | |
| Contact Information | <i>Office location</i> | HU125A |
| | <i>Office hours</i> | T Th / 08:30 – 09:30 a.m. |
| | <i>Phone number</i> | |
| | <i>Email address</i> | danny-oshea@redwoods.edu |
| Textbook Information | <i>Title & Edition</i> | Oceanography Course Notes (online) |
| | <i>Author</i> | D. O'Shea |
| | <i>ISBN</i> | n/a |
| <p>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.</p> | | |
| <p>Student Learning Outcomes:</p> <ol style="list-style-type: none"> 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. | | |
| <p>Special Accommodations</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 Disabled Students Programs and Services. Students may make requests for alternative media by contacting DSPPS at 707-476-4280.</p> | | |
| <p>Academic Support</p> <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> | | |

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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

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

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). 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 if you have any questions.

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 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>Chapter</u> | <u>In-Class Activities</u> | <u>Online Quiz</u> |
|-------------|----------------------|---|----------------|--|-------------------------|
| 1 | 19 - Jan 21 - Jan | Introduction Exploration | 1 | 1) Charts, Latitude Longitude & Time | 1 |
| 2 | 26 - Jan 28 - Jan | Ocean Basins Plate Tectonics | 2 3 | 2) Plate Boundaries & Marine Geology | 2 |
| 3 | 2 - Feb 4 - Feb | Seafloor Sediments Review | 4 | 3) Mantle Plumes & the Hawai'ian Hot Spot | Research Outline Due |
| 4 | 9 - Feb 11 - Feb | 1 st Exam Water & Salinity | 1 - 4 5 | 4) Seawater Chemistry | 3 |
| 5 | 16 - Feb 18 - Feb | Seawater Chemistry Physical Properties | 5 | 5) Pressure, pH & CO ₂ | |
| 6 | 23 - Feb 25 - Feb | Atmospheric Circulation | 6 | 6) Coriolis Effect | 4 |
| 7 | 1 - Mar 3 - Mar | Ocean Circulation | 7 | 7) Ocean Circulation | 5 |
| 8 | 8 - Mar 10 - Mar | Research Paper Due 2 nd Exam | 5 - 7 | Exam Review | 6 Research Paper |
| 9 | 15 - Mar 17 - Mar | Spring Break | | No Class | |
| 10 | 22 - Mar 24 - Mar | Ocean Waves | 8 9 | 8) Ocean Wave Prediction | |
| 11 | 29 - Mar 31 - Mar | Tides | 10 | 9) Ocean Tides | 7 |
| 12 | 5 - Apr 7 - Apr | Coastlines / Deltas 3 rd Exam | 6 - 10 | Exam Review | 8 |
| 13 | 12 - Apr 14 - Apr | Life in the Ocean Plankton | 11 12 | 10) Life in the Ocean | 9 |
| 14 | 19 - Apr 21 - Apr | Marine Animals | 13 | | 10 |
| 15 | 26 - Apr 28 - Apr | Biological Oceanography Ocean Ecology | 14 | | Notebooks Due |
| 16 | 3 - May 5 - May | Marine Resources Marine Pollution | 15 16 | | |
| 17 | 12 - May | Final Exam | 1 - 16 | Final Exam | |

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. 2004) 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 the chapters before you come to class.**

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

My office is located in the adjacent prep room, HU125A, and my office hours are Tuesday 1:00 p.m., or by appointment. The best way to contact me is via e-mail at: 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:

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

Grading Summary:

| | Points |
|----------------------------------|---------------|
| ➤ 3 Midterms 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 |

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.

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.