Syllabus for Laboratory in Oceanography— Eureka Campus					
Semester & Year	Spring 2019				
Course ID and Section #	OCEAN-10 E-5252 E-5253				
Instructor's Name	Danny O'Shea				
Day/Time	Tuesday, Thursday / 8:30AM – 9:55AM				
Location	Humanities Bldg, Room HU125				
Number of Credits/Units	3				
	Office location	HU 125A			
Contact Information	Office hours	T Th 11:30AM – 12:30PM or by appointment			
Contact Information	Phone number	n/a			
	Email address	danny-oshea@redwoods.edu			
	Title & Edition	Oceanography Notes			
Textbook Information	Author	Daniel C. O'Shea			
	ISBN	n/a			

# **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.

# **Student 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.

# **Special Accommodations**

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# **Academic Support**

Academic support is available at <u>Counseling and Advising</u> and includes academic advising and educational planning, <u>Academic Support Center</u> for tutoring and proctored tests, and <u>Extended</u> <u>Opportunity Programs & Services</u>, for eligible students, with advising, assistance, tutoring, and more.

## **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/AP5500StudentConductCodeandDisciplinar yProceduresrev1.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.

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# Emergency Procedures for the Eureka campus:

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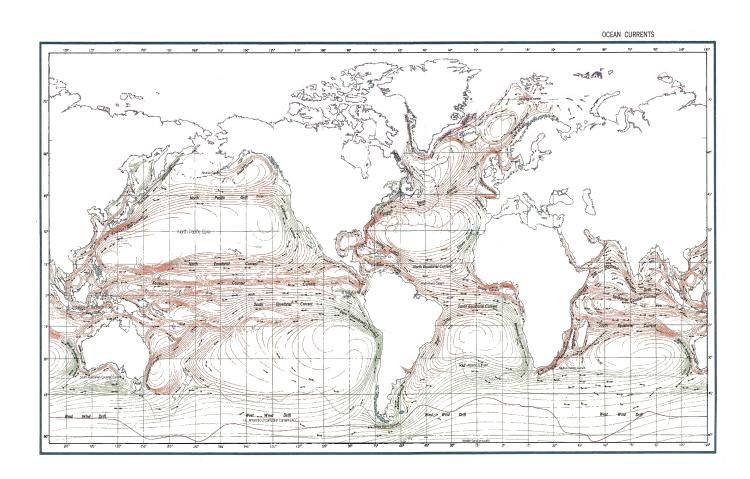
(<u>http://www.redwoods.edu/Eureka/campus-maps/EurekaMap\_emergency.pdf</u>). For more information on Public Safety, go to <u>http://redwoods.edu/safety/</u> In an emergency that requires an evacuation of the building:

- 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 <a href="https://www.GetRave.com/login/Redwoods">https://www.GetRave.com/login/Redwoods</a> 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 <a href="mailto:security@redwoods.edu">security@redwoods.edu</a> 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.

# Introduction to Oceanography OCEAN-10 E-5252 E-5253 College of the Redwoods Spring 2019



Syllabus Instructor Danny O'Shea

OCEAN-10 E-5252 E-5253 Spring 2019 TTh 8:30AM-9:55AM Introduction to Oceanography Office HU 125A Spring 2019 TTh 8:30AM-9:55AM Room HU 125 e-mail: danny-oshea@redwoods.edu

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

Week	Day-Month	<b>Topic</b>	Chapter*	In-Class Activities	Online Quiz
1	22 - Jan 24 - Jan	Introduction	1	1) Charts, Latitude Longitude & Time	1
2	29 - Jan 31 - Jan	Exploration Ocean Basins	2	2) Plate Boundaries & Marine Geology	2
3	5 – Feb 7 - Feb	Plate Tectonics	3	3) Hawai'ian Hot Spot Research Outline Due	3
4	12 – Feb 14 - Feb	Seafloor Sediments 1st Exam	4 1 - 4	Exam Review	4
5	19 - Feb 21 - Feb	Water & Salinity Seawater Chemistry	5	4) Seawater Chemistry 5) Pressure, pH & CO <sub>2</sub>	5
6	21 - Feb 23 - Feb	Physical Oceanography	6	6) Coriolis Effect	6
7	26 - Feb 28 - Feb	Atmospheric Circulation	7	7) Ocean Circulation	7
8	5 - Mar 7 - Mar	Ocean Circulation 2 <sup>nd</sup> Exam	5 - 7	Exam Review	
9	12 - Mar 14 - Mar	Ocean Waves	8	8) Ocean Wave Prediction	
10	19 - Mar 21 - Mar	Spring Break		No Classes	8
11	26 - Mar 28 - Mar	Tides	9	9) Ocean Tides Research Paper Due	9
12	2 - Apr 4 - Apr	Coastlines Deltas	10		
13	9 - Apr 11 - Apr	3 <sup>rd</sup> Exam	6 -10	Exam Review	
14	16 - Apr 18 - Apr	Life in the Ocean Plankton	11 12		10
15	23 - Apr 25 - Apr	Marine Animals	13	10) Life in the Ocean	
16	30 - Apr 2 - May	Biological Oceanography	14 15		
17	7 – May 9 - May	Ocean Resources Marine Pollution	16	Notebooks Due	
		Final Exam	1 - 16	Final Exam	

Office Hours: Tuesday 11:45AM – 12:30PM 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 successful 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 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.

## **Course Learning Outcomes:**

1000-900=A

- 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:

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	
	<b>Total Points:</b>	1,000	

899-800=B

#### **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.

#### **Course Notes and Illustrations**

Most classes will include notes and illustrations that are drawn on the board to explain the specific topics being covered for that day. Students are required to keep a notebook as a record the date, all illustrations, notes, graphs, plots and lecture material presented. Credit is given for careful reproduction of the notes and illustrations including any labels and graphs, questions as well as your personal notes. A complete notebook is worth **150 points.** Your notebook is collected the last Tuesday of class, and returned the following Thursday. If you are not present that week, you are responsible to turn it in the previous week.

# **Activities**

Each week we will focus on a specific topic, and use some of the class time to develop these concepts. You may need to spend some time out of class completing the activities. There are 10 activities throughout the course, each worth **15 points** for a total of **150 points**.

#### **On-Line Quiz**

Each week a multiple-choice, on-line quiz will be posted on **Canvas**. Variations of the 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** for a total of **100 points**.

#### Research Project

Each student is required to submit a **2,500 to 3,000-word** research paper with **2 images with description** on a topic of interest to you. The paper is to be **submitted online** via the **Canvas** 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) 2,500-3,000 words, original (not copied and pasted) text (this is about 5-7 pages);
- 2) **<u>DO NOT</u>** use direct quotes.
- 3) **2 images:** at least one **map** with a **figure number** (e.g. Figure 1) and a **brief description** of the location of interest; **AND** at least one **image**, **drawing** or **graph** complete with a **figure number** and **brief description**.
- 4) **References** (Bibliography, Works Cited, etc.); 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 Canvas under the "Library Resource" link in the Course Tools box.

We will briefly review some basic writing techniques early in the course.

A <u>General outline</u> with specific research topics for your project is due February 7 (20 pts)
The <u>Final draft</u> is due by <u>March 28</u>, early submissions are encouraged. Projects are to be turned in online as a ".doc" document. I will post your research project on the <u>Canvas</u> 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.

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#### Attendance/Participation

Participation is very important and absence will reflect negatively on your performance and final grade. If you miss more than 3 class periods you will be dropped from this class. Showing up late is 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 to miss a class, please let me know a day before the class.

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