

University of Connecticut Early College Experience



MARN 1002 Introduction to Oceanography Syllabus

Course Description

This early college experience course covers the processes governing the geology, circulation, chemistry, and biological productivity of the world's oceans. Emphasis is placed on the interactions and interrelationships between physical, chemical, biological, and geological processes that contribute to both the stability and the variability of the marine environment.

Course Objectives

Upon successful completion of this course, students should be able to:

- Describe the physical and chemical characteristics of seawater.
- Describe how the oceans and seafloor have changed over geological time.
- Explain how oceans modify the climate and heat distribution on Earth.
- Explain the processes driving currents, tides, and waves.
- Describe environmental issues concerning marine resources and ecosystems.
- Describe characteristics of marine life and controls on the marine trophic web.

Course Materials

Required Text : Sverdrup, K. A. and E. V. Armbrust. (2009). *An Introduction to the World's Oceans* (10th edition). McGraw Hill. ISBN: 978-0-07-337670-1.

Additional topics and activities can be added to the standard course schedule at the teacher's discretion.



Course Requirements

Success in this course requires attendance and participation in class (minds on learners!), promptly reading assigned chapters in the text, successful completion of homework assignments and in-class activities. Students must also be successful in passing their tests and final examination.

This course is designed to be completed in one semester under the 4x4 block of Ledyard High School in approximately 20 weeks of class, with the class meeting every day for about 83 minutes. The last week includes the final exam week provided by the school for all classes.

Ledyard High School students taking this course need to have successfully completed the prerequisites of at least a B- in Biology I (1421/1422) and at least a C- in Chemistry (1431/1432) or have written permission of department head.


Grading Policies

These grading policies apply to the UCONN ECE course grade; requirements for the high school course grade may be different and will be outlined in later paperwork. The final course grade will be calculated as the weighted average of the scores obtained in each of the following categories: participation, assignments, tests, and the final examination. The tests and final exam are in-class and closed-book. The final exam accounts for 20% of the final course grade. **Students must pass this UCONN examination to receive college credit for the course.** The final letter grade will be assigned based on each student's final score:

A	93-100	B	83-86	C	73-76	D	63-66
A-	90-92	B-	80-82	C-	70-72	D-	60-62
B+	87-89	C+	77-79	D+	67-69	F	0-59

Proposed Course Schedule

Week #	Topic Title	Text Chapter
1	Introduction	Preface, Chapter 1
1	The Water Planet	Chapter 2
2	Plate Tectonics	Chapter 3
3	The Sea Floor	Chapter 4
4	Sea Floor Sediments	Chapter 4
5	Physical Properties of Water	Chapter 5
6	Chemistry of Seawater	Chapter 6
8	Atmospheric Circulation	Chapter 7
9	Ocean Circulation	Chapter 8
10	Surface Currents	Chapter 9
11	Waves	Chapter 10
12	Tides	Chapter 11
13	Coasts and Beaches	Chapter 12
14	Estuaries	Chapter 12
15	Environmental Issues	Chapter 13
16	Ocean Life	Chapters 14
17	Primary Production	Chapter 15
18	Food Webs	Chapter 15
19	Plankton, Bacteria, and Viruses	Chapter 16
19	Nekton	Chapter 17
20	Benthic Life	Chapter 18
20	Review	
	FINAL EXAM	Cumulative

 **Order of these topics may change to accommodate changes in the LHS schedule and scheduling of field trips with Project Oceanology.**