Syllabus: INTRODUCTION TO OCEANOGRAPHY
OCE 1001, Fall 2019 (Class Number: 19015, 3 credits)

What does the deep sea say? Oh what does the deep sea say?
It moans, it groans, it flashes and it foams, and rolls on its weary way (Traditional)

Meeting Time/Place: Mon./Wed./Fri., Period 5 (11:45 AM - 12:35 PM) in Williamson Hall 100

Instructor

Andrew R. Zimmerman, Ph.D.
Associate Professor, Department of Geological Sciences, University of Florida, Office: (352) 392-0070
Office Hours: By appointment, Williamson Hall 364 (e-mail me to set up a time)
e-mail: azimmer@ufl.edu (but generally use Canvas Messaging tool instead)
website: http://people.clas.ufl.edu/azimmer/

Teaching Assistant

Jing Lyu, WM Hall 274
e-mail: jinglyu@ufl.edu (you are welcome to make an appointment to visit)

Overall Course Objectives

- Learn the major geological, physical and biological characteristics of Earth's marine realm.
- Understand the role of the ocean in shaping the global Earth environment.
- Develop an enhanced awareness of how the ocean influences human well-being and vice versa.
- Discover an excitement about science and how it can enhance our appreciation for the complexity and beauty of the world around us and solve real-world problems. Hopefully, this will translate into an eagerness to explore science-topics further and to vote and consume goods as a scientifically-educated citizen.

Course Website on Canvas

Go to http://lss.at.ufl.edu/ and click on the e-Learning in Canvas to Log In. You must have an active GatorLink ID to access the course website. If not, go to the GatorLink website (http://gatorlink.uf.edu) or call the help desk at 392-HELP for assistance.
The course site provides access to grades, announcements, downloadable lecture notes/outlines and exercises. It is the student's responsibility to see that their grades are correctly recorded in the on-line gradebook. No grade will be adjusted more than one week after they are posted. It is recommended that students adjust Canvas settings so that Announcements are sent to phone or email.

Recommended Textbook and Extra Credit

No text book is required for the course. Any introductory oceanography textbook that you may find, even an old one, is probably sufficient to serve as a secondary source of information that can provide you with additional information and alternative explanations of the material covered in the lecture and on the quizzes. I will place some textbooks on reserve in Marston Library.

HOWEVER, use of the following textbook and its companion website (Mastering Oceanography) will provide you with an opportunity for extra credit points that can boost your final grade tally by up to 6%. Here's the info:

Recommended: Trujillo & Thurman: Essentials of Oceanography Plus Modified MasteringOceanography with eText --13/e *OPTIONS:*

1. *Essentials of Oceanography 13e + Modified MasteringOceanography access code - ISBN: 9780135686881 (Bound book)*
2. *Essentials of Oceanography 13e Book a la carte + Modified MasteringOceanography access code - ISBN: 9780135686867 (3-hole-punched book)*
3. *Essentials of Oceanography 13e eText + Modified MasteringOceanography code: ISBN: 9780135486948 (eText only)*

Students may purchase 'Modified Mastering' including the eText for $78.95 or 'Modified Mastering' without the eText for $45 through the Canvas course website once the semester has started. You won't find prices better than these elsewhere (such as on Amazon.com).

Whether you purchase the 'Modified Mastering' from within Canvas or elsewhere, you need to register it within Canvas. The process is described here: http://www.youtube.com/watch?v=NlbR6zpdKRQ. If problems, students should contact Pearson tech support directly: https://support.pearson.com/getsupport/s/.

Mastering also has dynamic study modules for each chapter to help you study.

Extra Credit worth a possible 6% addition to your final grade: There are 6 assignments on the MasteringOceanography website. Two assignments should be completed before each of the three exams to receive full credit. Each one can be done in roughly 2 hours. Your score on a '*Mastering*' lesson will represent the fraction of the 1% extra credit you will be awarded. For example, if you did only 2 lessons and got a 70% and a 90%, you would get 0.7 + 0.9 = 1.6 % points and your grade might go from 89% or a B+, to 90.6%, an A-.

The 'Mastering' assignments are designed to help you learn the material and do better on exams (by letting you stop and consult the e-textbook, allowing partial credit for getting the answers on your second try or after providing a hint). Thus, full credit will be awarded only if assignments are completed before taking class exams on the corresponding material covered. Only half credit will be awarded for assignments completed before the final (third) exam.

Grading

3 Exams (all in class, curved to 85% median)	27%, 27% (best two), 16% for lowest exam score
In class Review Questions (using TopHat)	15% total
Homework exercise (probably 6)	15% total

Final letter grade:
A = ≥93%, A- = 90-92.99, B+ = 87-89.99, B = 83-86.99, B- = 80-82.99, C+ = 77-79.99, C = 73-76.99, C- = 70-72.99, D+ = 67-69.99, D = 63-66.99, D- = 60-62.99, E < 60

There will be no 'rounding up' of grades so please do not ask. The only extra credit that will be offered is **6%** final grade points for work done on *MasteringOceanography* and **2%** for going on the field trip (details to follow).

***Note:** An earned grade of 'C-' grade or below does not qualify for major, minor, Gen Ed, or college basic distribution credit.

Exams

Exams will be about 50-60 multiple choice questions (often the same or similar to those that appear as in-class Review Questions). Everything associated with the class is fair game on exams. However, the focus will be on material presented in lecture. Exam material is cumulative but *focuses on each third of the course*. I will offer pre-

exam Q&A sessions. Make-ups for exams will only be given by pre-arrangement (before the exam) or under extraordinary circumstances.

1st in-class exam	Mon. Sep 23
2nd in-class exam	Mon., Oct. 28
3rd exam	Tues. Dec. 10, 12:30 PM - 2:30 PM

Exam grades will be curved to a median of 85% using a linear method described at: http://www.ats.amherst.edu/software/excel/excel-grading/excel-grades/#CurvingGrades. As a result, more than half the class will get at least a B on exams.

In-Class Review Questions via TopHat (TH)

We will be using the Top Hat (www.tophat.com) classroom response system in class. You will be able to submit answers to in-class questions using Apple or Android smartphones and tablets, laptops, or via text message (SMS). Top Hat will require a subscription. There are three options to choose from:
$20 for 1 semester of unlimited access, $30 for 1 year of unlimited access, $55 for lifetime access.

You can visit https://support.tophat.com/s/article/Student-Top-Hat-Overview-and-Getting-Started-Guide

for the Student Quick Start Guide which outlines how you will register for a Top Hat account, as well as providing a brief overview to get you up and running on the system. An email invitation will also be sent to your email account (if you don't receive this email, you can register by visiting our direct Top Hat course URL https://app.tophat.com/e/690471. (Join Code: 690471)

Should you require assistance with Top Hat at any time, due to the fact that they require specific user information to troubleshoot these issues, please contact their Support Team directly by way of email (support@tophat.com), the in app support button, or by calling 1-888-663-5491.

For most questions asked during class using TopHat, 3 points will be awarded for correct answers and 2 point for wrong answers. So, of course, you should guess if necessary. The point is to participate and be in class, and be mentally present. A non-answer, whether because of non-attentiveness, absence, tardiness, forgetting to bring a devise to class or inability to operate it will receive no points…no exception. TH points cannot be made up, even in the case of excused absence. Because I understand that you may have to miss class a few times, I will give you 50 RQ points for free (of the about 400 point possible through the whole semester). This means you can miss class or forget your clicker etc. about 5 times without penalization. Students caught entering answers for more than one student will lose 50 TH. Don't do it! Be sure to check that your TopHat points are being recorded correctly. Changes will not be made to grades more than 1 week following the date at which the questions were given.

Exercises

Six exercises will be assigned during the semester. All but one of them will be done on the Canvas class website (Assignment tab). Homework assignments can be turned in late, but only within one week of the due date and only for half credit. You will receive in-class and e-mail reminders when these assignments are due.

Field Trip/Other Extra Credit

We will take an optional field trip to Cedar Key (UF/IFAS Nature Coast Biological Station on Seahorse Key) on **Saturday Nov. 9.** There is no cost to students. Extra credit of 2% final grade points will be awarded for attendance. HOWEVER, I need students to commit themselves to going so we can plan transport/ship time etc. 0.5% final grade points will be deducted for those who commit to go but fail to show up! We will explore the marine ecology of the area by doing a shipboard marine trawl and plankton tow, seine netting, and use the tanks and microscopes in the lab. Transportation will be provided but students may elect to drive themselves. Carpooling is encouraged. There will be no other extra credit opportunities (besides field trip and 'Mastering').

How to do well in this class

Skeleton notes for each lecture will be posted on the class website, usually one day before the lecture. Keep in mind that these are NOT complete notes. I recommend taking your notes on top of these. Everyone has his or her own study techniques, but here's my recommendation. The more frequently you are exposed to the material, the more likely you are to grasp the concepts and ideas presented. So I recommend skimming the designated reading before lecture. After class, really read the text focusing on the material covered in lecture and concentrating on figures and illustrations. Make note of questions or concepts to have clarified by me or your TA later. Attend pre-exam review sessions with a list of questions for me to answer. Use the office hours provided for you to ask questions or just to come in and chat. Be responsible for your own education. If you miss a class, get the notes from a colleague before the next class. It is not my intention that you be forced to memorize many trivial facts. Instead, I think you can succeed by being very familiar with the visual images (figures, graphs etc. shown in lecture or textbook). If you really understand the pictures, then you really understand the concepts.

Miscellaneous

This is a large class, so small disturbances rapidly multiply into large disturbances. Creating a disturbance is rude to your classmates and to me. I consider the following to be rude:

-No use of computers other than viewing and taking class notes will be allowed during class.

-No eating or reading the newspaper will be allowed in class during class.

-Entering the class late or leaving early. If you are more than 10 minutes late, I would suggest you do not enter. Leaving your seat before class ends, even to go to the bathroom, should be an extremely rare occurrence (i.e. should not happen). Make prior arrangement in the event of an extenuating circumstance.

-Talking with other students during lectures. If you have questions during the lecture, please address them to me. Chances are others have questions as well. Your comments and feedback are welcome.

Academic Honesty Policy

Students must conform to UF's academic honesty policy regarding plagiarism and other forms of cheating. This means that on all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The university specifically prohibits cheating, plagiarism, misrepresentation, bribery, conspiracy, and fabrication. For more information about the definition of these terms and other aspects of the Honesty Guidelines, see http://www.dso.ufl.edu/sccr/process/student---conduct---honor---code/. All students found to have cheated, plagiarized, or otherwise violated the Honor Code in any assignment for this course will be prosecuted to the full extent of the university honor policy, including judicial action and the sanctions listed in paragraph XI of the Student Conduct Code. For serious violations, you will fail this course.

Accommodations for Students with Disabilities

Please do not hesitate to ask for accommodation for a documented disability. Students requesting classroom accommodation must first register with the Dean of Students Office (http://www.dso.ufl.edu/drp/). The Dean of Students Office will provide documentation to the student, who must then provide this documentation to the Instructor when requesting accommodation. Please ask the instructor if you would like any assistance in this process. Please provide this information to your TA within the first two weeks of the semester.

Additional Resources

Students facing difficulties completing the course or who are in need of counseling or urgent help may contact the Counseling and Wellness Center: http://www.counseling.ufl.edu/cwc/Default.aspx, 392-1575; or the University Police Department: 392-1111 or 9-1-1 for emergencies.

Other Resources available on-campus for students include:

a. Student Mental Health, Student Health Care Center, 392-1171, personal counseling;

b. Sexual Assault Recovery Services (SARS), Student Health Care Center, 392-1161, sexual counseling;

c. Career Resource Center, Reitz Union, 392-1601, career development assistance and counseling.

Introduction to Oceanography OCE 1001 – Fall 2018
Prof. Andrew Zimmerman - Tentative Schedule

Week	Date	Topic	Reading
		Background	
1	Aug 21	Introduction to Course and Topic	Ch 1
	Aug 23	History and Methods of Oceanography	Appendix 1, 2, 3 & 5
2	Aug 26	History and Methods of Oceanography	
	Aug 28	Origins of Earth and Ocean	
	Aug 30	Origins of Earth and Oceans	
		Marine Geology	
3	Sep 2	**No class – Labor Day**	
	Sep 4	Plate Tectonics Exercise 1 & 2 Due	Ch 2
	Sep 6	Plate Tectonics	
4	Sep 9	Plate Tectonics	
	Sep 11	Physiography of the Seafloor	Ch 3
	Sep 13	Physiography of the Seafloor	
5	Sep 16	Physiography of the Seafloor	
	Sep 18	Sediments Exercise 3 Due	Ch 4
	Sep 20	Sediments	
		Marine Chemistry	
6	Sep 23	**1st In-Class Exam**	
	Sep 25	Water Chemistry	Ch 5, Appendix IV
	Sep 27	Water Chemistry	
		Physical Oceanography	
7	Sep 30	Atmospheric Circulation	Ch 6
	Oct 2	Atmospheric Circulation	
	Oct 4	No class - Homecoming	
8	Oct 7	Atmospheric Circulation	
	Oct 9	Surface Ocean Circulation	Ch 7
	Oct 11	Surface Ocean Circulation	
9	Oct 14	Deep Ocean Circulation	
	Oct 16	Waves	Ch 8
	Oct 18	Waves Exercise 4 Due	

10	Oct 21	Coasts & Beaches	Ch 10
	Oct 23	Coasts & Beaches	
	Oct 25	Coasts & Beaches Exercise 5 Due	
11	Oct 28	**2nd In-Class Exam**	
	Oct 30	Climate Change – Evidence and Uncertainties	Ch 16
	Nov 1	Climate Change and Sea level Rise	
		Biological Oceanography	
12	Nov 4	Life in the Ocean – Intro.	Ch 12
	Nov 6	Life in the Ocean - Ecology	
	Nov 8	Life in the Ocean – Primary Production	Ch 13
	Sat. Nov 9	**OPTIONAL Ex.Cred. FIELD TRIP (10:30–5pm)**	
13	Nov 11	No class – Veterans Day	
	Nov 13	Life in the Ocean – Primary Production	
	Nov 15	Pelagic Organisms	
14	Nov 18	Pelagic Organisms	Ch. 14
	Nov 20	Pelagic Organisms	
	Nov 22	Biological Resources	
15	Nov 25	Biological Resources	
	Nov 27	No class - Thanksgiving	Ch. 13 (p 430-441)
	Nov 29	No class - Thanksgiving	
16	Dec 2	Benthic Communities Exercise 6 Due	Ch 15
	Dec 4	Marine Pollution/Issues	Ch 11
	Dec 6	No Class - Reading Period	
	Dec 10	Scheduled Final Exam, Tuesday 12:30 PM - 2:30 PM	