

Oceans and Society

Marine Science 210

Fall 2017



Dr. Lori A. Ziolkowski (Dr. Z)

email: loriz@sc.edu

MWF 9:40 to 10:30am

Booker T Washington 201

Course Description:

Oceans and Society is a class about why the ocean matters to you as an individual and society in general. We use the oceans for the oxygen we breathe, the food we eat, to transport the clothes and electronics we purchase and the oceans shape the coasts that we live on. The oceans also control the climate and are affected by human activity. After this class, I hope you will see how important the oceans are to our everyday life, even if we do not live on a coastline.

Learning outcomes:

By the end of the term, successful students should be able to do the following:

1. Locate and name the major oceans on a map.
2. Identify the features of the ocean basins and relate the structures observed to the theories of their origin.
3. Understand basic chemical oceanography in terms of properties of water, salts, and gases.
4. Describe motions in the sea in terms of their effects on land.
5. Identify and discuss the difference between plankton (e.g. algae) and nekton (e.g. sharks).
6. Identify how water circulates both on the surface and deeper in the ocean.
7. Identify the causes of marine pollution and understand the problems of containment and alleviation.
8. Understand how past evidence of ocean and climate history is obtained and how this information is interpreted.
9. Evaluate scientific evidence of both natural and anthropogenic climate change, and recognize the complexity of the ocean's role in climate.

Textbook (not required):

Essentials of Oceanography, Tom Garrison,
Thompson Learning, Inc. Belmont, CA.

Previous editions can also be used.

iClicker remote – required.

Due to the size of the class, I will be using iClickers to get your feedback on material we cover during the semester. Because the wifi in our classroom is not always reliable, only iClicker remotes (iClicker 2 or iClicker +) can be used. Therefore, I am sorry to report that iClicker Cloud will not work for this class. You will need to link your iClicker remote to your student ID in Blackboard, which I will give instructions on how to do that the first full week of class. **We will start clicking for points after Labor Day.**

Grading:

Final grades will be calculated as follows:

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| a. Midterm exams (best two of three count) | 50% |
| b. Final exam (cumulative, mandatory) | 30% |
| c. Participation (via iClicker) | 10% |
| d. Weekly quizzes on Blackboard | 10% |
| e. Bonus (correctly answered iClicker questions) | 5% |

Your semester grade is based on points accumulated from these elements. If there are decimals, 0.500 and higher will round up to the next whole number. You are not in competition with other students for grades, I will not negotiate grades after the fact.

The lab section is a separate grade from the lecture section.

Exams: The exams will be multiple-choice format. When writing the exams, you will need a pencil and your student card. **New this semester:** I will allow one hand written page (8.5" x 11") of crib notes for the exam. These notes can be written on both sides of the paper if needed. The midterm exam grade (50% of your final grade) will be calculated as the **best two out of three midterm grades**. Therefore, if you do poorly on the first exams but great on the last two midterms, it will not affect your grade. The **final exam will be cumulative and mandatory**. I am sorry, but given the size of the class no makeup exams will be given.

Final grades will be assigned according to your final average and will be based on:

100 – 90 = A	79 – 76 = C+	65 – 60 = D
89 – 86 = B+	75 – 70 = C	less than 60 = F
85 – 80 = B	69 – 66 = D+	

Final grades typically results in an average course grade in the area of a low “B”.

Exams:

Midterm exams (n=3): Wed Sept 20, Wed Oct 11 and Wed Nov 8 all during the Fall 2015 term.

Final exam: Wednesday Dec 13, 2017 9am until 11:30am in Booker T Washington 201 (our regular classroom).

Exams will be based on lectures, videos, notes and anything else covered during class time. Exam questions will be drawn from lecture notes and videos. As noted above, one sheet of 8.5"x11" paper with handwritten notes on both sides of the page will be allowed as a crib sheet.

Participation

(iClickers test your understanding, get bonus points, attendance & 10% of your final grade):

Attendance is required for success in any class. I use iClickers to know that you were in class. Please bring your iClicker to every class. Here's why: the USC Bulletin for Undergraduate Studies states that absences of more than 10% of the scheduled class sessions are excessive – both excused and unexcused absences count towards this 10%. If you miss five (or more) days of clicking in that means you will have missed more than 10% of the classes and you are subject to a reduction in your grade by one letter grade according to USC policies.

Blackboard quizzes (10% of final grade):

At the end of our first full week of class (Friday September 1st), there will be a six-question quiz that must be completed by 11:59pm on Sunday evening. You will have two full days to complete the quiz. These quizzes can be attempted three times over the weekend.

Office Hours / Communicating with me:

Office hours are Tuesdays from 1 to 3pm. If those hours do not work for your schedule, alternative meeting times may be available. Email is an effective way to communicate with me and I check my email often. My email address is loriz@sc.edu. Because many of you will have similar questions, I may direct you towards the Discussion page

on Blackboard to ask your question so that I can answer it for everyone in the class. Before each exam, I will also open a Blackboard discussion where you can ask for clarification on issues that come up while studying for exams.

Small print:

Lecture notes: Two types of lecture notes will be posted. The night before class (by 11pm), a text outline of what we will talk about in class will be posted on Blackboard. By the end of the day after class, I will upload a PDF of the notes used in class. These two documents will contain essentially the same information except the after class version of the notes will have images and the iClicker questions. Your exam questions will be generated from material covered in class (lecture notes and videos). I will not test you on material in the textbook that we didn't talk about in class.

Just as you probably expect me to act respectfully toward you, I expect you to be respectful during class – to me and the other students around you. Please silence your cell phones before class. I may just answer your phone if I hear it ringing! If you are found being disrespectful to others, or me then you may lose your attendance grade and may be asked to leave class. I reserve the right to confiscate any electronic equipment that is distracting or disruptive to me or others for the remainder of the class period.

With all that said, I sincerely hope you enjoy this class. I encourage you to ask questions and start discussions about any concepts, misconceptions, preconceptions, current events or anything you've encountered related to marine science and climate change. Please feel free to contact me by email, after class or during office hours with any questions or concerns you may have. I welcome the opportunity to talk with you, and I strive to provide you with an interesting and enlightening course in the field of oceanography!

Caveats and other info:

All materials generated for this class, which include but are not limited to syllabi, in-class materials, and exams, are copyrighted. You do not have the right to distribute these without written consent of the instructor.

Academic Integrity:

The University of South Carolina Honor Code states:

“It is the responsibility of every student at the University of South Carolina Columbia to adhere steadfastly to truthfulness and to avoid dishonesty, fraud, or deceit of any type in connection with any academic program. Any student who violates this Honor Code or who knowingly assists another to violate this Honor Code shall be subject to discipline.”

By signing your name to a quiz or an exam, you are acknowledging adherence to the Honor Code. More information can be found at: www.sc.edu/academicintegrity/honorcode.html.

The American with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. **If you believe you have a disability requiring accommodation, please contact the instructor before you need accommodations.**

Academic Responsibility:

Faculty and students at USC are obligated to follow the USC Code of Academic Responsibility. I expect all class members to demonstrate intellectual honesty and to respect the academic rights of their classmates. If you have forgotten your responsibilities under this Code, please re-read Student Affairs Policy STAF 6.25 on USC's web page.

Course Schedule (This may change over the semester)

Day	Date	Topic
	TH, 8/24	Classes begin
1	F, 8/25	Introduction / Class objectives
2	M, 8/28	Scientific Method and Earth History
3	W, 8/30	History of Marine Science
4	F, 9/1	Earth Structure and Plate Tectonics
	M, 9/4	Labor day. No class.
5	W, 9/6	Ocean Basins
6	F, 9/8	Ocean Sediments
7	M, 9/11	Blue Planet: Ocean World
8	W, 9/13	Seawater Properties
9	F, 9/15	Water-column Properties
10	M, 9/18	Atmospheric Circulation
11	W, 9/20	Exam #1
12	F, 9/22	Wind-driven Circulation (shallow circulation)
13	M, 9/25	Thermohaline Circulation (deep circulation)
14	W, 9/27	Waves 1
15	F, 9/29	Waves 2
16	M, 10/2	Tides
17	W, 10/4	Coasts
18	F, 10/6	Estuaries (Parent's Weekend)
19	M, 10/9	Review for Exam #2
20	W, 10/11	Exam #2
21	F, 10/13	Life in the Ocean
22	M, 10/16	Plankton
23	W, 10/18	Nekton
	TH, 10/19	Fall Break – No Class
	F, 10/20	Fall Break – No Class
24	M, 10/23	Food Webs and Pelagic Biogeography
25	W, 10/25	Coral Reefs
26	F, 10/27	Chasing Coral
27	M, 10/30	Use and Abuse of the Ocean 1
28	W, 11/1	Use and Abuse of the Ocean 2
29	F, 11/3	Use and Abuse of the Ocean 3
30	M, 11/6	Review / catch-up day
31	W, 11/8	Exam #3
32	F, 11/10	Climate Change: intro
33	M, 11/13	Climate: the Ocean
34	W, 11/15	Climate: Chasing Ice, part 1
35	F, 11/17	Climate: Chasing Ice, part 2

36	M, 11/20	Climate: Facts 1
	W, 11/22	Thanksgiving Break, no classes
	TH, 11/23	Thanksgiving Break, no classes
	F, 11/24	Thanksgiving Break, no classes
37	M, 11/27	Climate: Facts 2
38	W, 11/29	Climate: Facts 3
39	F, 12/1	Climate Summary
40	M, 12/4	Class Review 1
41	W, 12/6	Class Review 2
42	F, 12/8	Last day of class, Class Review 3
	S, 12/9	Reading Day
	Wednesday 12/13/17 @9am	Final Exam in our regular classroom