TEXAS A&M UNIVERSITY

SYLLABUS

Course title and number	OCNG 252 Section 502
Term	Fall 2017
Meeting times and location	Eller O&M Room 207, Monday, 11:30am-1:30 pm

Course Description and Prerequisites

This course is a lab-based introduction to oceanography topics. There are no prerequisites for this course, but a general understanding of basic math is needed and some familiarity with Microsoft Excel is useful. While this class complements the oceanography 251 lecture course, OCNG 251 and 252 do NOT need to be taken in the same semester. However, many students find OCNG 252 helps them better understand concepts covered in OCNG 251. OCNG 252 may also be taken as a standalone course.

Learning Outcomes

After successfully completing the Introduction to Oceanography lab, students will be able to:

1) Describe the bathymetric variability of the seafloor and how to contour it.
2) Discuss the deposition and transport of sediments in the ocean.
3) Compare the different methods for determining salinity and assess which method is more accurate and precise.
4) Describe how density is determined and the role it plays in ocean circulation.
5) Explain how climate change impacts the ocean.
6) Describe the effects of seasonal variability on the surface ocean and the organisms in it.

Core Objectives

Students will develop critical thinking skills, communication skills, empirical and quantitative skills and teamwork throughout the semester through the following activities:

- Students demonstrate teamwork each week as they work in pairs or groups of four to make the necessary measurements for each lab.
- Students develop empirical and quantitative skills as they individually perform calculations to answer the problems assigned for the lab.
- Students hone critical thinking skills as they use the data and calculations to draw conclusions and answer the text questions.
- Communication skills are fostered as students write up their answers for the lab reports (forms).

Instructor/TA Information

TA Name:	Mrs. Jenna Patten
Email address:	Newmanj@tamu.edu **best way to contact me
Office hours:	(Monday 1:30pm-3:30, Thursday 11:35-12:35pm) or by appointment
Office location:	508AAA, Eller O&M Building
Instructor of Record:	Dr. Christina Wiederwohl
Telephone number:	979-845-7191
Email address:	chrissyw@tamu.edu
Office location:	411a, Eller O&M Building

Textbook and/or Resource Material

REQUIRED: Oceanography 252 Laboratory Manual (eBook) by C.L. Wiederwohl, 2015. This is provided for free on eCampus.

REQUIRED: iClicker available for purchase at the bookstore if you do not already have one. iClicker 1, iClicker 2, and iClicker + are all acceptable. We will not be using iClicker-REEF or the iClicker mobile app. You must register your clicker here: https://www.iclicker.com/remote-registration-form-for-classic

Grading Policies

A total grade for each of the 11 labs will be composed by the following:

20%	PreLab In Class Clicker Quiz	(completed at the beginning of each class)
40%	PostLab Online Assignments	(completed through eCampus)
40%	Forms and Participation	

Grades are available at all times on eCampus except when the website is down for routine maintenance, therefore you will know your grade throughout the duration of this course.

If you miss a lab without a university excuse or fail to do make-up work when allowed, you will receive a zero for that lab. Nothing will be accepted late and ***it is your responsibility to watch due dates for online assignments***.

Attendance policy:
If you miss a lab without documentation of a university excused absence or **because of improper lab attire** (not wearing long pants and closed-toe shoes), all associated assignments (online or forms) will be marked as zero even if completed.

Tardiness:
At the beginning of each class a QUIZ will be given followed by a brief presentation. The quiz will be used to assess your preparedness for the lab. **If you miss the start of the quiz, you will not be allowed to complete it and will receive a zero.** The presentation will inform you of any safety precautions, necessary procedural changes, equipment instructions or vital background information. You MUST be on time for this presentation. **If you miss any part of this presentation, you will not be allowed to complete the lab exercises and no make-up opportunity will be offered.**

University Excused Absences: – http://student-rules.tamu.edu/rule07
It is your responsibility to contact the instructor to make up the lab IF you have an excuse. You must turn in the appropriate excuse forms to the instructor before you make up the lab. You are responsible for getting any assignment due in that lab to the instructor before you make up the lab.

Make up labs:
If you miss a lab and have a University Approved Excuse, you will be allowed to make up the lab. Due to the nature of the lab schedule, in most cases you will ONLY be able to make up a lab DURING the SAME week you missed. **You may not simply attend whichever lab you choose, and must set up a makeup time through me**.

If you do not make up the lab during the agreed upon time, you will receive a zero for all associated assignments, including those completed online.

Safety:
In order to enable a safe learning environment, there are 18 cubbies available at the front of the room. ALL personal belongs must be stowed there for the duration of all labs. This includes cell phones, ipods, purses, book bags, etc. Since we are in a laboratory classroom setting, **everyone must wear closed-toe shoes and long pants/skirts for every meeting of this course**, and food and drinks are not allowed in the lab. You can bring track pants, scrub pants or the like and just put them on for the labs and take them off after. For the labs where simple chemicals (weak acid, silver nitrate, potassium chromate) are used, safety goggles, gloves and aprons are provided and must be used. These are kept in the lab, so you are welcome to use them at any other time you would like. The location of other safety equipment (fire extinguisher, broken glass container, eye wash, etc.) found in the lab will be brought to your attention by the instructor.

PreLab Quizzes and PostLab Assignments:
At the beginning of each lab, a clicker PreLab quiz will be given. The questions will generally be based on the lab manual for that lab, though they many contain information learned from previous labs. You should thoroughly read the manual prior to coming to lab. All PostLab Assignments are short, online assignments completed eCampus. The PostLab assignments are to be completed AFTER performing the in-class exercises for each topic. You are NOT permitted to work with anyone on this assignment. These assignments will focus on your understanding of the material presented during the lab exercise.

The PostLab Assignments will become available directly after the end of lab and will be due the following week **1hr before** the start of lab. There are 2 attempts available for each PostLab and the highest grade will be recorded. For each attempt, you will have 2 hours to complete the assignment.

Forms and Participation:
Each week while conducting your exercises you will be required to complete a form. This will include data collected during your exercises as well as answers to questions based upon the exercises. Participation will be lost for various reasons including, but not limited to: tardiness, lack of attentiveness, lack of preparation, and lack of participation in group activities. Failure to clean up your lab area before you leave can also result in the loss of participation points.

Students will work in pairs or groups of 4 for each lab performing measurements, however all calculations and written lab reports will be done individually. Lab forms should be in your own words (not your lab partner's words).

Grading Scale

A	100-90%
B	89.99 -80%
C	79.99 – 70%
D	69.99 – 60%
F	59.99% and below

There will be no rounding. There will be no curve.

Course Topics, Calendar of Activities, Major Assignment Dates

Dates	Topic Summary	Required Reading
	Syllabus/Clickers/Ebook/eCampus	
8/28	The expectations and requirements for this course will be discussed, and students will be introduced to the clickers, eBook (required), and eCampus. ***Safety:*** no special Personal Protective Equipment (PPE) required.	Syllabus
	Isostasy and Rock Density	
9/4	Using simple materials of various densities, the principles behind plate tectonics are revealed. ***Safety:*** no special Personal Protective Equipment (PPE) required	Isostasy and Rock Density
	Bathymetry	
9/11	Simple box models show how dynamic the seafloor surface can be. ***Safety:*** no special Personal Protective Equipment (PPE) required.	Bathymetry
	Salinity	
9/18	This fundamental property is measured for almost any study involving the ocean. Here the advantages and disadvantages of common methods will be reviewed. ***Safety:*** Silver Nitrate is used for a chemical titration – use caution and wear work clothes in addition to the required provided Personal Protective Equipment (PPE)	Salinity
	Density	
9/25	Salinity and temperature control density, which in turn, drives the major circulation patterns in the ocean. This lab demonstrates this intrinsic physical property. ***Safety:*** Dry Ice is used – use the Personal Protective Equipment (PPE) provided.	Density
	Ocean Circulation	
10/2	Waters of different temperature are used to demonstrate how density differences drive ocean circulation. ***Safety:*** Dry Ice is used – use the Personal Protective Equipment (PPE) provided.	Ocean Circulation

	Albedo and Sea Level Rise	
10/9	The light energy from the sun warms surface waters and is reflected by ice, but only a fraction reaches depths. Simple globes, tubes of water and earth surface samples provide exercises to study the sun's effects on the ocean. ***Safety:*** no special Personal Protective Equipment (PPE) required	Albedo and Sea Level Rise
	Plankton	
10/16	Although this group is small in size, almost all life in the oceans depends upon planktonic organisms. Various types will be identified by microscope, drawn or counted. ***Safety:*** no special Personal Protective Equipment (PPE) required	Plankton
	Seasonality	
10/23	The tilt of the earth that causes our seasons also affects the ocean. Simple statistics and color maps clarify how. ***Safety:*** no special Personal Protective Equipment (PPE) required	Seasonality
	Sedimentation	
10/30	Different types of deep-sea sediment are examined for origin and age. ***Safety:*** no special Personal Protective Equipment (PPE) required	Sedimentation
	Ocean Acidification	
11/6	Weak acids demonstrate how carbon dioxide in the air affects the organism in the ocean. ***Safety:*** Use the Personal Protective Equipment (PPE) provided.	CO_2 in the Ocean
	Ocean Pollution	
11/13	Simple exercises demonstrate how everyday materials can be harmful to the marine environment. ***Safety:*** no special Personal Protective Equipment (PPE) required	Ocean Pollution
11/20-12/1	**Lab Make-ups**	
	****There are no Final Exams****	

Americans with Disabilities Act (ADA)

The Americans 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 an accommodation, please contact Disability Services, currently located in the Disability Services building at the Student Services at White Creek complex on west campus or call 979-845-1637. For additional information, visit http://disability.tamu.edu.

Academic Integrity

For additional information please visit: http://aggiehonor.tamu.edu

“An Aggie does not lie, cheat, or steal, or tolerate those who do.”

Copyright Notice

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Plagiarism Statement

As commonly defined, plagiarism consists of passing off as one’s own ideas, words, writing, etc., which belong to another. On accordance with this definition, you are committing plagiarism if you copy the work of another person and turn it in as your own, even if you should have the permission of that person. Plagiarism is one of the worst academics, for the plagiarist destroys the trust among colleagues without which research cannot be safely communicated.