

MSCI/GEOL 215L: Coastal Environments of the Southeastern U.S LABORATORY
Spring 2016

BULLETIN INFORMATION

MSCI 215 = GEOL 215 Coastal Environments of the Southeastern U.S (1 credit hour)

Course Description:

Coastal zones of South Carolina and neighboring states, including geologic history, geomorphology, stratigraphy, hydrogeology, shoreline processes, environmental issues, and effect of man. Not available for Marine Science/Geological Sciences major credit.

Catalog Description:

Exercises examining coastal ecology, geomorphology, hydrogeology, shoreline processes, environmental issues, and human impact. Not available for marine science major credit. Two laboratory hours per week. Scheduled field trips required.

Office hours: Tuesday and Thursday 12-1 PM or by appointment

Office hours: Wednesday 11 am-noon and Friday noon-1 PM or by appointment

Labs: Wednesday 8:30-10:30 AM (SECTION I) Friday: 9:40-11:40 AM (SECTION II)

COURSE OVERVIEW

Coastal Environments of the Southeast United States Lab (MSCI 215L = GEOL 215L) is designed as a companion laboratory for the Coastal Environments of the Southeast United States Lecture (MSCI 215 = GEOL 215). Each laboratory is scheduled for two hours. This course is designed to teach students basic principles and concepts of processes that influence the Southeastern coastal ocean using hypothesis testing, data collection and interpretation. Students will learn about the fundamental processes and landforms found within the coastal zone and the impacts of human activity and natural disasters on these systems. Experiments will specifically highlight the coastal zones of the southeast United States, defined here as North and South Carolina, Georgia, and the east coast of Florida.

ITEMIZED LEARNING OUTCOMES

Upon successful completion of Marine Science/Geology 215L, students will be able to:

1. Demonstrate understanding of the scientific method and how to formulate hypothesis, set up and conduct experiments, collect data, and explain the relevance of results;
2. Demonstrate use of basic laboratory safety procedures and specialized scientific instrumentation;

3. Identify the features of coastal environments and continental margins and relate the structures observed to the theories of their origin;
4. Identify and describe coastal processes (wind, waves, tides) that influence the southeast United States;
5. Evaluate the scientific evidence for both natural and human-induced climate change and explore the impacts of climate change on coastal ocean systems with respect to society; and
6. Describe the importance of the coastal zone to environmental and economic systems.

Carolina Core Outcome:

SCI - Students will be able to apply the principles and language of the natural sciences and associated technologies to historical and contemporary issues.

Academic Responsibility

Faculty and students at USC are obligated to follow the USC Code of Academic Responsibility. It is expected that all class members demonstrate intellectual honesty and 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. Even while working in groups, each person must do his/her own work! Plagiarism will not be tolerated. If this occurs you will receive a zero for the assignment and the matter will be reported to the university authorities.

REQUIRED TEXTS/SUGGESTED READINGS/MATERIALS: Lab Manual: Labs will be posted on Blackboard and each student will be expected to have read and to bring a printed copy to each lab class.

Attendance: Attendance is MANDATORY. Missed labs will result in a zero for the lab and quiz. There will be no switching lab classes. The lowest lab and quiz grades will be dropped, including a zero resulting from a missed laboratory. However, students that miss lab on Apr 17/19 will receive a zero that will NOT be dropped. Extenuating circumstances will be reviewed on a case-by-case basis and shall be discussed with me.

Lab Rules:

- No food or drinks. No use of electronic devices like cell phones/ipads during lab.
- No open-toed shoes (flip flops, sandals, etc).
- There are no exceptions. If you are not prepared for the lab you will be asked to leave the lab.

ASSIGNMENTS AND/OR EXAM

1. **Laboratory quizzes and exercises:** Each laboratory begins with a 15 minute quiz designed to ensure that you have read the laboratory, have an initial understanding of the concepts to be learned, and know the procedures to be conducted during the class. Each lab consists of a testable set of hypotheses and objectives followed by a series of experiments. During each lab, you will be asked to collect and plot data, interpret the results, and answer specific questions that explore the collected data and relate it back to the initial concepts and hypotheses described at the beginning of class. In some cases, take home lab reports will be assigned for more in-depth analysis and discussion. These are to be turned into your IA at the beginning of the next scheduled lab.

2. **Presentation:** Each lab will be broken into groups of 3 students and asked to represent a particular interest group (shrimpers, county residents, Audubon society/environmentalists, and beach front property owners) regarding a coastal region being considered for major development (e.g., a manufacturing plant, hotel, etc.). The instructor acts as the representative for the major development to be constructed and is used as an additional resource for questions. You are provided 2 class periods to work together and develop a presentation that persuasively argues your viewpoints (pro or con) based on what you have learned during the course as well as external resources. Each group will be given 15 minutes with 2-3 minutes of questions from other groups. After all of the groups present, time is allotted for a debate where each group is expected to argue their points directly. The presentation grade is based on your group's presentation and the ability to persuasively argue your position. A grading rubric will be provided.

Grading:

Labs: (10 Labs) x (90 Points Each) = 900 Points x 50% = "A"

Quizzes: (10 Quizzes) x (10 Points Each) = 100 Points x 20% = "B"

Project: (1 Presentation) x (100 Points) = 100 Points x 30% = "C"

There is a total of 500 Points possible total. Divide your total by 500 then multiply by 100 to determine your percentage grade.

Ex: "A"+"B"+"C" = (total points/500)*100 = Percentage Grade

Labs are due at the beginning of your next lab. One point will be deducted for each day late.

Grading Score:

A \geq 90; B+ = 85-89; B = 78-84; C+ = 72-77; C = 66-71; D+ = 60-65; D = 50-59; and F \leq 49.

(Decimal points are rounded to the nearest integer)

TENTATIVE LAB SCHEDULE

Jan 16/18:	Orientation
Jan 23/25:	Lab 1: Coastal Navigation
Jan30/Feb 1:	Lab 2: Tides
Feb 6/8:	Lab 3: Waves
Feb 13/15:	Lab 4: Wind
Feb 20/22:	Lab 5: Coastal Sediments
Feb 27/Mar1:	Lab 6: Grain Size/Settling Velocity
Mar 6/8:	Lab 7: Lagoons/Coastal Wetlands
March 10-17	Spring Break
Mar 20/22:	Lab 8: Anthropogenic Factors
Mar 27/29:	Lab 9: Coastal Land Use Introduction/Field Trip
Apr 3/5:	Lab 10: Presentation Preparation
Apr 10/12:	Lab 11: Presentation preparation
Apr 17/19:	Presentations