

TIDE-1220

**New Orleans and Hurricanes: Past,
Present, and Future**

Fall 2012

Instructor: Dr. Stephen A. Nelson

Office Hours - MWF 1:00 - 3:00 PM, Room 208, Blessey Hall

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Course Description: This course will explore the events leading up to Hurricane Katrina, from a geological and historical perspective and explore why New Orleans is at risk from future hurricanes and the steps being taken to protect the city from future events. Although sociological, cultural, and political aspects of the response to the Katrina disaster and recovery will be touched upon, the main emphasis will be placed on historic, scientific and engineering aspects of Katrina and the systems designed to protect the city from hurricanes.

Course Goals and Objectives:

1. The student will gain an understanding of hurricanes in general in terms of how and why they form, their effects, and how they are forecast.
2. The student will gain an understanding of the historic, geologic, and engineering aspects that led to the Katrina disaster in 2005.
3. The student will gain an understanding of the events that occurred during the Katrina Disaster.
4. The student will gain an understanding of the current and future risk to New Orleans from Hurricanes and the protection system that is being designed and built to protect the city from future hurricanes.
5. The student will learn how to give an effective presentation on some aspect of hurricanes and New Orleans using Microsoft Power Point.

Course Requirements

Attendance: Attendance at every class is mandatory. If serious reason keep you fulfilling your obligations, you remain responsible for all work assigned and the information communicated in class. The field trip is part of the course and is also mandatory. Because of the logistics of the field trip, it cannot be made up.

Course Grading:

Your grade in this course will be determined on the following distribution:

Homework Assignments	25%
Class Participation	25%
Participation on Field Trip	25%
Oral Presentation	25%

Web Site:

Further course materials, including a copy of this syllabus, all assignments, lecture notes, announcements from the instructor, and useful internet links can be found on the Internet at: http://www.tulane.edu/~sanelson/New_Orleans_and_Hurricanes/

Be sure to check this web page regularly throughout the course for important announcements and updates.

In addition some course documents will be posted on the Blackboard site for this course.

Homework Assignments:

Homework assignments consist of exercises designed to help the student gain an understanding about hurricanes and their effects on New Orleans. Due dates are listed in the schedule below. All homework is due by the beginning of the class period on the due date. Due dates and times are firm. Late assignments will be subject to a 50% penalty and will not be graded in detail. All assignments will be returned to the student at the next class meeting after the due date with comments and suggestions.

Class Participation:

Informed participation in class discussions is an important component of this course. Students must regularly show good knowledge of the sources assigned for class, thoughtful reflection on their meaning, and interest in the contributions of their fellow students and instructor. Students who are shy or feel uncomfortable speaking in front of groups should consult with the professor who will help develop strategies with them for success.

Field Trip:

Because part of New Orleans is still a disaster zone, we have an excellent opportunity to observe the effects of Hurricane Katrina first-hand. In order to help understand the Katrina disaster 25% of your grade will be based on participation in a 4.5 hour field trip that will take the place of 3 class meetings. To receive the 25%, all you need to do is participate in the field trip. The Field trip date is listed in the schedule below.

Presentations:

Each student will give a 10 minute presentation on a topic approved by the instructor on some aspect of hurricanes and New Orleans. The topic of each presentation will be chosen by the students with the approval of the instructor. Approvals must be obtained by **Sept. 26, 2012**. The presentations will take place during the last two meeting sessions of the course (see schedule below). An assessment form will be completed by each student for each of their fellow student's presentations. The instructor will also complete the assessment form. 60% of the presentation grade will be based on fellow student's assessments and 40% on the instructor's assessment.

Honor Code:

All students are expected to follow the Tulane Honor Code. If you are unfamiliar with the Honor Code or have any questions about it, get a copy of the Honor Code from your Dean's office or view it at: <http://college.tulane.edu/code.htm>. In short, the Honor Code states that all work turned in for credit must be **your own work in your own words**, unless clear and explicit acknowledgement of the sources of the work is given. This does not mean that collaboration on assignments is discouraged. You may collaborate, just make sure that the work you turn in is in your own words, and not just a copy of the work of your collaborators.

Schedule (Revised 10/11/2012)		
Week	Date	Topics and Assignments
1	Sept. 5	Introduction to course and Assignment: Exercise 1 - Internet exercise on Hurricanes (will be available on course web site)
2	Sept. 12	The Science of Hurricanes (Lecture notes on the course web site) Reading: National Hurricane Center article on Tropical Weather - http://www.srh.noaa.gov/srh/jetstream/tropics/tropics_intro.htm
3	Sept. 19	Why New Orleans is Vulnerable to Hurricanes - Geologic and Historical Factors (Lecture notes on the course web site) Reading: Washing Away - http://www.nola.com/hurricane/content.ssf?/washingaway/index.html Assignment: Exercise 2 - Map Exercise (to be posted on web site) Exercise 1 Due
	Sept. 26	No Class (Yom Kippur Holiday)
4	Oct. 3	Why New Orleans is Vulnerable to Hurricanes - Geologic and Historical Factors Continued) Reading: Hurricane Katrina - What Happened? A Field Trip - http://www.tulane.edu/~sanelson/Katrina/ Exercise 2 Due
5, 6 & 7	Oct. 6 Saturday	Field Trip to Levee breach sites in New Orleans (4.5 hours) Reading: Hurricane Katrina - What Happened? A Field Trip - http://www.tulane.edu/~sanelson/Katrina/ Assignment: Exercise 3 - Hurricane Katrina Time Line (will be available on course web site)
8	Oct. 10	Lessons Learned and Reducing Vulnerability (Lecture Notes on course web site) Reading: U.S. Army Corps of Engineers Risk and Reliability Report - Link to be posted on course web site
9	Oct. 17	The Risk to New Orleans from Hurricanes - Present and Future (Lectuer notes on course web site) Exercise 3 Due Assignment: Exercise 4 - 2 page report on Hurricane Isaac
	Oct. 24	No Class
10	Oct. 31	Student Presentations
11		Student Presentations Exercise 4 Due

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