

Geography 406: Natural Hazards and Environmental Risk ~ Fall 2007

Instructor: Dr. Walker Ashley

Office: 219-D Davis Hall

Contact: washley@niu.edu or 753-0648

Office Hours: 1:00-2:00 PM Tuesday and Thursday or by appointment (please email washley@niu.edu).

Lecture: 11:00 AM - 12:15 PM Tuesday and Thursday in Davis Hall Room 121

Prerequisite: GEOG 101/102, GEOG 105/106, GEOL 120, or permission of department.

Course description:

This course investigates how the normal processes of the earth-atmospheric system concentrate their energies and deal disastrous blows to humans and their structures. Geophysical processes such as earthquakes, floods, hurricanes, tsunamis, tornadoes, volcanoes, drought, and windstorms are explored. In particular, we will examine the spatial and temporal factors of these hazards, the physical earth-atmosphere system processes that create these hazards, and the societal aspects that affect and, in many cases, compound the disasters associated with these natural phenomenon. Historical and contemporary case studies will be utilized to investigate the interaction between society and natural hazards.

I learn things easiest when I'm enjoying myself, so I'll try to do things in lecture to make it fun and participatory. You may get out of your seat; interact and discuss things with me or the class; you may also watch interactive applets, movies, and video clips too! Again, this subject is an upper-level science course, so expect to work very hard.

Course Objectives: Upon successful completion of this course, students will be able to:

- understand the physical processes that create various "natural" hazards;
- recognize the risks and impacts associated with those hazards;
- analyze solutions for mitigating the impacts of those hazards; and
- demonstrate professional research, analysis, writing, and presentation skills.

Required Texts:

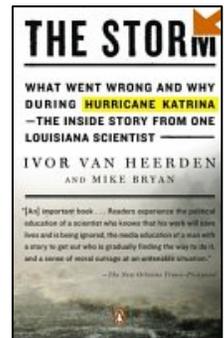
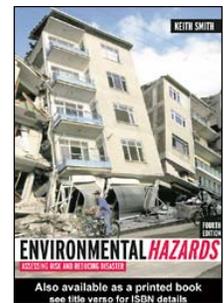
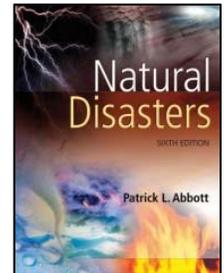
- *Natural Disasters* (6th edition) by P.L. Abbott. McGraw Hill Publishing, 2005.
- *Environmental Hazards: Assessing Risk and Reducing Disaster* (4th Edition) by Keith Smith. Routledge, 2004. [copies of chapters will be made available in the map library on the 2nd floor of Davis Hall]
- *The Storm: What went wrong and why during Hurricane Katrina – the inside story from one Louisiana scientist* (Paperback) by Ivor van Heerden and Mike Bryan. Penguin, 2007. [available on amazon.com and half.com for cheap; please order a paperback the first week of semester]

Other selected readings:

- *Disasters by Design: A Reassessment of Natural Hazards in the United States* by Dennis S. Mileti. Joseph Henry Press, 1999.
- *American Hazardscapes: The Regionalization of Hazards and Disasters* by Susan L. Cutter. Joseph Henry Press, 2001.
- *Perils of a Restless Planet* by Ernest Zebrowski, Cambridge Press, 1997.
- *Cartographies of Danger: Mapping Hazards of America* by Mark S. Monmonier. University of Chicago, 1998.
- Additional reading materials will be provided on Blackboard.

Student Evaluation: The purpose of a grade is to indicate the relative standing of each student with regard to the rest of the class. The grading system is designed to impose general standards and to assess the performance of each student. Your level of understanding is assessed upon the following criteria:

1. Three exams (60%) – The final exam date is set for December 11th while the first two exam dates will be announced at least one week before the corresponding test date.
2. Exercises and Movie Questionnaires (10%) – Several formal exercises scattered throughout the semester will be offered. These could include in-class activities, problem sets, writings, evaluations of published research, disaster assessments, or GIS exercises.
3. Critical readings and questionnaire responses to chapters in *The Storm* (15%)
4. 8-10 page term paper and short class presentation describing a natural hazard or disaster of your choosing (15%)
5. *Attendance and active participation in class are expected.*



Makeup tests? *There will be NO makeup tests* except 1) in the event of *extremely* exceptional circumstance, 2) a written excuse (from doctor, lawyer, etc.) is provided, and 3) that I am notified about the circumstance within 24 hours of the missed test. All three of these conditions must be met in order for you to be eligible for a make-up allowance. The make-up test will likely be harder than the actual test provided during the regular testing period, and will possibly contain more theoretical essay questions. If the conditions are met for a make-up exam, the test must be completed within 48 hours of the missed test time. *There will be no make-up final exam.* Please note undocumented excuses will not be tolerated (e.g., I accidentally slept through exam, I had to take my dog to the vet, I had to go get a custard at Ollie's, etc.). Bottom line: I expect you to be responsible adults and do not miss an exam.

Readings, Class Notes, and Movie Questionnaires: We will utilize two textbooks during this course. My lectures will be organized around the material presented in your textbooks. I will amplify and explain, as well as supplement, the concepts which are presented in the text. A schedule detailing expected readings follows on the next page.

A “bare-bones” version of my lecture notes will be available on Blackboard. The notes for that day's lecture will be available on Blackboard *by evening the day before class*. I expect you to print off the notes and bring them to class. This will allow you to 1) listen and try to understand the lecture material without having to write down every word from the notes presented that night and 2) interact with me and other students. I also reserve the right to remove this benefit if I observe students abusing the privilege. You can not solely rely on the “bare-bones” version of my lecture notes and expect to pass this course as the notes provided will have numerous instances of removed text and items that are expected to be filled in during my lecture. **If you miss a class, you are responsible for obtaining the missing notes from a classmate.**

In addition to the lecture readings, you will be expected to read all chapters in van Heerden and Bryan's *The Storm*, which summarizes the Hurricane Katrina debacle. I will provide a set of questions for each chapter. You will be expected to turn in a typed response to each of these questions based on your reading of the corresponding chapter. During most weeks you can expect to read one-to-two chapters (10-30 pages). Responses to the questions will be judged by their quality, not quantity. *Caveat:* I can identify easily those who have not read the chapter by examining the quality of the responses. In addition, tests may include a section examining material from the book. This assignment will allow you to gain *perspective* of the debacle from a well-known (and outspoken) hurricane researcher. I believe you will find that the book is an interesting and enlightening read ... even if it is a bit self aggrandizing.

We will likely watch a number of disaster-related movies or video clips during the course. You are expected to fill out questionnaires related to the movies. These questionnaires, as with any homework, will be turned in and assessed.

Graduate Credit: To receive graduate credit, students may be asked to complete outside readings on related topics and provide written summaries of these readings. These readings will be posted on Blackboard. In addition, the final project must be 10-15 pages in length. Finally, graduate students will be expected to answer examination with further rigor.

Extra credit? In fairness to all students, *I do not offer extra credit assignments to individuals.* If extra credit is provided, it will be provided to the entire class and will be announced during class and not on Blackboard. Please speak with me if you are having problems. I will be happy to help you.

Attendance Policy: I do not take attendance. In the event of illness/crisis, do what you need to do; then see the syllabus, classmates and Blackboard to find out what you missed in class. **I will not provide full versions of my notes if you missed a class; instead, you should obtain these notes from a classmate.** Warning: in any science class, if you miss one class period you miss a *lot* of material. Lecture attendance is essential for a thorough understanding of course material! *You will not be successful in this class if you repeatedly skip.* Tardy assignments will incur a letter-grade deduction each day they are late.

Academic Misconduct/Ethics Statement: Please consult the current NIU Undergraduate Catalog for information regarding ethics, conduct, and drop dates. Any student caught cheating during an assessment or plagiarizing their paper will receive a grade of “F” in the course and may be suspended from the university according to the rules of academic misconduct. There will be no exceptions. Warning to cheaters: I have executed this policy in the past.

Blackboard: I will post your assessment scores, notes, additional readings, and any handouts on the Geography 406 Blackboard (webcourses.niu.edu) site. You will need your student z-id and password to access the website.

Receiving Assistance: Students are urged to contact me should they have questions concerning course materials and procedures. If you have a disability or any other special circumstance that may have some impact on your course work and for which you may require accommodations, please contact me early in the semester so that arrangements can be made with the Center for Access-Ability Resources (CAAR). It is your responsibility to 1) setup any sort of special needs/requests through CAAR and 2) remind me of these needs/requests.

If the University is closed during our class time for any reason, you are responsible for checking the GEOG 406 Blackboard homepage for immediate updates.

Finally, I reserve the right to modify this syllabus and/or course policies as the semester progresses. Any changes will be presented in class and on Blackboard announcements.

Course Schedule

The lecture schedule indicates the intended scope and timing of materials presented in the course and is subject to change!

Approximate Week of Semester	Preliminary Topic Schedule	Abbott	Smith	<i>The Storm</i>
1	Course Overview; Introduction to Natural Disasters; Hazard in the Environment	1	1	-
2	Hazard in the Environment; Dimensions of Disasters; Risk Assessment and Management	-	2, 3	-
3	Disaster Mitigation: Accepting, Sharing and Reducing the Loss	-	4	1, 2
4	Energy Sources for Disasters	2	-	-
5	Plate Tectonics and Earthquakes I	3	5	3
6	Earthquakes II and Tsunamis	4-7	5	4
7	Volcanoes	8-9	6	5
8	TBD	-	-	-
9	Mass Movements	10	7	6
10	Severe Weather	11, 12	8	7
11	Tropical Systems	12	8	8
12	Floods	14	10	9
13	Drought and Fire	15	9, 11	10
14	Leftover Material and/or Term Paper Present.	-	-	11
15	Term Paper Presentations			
16	Final Exam	Tue., December 11, 10-11:50 AM		

I am always available and always approachable!

I encourage you to email (washley@niu.edu) or come see me if you have a problem or question.