Geog 6420 Fall 2005

Seminar in Resource & Environmental Geography: Coping with Disasters

M 6:30-9:20 PM SEC 668

INSTRUCTOR: **Dr. Tarek Rashed**, SEC 680 (rashed@ou.edu; 325-5104)
OFFICE HOURS: M-W 11 AM – 12 PM or by appointment

OVERVIEW:

Contemporary theoretical, empirical, and policy work on hazards and disasters gives its primary attention to the relation between the risks to which societies are exposed and the human practices that may increase, decrease, or reallocate these risks. A central lesson of this work recognizes that disasters are poorly explained by, and not uniquely dependent upon, the character of the events that may trigger them, be they natural (e.g., earthquake, flooding), technological (e.g., chemical release, dam failure), or human intended (e.g., terrorism act, war). Rather, the same damaging hazards bring widely varying losses that reflect the distribution of social and physical vulnerabilities over urban places. The tragedy of September 11th and the subsequent public anxiety shed light on urban vulnerability as a challenging policy problem and on the assessment of vulnerability as a guiding planning principle. This graduate seminar focuses on vulnerability as a manifestation of the relationship between society and hazards in cities, especially of how people and societies cope with and respond to natural and technological hazardous events. A central objective is to facilitate critical thinking on the evolution of current analytical models of vulnerability and their relation to hazards policy, and to examine some geospatial solutions being proposed and implemented to reduce the vulnerability of society to natural and technological hazards.

COURSE OBJECTIVES

By completing this course, you will be acquire a solid knowledge of vulnerability to urban hazards and the context-altering forces that drastically affect people's resilience and ability to cope with extreme events. This knowledge is developed through a range of class activities designed to accomplish the following specific objectives: (1) explore the range of urban hazards and comprehend commonalities and differences among them; (2) introduce the concept of urban vulnerability and examine the controversies surrounding the different approaches to vulnerability analysis; (3) discuss hazards mitigation policies and suggest ways they can help reduce urban vulnerabilities in effective ways; and (4) assess the role of geospatial technologies in hazards mitigation and vulnerability reduction efforts.

PREREQUISITE:

GEOG 5453/5553 (GIS Applications or an equivalent **advanced** GIS course). Otherwise, permission from the instructor is required and will be granted based on the student's GIS technical knowledge. Junior or senior level students wish to receive graduate credits for this course must file a petition form. Please check with the Graduate College on the deadline for such applications. The petition forms are available in the Graduate College Office, Room 313, Buchanan Hall or on the Graduate College web page at http://gradweb.ou.edu/

TEXT:

THERE IS *NO* REQUIRED TEXT BOOK FOR THIS CLASS.

Highly Recommended *(but not required)*: (1) Smith, Keith (2004), Environmental Hazards: Assessing Risk and Reducing Disaster, 4th ed. (Rutledge, Physical Environment Series); (2) Hewitt, Kenneth (1997), Regions of Risk: a Geographical Introduction to Disasters, (Harlow: Longman).

Reference Materials: Readings for particular topics will be assigned to you as needed. The packet of assigned readings will be available online via http://learn.ou.edu one week before respective classes.

Procedures for Accessing Assigned Readings:

1. Access the OU Desire2Learn site at http://learn.ou.edu
2. Enter OU NetID (4x4)
3. Go to "Content" and access material under targeted module

COURSE FORMAT:

This is a seminar course. The learning experience should be a collective one based on discussion of the assigned materials and class activities. That means that you'll need to complete the assigned reading ahead of time, think about the issues raised, and arrive at class prepared to discuss them. It also means that you'll have to be an active participant in class discussion and relevant activities done both on individual and group basis. The following is a summary of the expected activities and course deliverables:

1. *Participation*, as expressed in the form of class discussions, will contribute to a considerable portion of your grade. This includes (a) your engagement with the course literature (your familiarity with the course materials as well as your willingness to talk about them) and (b) signing up for and leading of at least one seminar session on a given topic.

2. *Class activities*: A number (4 to 6) in- and out-class activities will take place along this course. Together in small groups, you will work with your peers on preparing for, carrying out, and presenting the results of these activities. The scope of these activities will range from surveying the internet to prepare the hazards profile for a country, to participating in a simulation game of mitigation strategies in which you are confronted by a specific hazard event and then asked to assess associated risks and plan for mitigation accordingly.

3. *Mid-term paper*: A maximum of 6 page double spaced essay is due on 14 October, You should draw on the full range of seminar readings assigned till that date to complete the assignment. You will be given a list of hazards and asked to choose two of these hazards, contrast them and identify similarities and differences found in patterns of vulnerabilities to and risks from these hazards. You will critically assess the adaptation and mitigation approaches in the context of each hazard and identify avenues of potential improvements. Your critical assessment should reflect a grasp of different hazards paradigms and contemporary trends in hazards research and policy, as well as an understanding of the factors that contribute to the exacerbation of hazards and opportunities to make adjustments and reduce vulnerability.

   Papers will be assigned to a numerical grade on 0-100 point scale. You will have the chance to revise and resubmit the paper but the overall grade will be based on the average of the grades assigned to initial and revised submissions.

4. *Final-term paper*: A maximum of 15-20 page double spaced paper is due on 12 December. The final paper will be written in response to a number of challenging questions (or application areas in case you'd rather do applied work) concerning urban vulnerability that I will give in the 9th week of the semester. Using assigned readings, complemented by materials drawn from the discussion, class activities, journals and external researches, you will be asked to select one or more question(s) and write a paper of publication potential that expresses your view of how the answer to the question(s) you selected might be delivered. You should articulate the factors that need to be considered, strategies to be adopted, methods to follow, constraints, etc. Specific instructions and format of the paper will be given to you during the course and I will work closely with you in that paper with the hope that you can do something that can be sent for publication.

   Papers will be assigned to a numerical grade on 0-100 point scale and no revision allowed since the paper is due the last week of the semester.

GRADING

Participation: 10%; Class activities: 40%; Mid-term Paper: 20%; Final-term paper: 30%

- ***Grading scheme:*** **A**: 90% or more, **B**: 80-89.99%, **C**: 70-79.99%, **D**: 60-60.99%, and **F**: less than 60%.
- ***Grading Rules:***

  - Grades are determined at absolute scale based on accumulative points.
  - All deliverables should be submitted by the due dates. Penalty of late submission is 5% (off assigned grade) per day
  - Extension of deadline will NOT be allowed without a legitimate excuse such as proof of a medical condition or religious holidays.

IMPORTANT POLICY INFORMATION:

Academic Honesty: Academic honesty is a cornerstone of the development and acquisition of knowledge. The instructor has zero tolerance to cheating and plagiarism and will take proper actions against academic misconduct. The instructor assumes that all students are aware of all forms of academic misconduct related to plagiarism, multiple-submissions of a single paper to different classes, and any form of "collaboration" during exams. If not, you must take a moment and make sure you read and understand the OU academic conduct code (http://www.ou.edu/studentcode/OUStudentCode.pdf).

Integrity Pledge: OU Honor Council, which is an initiative shared by the OU Student Association and the Office of the Provost (www.ou.edu/honorcouncil), has asked that students be asked to sign an Integrity Pledge, which reads ***"On my honor, I affirm that I have neither given nor received inappropriate aid in the completion of this exercise."*** on each single piece or work submitted, whether labs, quizzes, exams, or even a report. Any submitted work may not be accepted without signing this pledge at the end of the work. It's your responsibility as a student to make sure of this.

Students with Disabilities: Any student in this course who has a disability that may prevent him or her from fully demonstrating his or her abilities should contact the instructor personally as soon as possible so we can discuss accommodations necessary to ensure full participation and facilitate your education opportunities.

Religious Holidays: It is the policy of the University to excuse the absences of students that result from religious observances and to provide without penalty for the rescheduling of examinations and additional required class work that may fall on religious holidays.

SUMMARY SCHEDULE (SUBJECT TO CHANGE):

	Day		Topic	Remarks
1	8/22	M	Syllabus/Course Introduction **Introduction to Hazards and Disaster**	
2	8/29	M	**Disaster Trends**	Activity 1 due
3	9/5	M	**No Class – Labor Day Holiday**	

4	9/12	M	**Research Paradigms**	Student-led discussion Activity 2 due
5	9/19	M	**Defining Vulnerability**	Student-led discussion
6	9/26	M	**Vulnerability in Cities I:** Urban vulnerability & the ecology of risk	Student-led discussion Activity 3 due
7	10/3	M	**Vulnerability in Cities II:** Assessing urban vulnerability – Activity (4)	Student-led discussion
8	10/10	M	**Vulnerability in Cities III:** presentation of group work on vulnerability assessment	Activity 4 due *MID-TERM PAPER DUE ON 10/14 (11:59 PM)*
9	10/17	M	**Coping with Disaster through Reducing Vulnerability I:** How do societies cope with hazards	Student-led discussion
10	10/24	M	**Coping with Disaster through Reducing Vulnerability II:** Community based activities & public awareness	Student-led discussion
11	10/31	M	**The Disaster Mitigation Game –** activity 5	
12	11/7	M	Student presentation of mitigation games	Activity 5 due
13	11/14	M	The role of geospatial technologies 1: **What are the applications?**	Student-led discussion
14	11/21	M	The role of geospatial technologies 2: **Simulation of hazards – overview of HAZUS-MH**	
15	11/28	M	The role of geospatial technologies 3: **Early warning systems**	Activity 6 due (if needed)
16	12/5	M	Student presentations for Final–Term paper Wrapping up course contents	
17	12/12	M		FINAL-TERM PAPER DUE by 11:59 PM