Course Description:
Hazards geography encompasses a diversity of issues – ranging from analyses of the root causes of our sensitivity to hazards, to explanations for risk and human behavior, to the practical tools and planning instruments to mitigate loss and adjust to future risk. In this class you will be introduced to different approaches to the study of environmental hazards and will apply some of the approaches you have learned to disasters that have happened or are in the making. You will learn how disasters are the product of multiple and interacting forces; biophysical processes are only part of the equation. We will explore how livelihoods, places and institutions come together to create hazardous situations and disastrous outcomes. We will look at trends in hazards and losses, and the distribution of vulnerability and hazard impacts within and across populations and places. We will also address problems and opportunities for reducing vulnerability through advance planning, hazard prediction, technological adjustments and economic development. We will not cover all types and forms of hazards – technological hazards, for example, are not covered in this class. However you will find that the approaches we will explore and the core concepts of hazards geography can be applied broadly and I hope you will be motivated to continue work in this exciting and evolving area of study.

To summarize, by the end of the course you should be able to:
- Use core concepts in hazard geography accurately and creatively (e.g., risk, vulnerability, hazard, disaster, adjustment, mitigation, coping, adaptation)
- Identify and analyze the physical and social processes that explain differential vulnerabilities to hazards and the causal relationships between disasters and human development, needs and desires
- Understand how different hazards are defined, described and measured
- Evaluate the opportunities and limitations of measures to reduce risk and mitigate disaster

Texts:

Reader available from the Alternative Copy Shop in Isla Vista
  Vol. 1 Available by January 7
  Vol. 2 Available by February 5

What you need to do to do well in this class:
1) Read the assigned readings prior to class, take notes on these readings and be ready to discuss the material in class. Prepare answers to the study questions in the reading list. Ensure that your level of understanding extends from simple knowledge acquisition to analysis and interpretation.
2) Complete 4 homework assignments with competence and insight
3) Excel on the two course exams
4) Grads: Write an analytical term paper linking concepts and literature covered in the course to a research topic of your choice (7-10 pages)
**Homework Exercises:** There will be 4 Homework Assignments that you will need to complete. These assignments are due at the beginning of class on the indicated day (Late assignments will be penalized).

1) UNEP exercise (**Due 1/22**)
2) Afghanistan analysis (**Due 1/29**)
3) California tsunami plan analysis (**Due 2/26**)
4) Newspaper story analysis (**Due dates vary, begin after midterm**)

You will pick a newspaper article corresponding to the type of hazard being discussed in class and write a response to the article in terms of the hazard issues you think it raises (e.g. vulnerability, risk, hazard measurement and prediction, development, reconstruction etc).

**Exams**
Exam 1 will take place on February 5th; Exam 2 will take place on March 22. Both exams will contain multiple-choice, true/false and short essay questions. Exam 2 will also have extended essay questions. In addition to the Smith text and lecture material, you will be expected to know the content of the articles you have read, and to have thought through the significance of these articles for your exams.

**Grades**
25% Exam 1 (100 pts)
50% Exam 2 (200 pts)
20% 4 Homework assignments (80 pts)
5% Class participation and in class exercises (20 pts)

**Paper (Graduate only: Due March 12)**
You will write one 7 to 10 page paper in this course on a topic of your choosing. You will note that the paper is not long. You are going to be evaluated on the quality of your analysis, clarity, creativity and precision.

To get an A on this paper your paper should:
- Have (virtually) no grammatical or spelling errors.
- Cite the literature appropriately and accurately, using author/date citation format and complete bibliography.
- Clearly state your central **argument** concerning your interpretation of the issue you have chosen for analysis.
- Apply the knowledge you have acquired in the class creatively to construct your argument, clearly illustrating your understanding of the concepts and debates in hazards research relevant to your case.
- Support this argument with evidence and examples collected from your review of the literature and other supporting sources (e.g., available databases, country reports; your own data).
- Synthesize and justify your findings in your conclusions.

**Paper Presentation (Graduate only): March 12**
Prepare a professional presentation of your paper (10 minutes maximum) for the class.

**Other Issues:**
- PLEASE TURN OFF YOUR CELL PHONES IN CLASS.
- Late papers or assignments will be penalized. Cheating, plagiarism, dishonesty of any sort is not tolerated.
- Withdraws from this class are YOUR responsibility. Do so by the Registrar’s deadline.
- Only you know if you understand the course material. Make use of my office hours!
**Course Schedule**

January 8: Introduction to Hazards Geography  
- Smith Chapter 1  
- Hewitt, K. “The ‘geographicalness’ of disaster” (Reader)

Q: What do hazards have to do with human values?

January 10: Basic concepts in hazards research and disaster trends  
- Smith Chapter 2  

Q: What do hazards, risk, vulnerability and disaster mean? What are some problems with disaster data and measurement?

January 17: Approaches to Hazards: Behavioral Approaches and the Hazard Paradigm  
- Smith Chapter 3, focus especially on pp. 36-48  
- Tobin and Montz. Chapter 3 pp 132-164

Q: What is meant by “Behavioral Approaches” to hazards research?  
Q: Why is perception important and what factors influence perception?

**UNEP Exercise Assigned**

January 22: Lay person risk vs. expert risk  

Q: How is risk different from hazard and vulnerability? How is risk measured?  
Q: How does lay person and expert risk perceptions differ and why are these differences important?  
Q: What is the psychometric paradigm and what does it tell us about how people perceive risks?

**UNEP Exercise Due**  
**Afghanistan Analysis Assigned**

January 24: Approaches to Hazards: The “Vulnerability” Approach  
- Wisner et al. “The disaster pressure and release model” Chapter 2 of *At Risk.*  

Q: How does Wisner define vulnerability? Does his definition differ from Smith? What is the PAR model? What policy solutions to vulnerability arise from the use of this model?
Q: (For the Mustafa article): How does the analysis of flooding in Pakistan illustrate the PAR model? Is it a convincing model for understanding hazards and vulnerability?

January 29: Livelihoods and Coping
- Wisner Chapter 3
- Finkel “To Wait or Flee” New York Times Magazine February 17, 2003

Q: What is a livelihood? What is meant by “coping” and how is coping related to livelihoods? Why is the sequence of coping strategies important for disaster management?

Afghanistan Analysis Due

January 31: Disaster Preparation and Response
- Smith Chapter 4
- Grads: Bankoff, Gregory (2005) “The tale of the three pigs: taking another look at vulnerability in the light of the Indian Ocean Tsunami and Hurricane Katrina. Download from: http://understandingkatrina.ssrc.org/Bankoff/. (Also see the other papers on this site.)

Q: What are some of the structural causes of the Katrina disaster? What is the “safe development paradox”?
Q: What are the phases of disaster reconstruction and how long does each phase take?
Q: What are the different ways societies adjust to hazard risk?

Feb 5 Exam 1

NEWSPAPER ARTICLE REVIEWS BEGIN AFTER FEB 5. CHECK YOUR ASSIGNED DUE DATE.

Feb 7: Drought
- Smith Chapter 11

Q: Why does the definition of a drought vary according to geography and economic activity?
Q: What are some direct and indirect impacts of drought hazards?

February 12: Famine
- Wisner Chapter 4
Q: In what ways are famines “socially constructed” disasters and what does this mean for famine monitoring and prevention?

Q: Are famines always associated with drought?

February 14: Floods and Coastal Storms
- Smith chapter 8 and 10

Q: What social processes increase human exposure to flooding and coastal storm impacts?

Q: What responsibility does the government (taxpayer) have to protect individuals from flood risk?

Q: How does flood mitigation policy increase exposure to flood risk?

**Tsunami Plan Analysis Assigned**

FEB 19: NO CLASS

February 21: Landslides and risk perception
- Smith Chapter 7
- Brainard. “Retrench or Retreat?” *The New York Times*

Q: What are some of the physical and social factors contributing to landslide risk?

Q: How is the exposure to landslides different in developing and industrialized country contexts? What people are typically vulnerable in each context?

Q: How does “bounded rationality” influence people’s behavior in face of landslide hazards?

February 26: Earthquakes and Tsunamis
- Smith Chapter 5

Q: What are “top down” and “bottom up” strategies for managing earthquake risk and what are their limitations?

Q: To what extent is earthquake preparedness a public or private concern? How does the frequency and magnitude of earthquake damage affect risk perceptions, behavior and policy?

**Tsunami Plan Analysis homework due**

February 28: Biological Hazards (Epidemics)
- Smith Chapter 9

Q: In what ways are epidemic hazards different from other environmental hazards?
Q: What people are particularly vulnerable to HIV in Africa and why? How does hazards theory help address HIV risk?

March 5: Fire
- Smith chapter 9 (pages 176-185)

Q: What is the wildland-urban interface (WUI)? How does the WUI make controlling fire hazards particularly difficult? How is vulnerability to wildfire related to human values and desires?
Q: To what extent is wildfire a “socially constructed” hazard?

March 7: Climate Change and Disasters & Sustainable Development
- Smith Chapter 13

Q: Why is climate change a “complex hazard”?
Q: What changes in individual hazards can we expect with climatic change?
Q: What can we learn from hazards research to help us address climate change?
Q: How is hazard management a problem of development? If hazards are a development problem, what policies should be put in place to address social vulnerability and risk?

March 12: Conclusions and Graduate presentations
Grad: Final paper due

March 14: Review

March 22: Final 8-11 am