



## Spring2017 – Natural Hazards

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### Course Description and Goals

When we hear the term - natural hazard, the first images that come to mind are usually the devastating aftermaths caused by earthquakes, hurricanes, tornados, floods, droughts, tsunami, etc. With no doubts, these natural forces can bring powerful destruction to the human society. There is actually a dramatic rise in economic losses incurred by natural hazards over the past several decades both worldwide and in the United States. The concentration of population and property coupled with a changing global environment has been attributed to this rising trend. The devastating consequence of natural hazards is therefore the product of both social and environmental factors. Faced with the increasingly challenging environment globally, nationally, and locally, societies at various levels need to adopt measures to adapt to this changing environment. Meanwhile, it would be difficult to find suitable solutions without understanding these extreme natural forces.



**Figure 1. Various Natural Hazards: Fault, Volcano, Hurricane, and Tornado (from left to right)**

What makes a natural event a hazard? What are the differences among hazard, risk and disaster? How does society assess risks and reduce impacts of hazards? In this course, we will examine the nature of hazard, a variety of specific hazards and how to reduce the impacts of hazards. In the first part of this class, definitions, concepts, and methodologies will be introduced.

Outside-class reading and in-class discussion are crucial to success in this class. In the second part of this class, the nature of specific hazards and their interactions with human society will be explored. Moreover, each student will play an active role initiating a special topic on one natural hazard and exploring aspects of that hazard including its nature, impacts, and societal response to reduce its damages.

### **Student Learning Objectives and Outcomes**

This is a reading intensive class. You are expected to read all the material I post on Blackboard. This is also a collaborative class. My role as an instructor is to help you learn through independent inquiry and critical thinking. In addition to completing all the required assignments, you are expected to participate in class discussions. The immediate outcomes include:

- 1). Your understanding of natural hazards in general and the specific hazard you choose to study will be greatly improved.
- 2). You will acquire certain essential skills that can be directly applied into practice: data/information search, literature review, application of your knowledge and skills into solving real-world problems.
- 3). Through this inquiry, you will get a sense of critical and independent thinking which are the essential skills in the 21<sup>st</sup> century.

### **Recommended Text**

Smith, Keith. Environmental Hazards: Assessing Risk and Reducing Disaster. 2013. 6<sup>th</sup> edition. New York: Routledge.

### **Important Information Sources:**

Natural Hazards Research and Applications Information Center, Colorado  
[www.colorado.edu/hazards/](http://www.colorado.edu/hazards/)

UN International Strategy for Disaster Reduction [www.unisdr.org](http://www.unisdr.org)

Disaster Risk Hotspots [www.ldeo.columbia.edu/chrr/research/hotspots/](http://www.ldeo.columbia.edu/chrr/research/hotspots/)

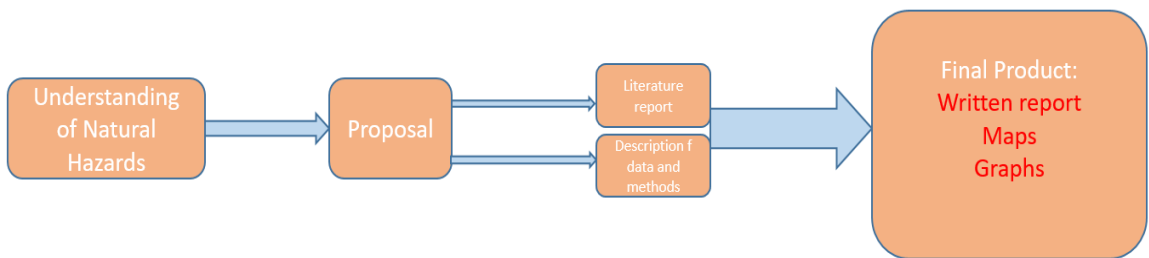
USC Hazards and Vulnerability Research Institute <http://artsandsciences.sc.edu/geog/hvri/hvri-resources>

### **Grade System**

- (1) Discussion questions: to prepare for each class you will be required to write 2-3 questions for discussion based on the readings for each session (no more than 300 words total). For example, these could include questions about the content of the material, questions about issues that the material raises, or questions for others in the class about how they interpreted the material. Discussion questions will be used to evaluate your comprehension of the readings, so you should include at least one question for each assigned reading per day.

- (2) One-page essay entitled, “My understanding of natural hazards.”
- (3) Half-page proposal of a specific hazard you choose for the final paper and presentation.  
Please provide rationale for the selection of hazard by using data if possible. This will be due by the end of the second week.
- (4) Literature report on hazard in general and your chosen hazard in particular.
- (5) Half-page description of data sources and methods
- (6) Final product: written report accompanied by bar charts, graphs, or maps.
- (7) Oral presentation: please do not read directly your slides

I want you to view assignments from 2-7 as building blocks on an intellectual path. Please refer to Fig 2. This path demonstrates an exploratory path throughout the entire course.



**Fig. 2 Development of course assignment**

<b>Discussion question</b>	150 pt.
<b>One-page essay</b>	30 pt.
<b>Half-page proposal</b>	20 pt.
<b>Literature report</b>	60 pt.
<b>Half-page description</b>	20 pt.
<b>Final product</b>	200 pt.
<b>Oral presentation</b>	30 pt.

Note: students are required to take all the exams and complete all assignments. Failure to complete all of the required assignments may result in a grade of F for the course. Points will be deducted for any work that is turned in late. 25% of the entire points for that particular assignment will be taken off if one day late. 50% of the entire points will be deducted if two-seven days late. You will get 0 for that assignment if you submit your work over a week late. A make-up essay/written report will be considered only upon receipt of proper documentation for an absence.

## **Grade Scale**

90-100%=A

80-<90%=B

70-<80%=C

60-<70%=D

<60%=F

Letter grades are based on the following guidelines

A: Demonstration of exceptional understanding of the subject and critical thinking.

B: Above average work that exceeds minimum course requirements.

C: Satisfactory completion of course requirements

D: Failure to meet course requirements satisfactorily

F: Reserved for those who show no commitments to this course

## **Email:**

I WILL NOT respond to messages sent by any email service other than AUM Outlook Campus E-mail. AND ALWAYS PUT the course number on the subject line.

## **Disability Accommodations**

Students who need accommodations are asked to arrange a meeting during office hours to discuss your accommodations. If you have a conflict with my office hours, an alternate time can be arranged. To set up this meeting, please contact me by e-mail. If you have not registered for accommodation services through the Center for Disability Services (CDS), but need accommodations, make an appointment with CDS, 147 Taylor Center, or call 334-244-3631 or e-mail CDS at [cds@aum.edu](mailto:cds@aum.edu).

## **Free Academic Support**

All students have the opportunity to receive free academic support at AUM. Visit the Learning Center (LC) in the WASC on second floor Library or the Instructional Support Lab (ISL) in 203 Goodwyn Hall. The LC/ISL offers writing consulting as well as tutoring in almost every class through graduate school. The LC may be reached at 244-3470 (call or walk-in for a session), and the ISL may be reached at 244-3265. ISL tutoring is first-come-first served. Current operating hours can be found at [www.aum.edu/learningcenter](http://www.aum.edu/learningcenter).

## **Academic Dishonesty**

Academic dishonesty is a very SERIOUS and UNFORGIVABLE offence under AUM policy. It includes but is not limited to cheating and plagiarism. Plagiarism generally refers to unauthorized collaboration on research papers and use of unreferenced Internet materials. For every paper you submit, I will use a system called Turn it In to check if there is any evidence of plagiarism. Academic dishonesty will result in an automatic "F." A student may be denied an academic degree if found guilty of academic dishonesty. This is noted permanently on the student's educational record. Please refer to the AUM Student Handbook on Academic Dishonesty or feel free to contact me for further clarification.

## **Conduct in the Classroom**

In the classroom, I expect you to show respects for me and your classmates. All students need a comfortable, safe, and distraction-free learning environment. If you engage in any behavior that can be disruptive or disrespectful, I will ask you to discontinue immediately or leave the classroom. I have NO tolerance for cell phone use in the classroom. If you have to use your iPads or laptop to take notes, you are not permitted to engage in activities that are irrelevant to the class.