Natural Disasters and Society

GEOG 41051 | 51051 | 71051
Fall 2021 McGilvrey Hall Rm 234 M/W 11:00-12:15

Instructor	**Office Hours**
Dr. Timothy Assal (he/him) Office: 437 McGilvrey Hall Email: tassal@kent.edu (*best way to contact me)* Phone: 330-672-2046	M/W 9:30 am – 10:45 am M 1 – 3 pm; W 4-5 (in office or in my Zoom Room) If you are unable to meet during these times, please contact me for an appt.

Course Description

This course is a study of natural disasters, the physical processes responsible for hazards, and their effects on the physical and social environment. This course will focus on the **science of natural hazards** and how we can use our knowledge of these natural events and processes to reduce the occurrence or mitigate the effects of **natural disasters**. Natural disasters include earthquakes, volcanoes, tsunamis, landslides, thunderstorms and tornadoes, heatwaves and droughts, floods, coastal hazards, and wildfires. This course is taught through lecture and analysis of numerous case studies of global natural disasters.

Course Learning Outcomes and Goals

Upon completion of this course, students are expected to:
1) Understand the science behind the geologic and atmospheric processes responsible for natural hazards.
2) Be able to identify key events that illustrate each of the natural disaster types.
3) Understand how society mitigates hazards in the short and long term.
4) Gain an understanding of the locations most susceptible to each hazard and what can be done to protect local populations from them.

"Yes, the tornado riding the melted-glacier smoke storm is alarming, but it's creating the perfect natural filter for this sunset."

Course Materials

(Highly) Recommended Textbook:

- Donald Hyndman and David Hyndman: *Natural Hazards and Disasters, 5th Edition* ISBN 1305581695 (There will be a copy on reserve in the Map Library; previous edition at Main Library)
- All required readings in the form of journal articles will be provided

Course Structure

Classes will be conducted as lecture and discussion. Typically, background material will be introduced on a topic in lecture on Monday; then we will discuss a case study of that topic (from a journal article) on Wednesday. Course assessment will include three exams (75% of grade), a *disaster chronicle* (10%), participation (10%) and class/paper lead (5%). The course instructor will deliver course materials and additional materials via Blackboard.

Final Grade Scale

A 92.5 - 100	B+ 86.5-89.4	C+ 76.5 - 79.4	D+ 66.5 - 69.4
A- 89.5 – 92.4	B 82.5 - 86.4	C 72.5 - 76.4	D 59.5 - 66.4
	B- 79.5 - 82.4	C- 69.5 - 72.4	F < 59.4

The Disaster Chronicle

Students will find information on natural disasters that occur during the semester. Information about the disasters can be found in reputable news stories (web, print, TV) and on hazard web sites. Other web sites, including government sites, can be used to find more information after the disaster. For each disaster, the chronicle should contain the following information: type of disaster and specific location (map); date and duration; warning and preparedness efforts before the event; basic information on the event (strength, measurements); impacts on the natural and the built environment; effects on people and societies; mitigation; government and NGO responses. **I will post more information on this assignment in the first few weeks of the semester.**

Participation

Communication is critical in this course, and we will exercise all forms of it, with a focus on oral communication this semester. ***Participation in class discussion is crucial to your success in this class.*** Each undergraduate student will give a brief introduction (~5 mins, based on a ppt template provided by the instructor) to the paper before discussion periods (overflow students will present their disaster chronicle). Graduate students will each lead one lecture during the semester. There will be occasional quizzes, in-class reflection assignments, presence/participation to account for the remaining participation grade.

COVID-19 Information

This course is being offered as a traditional on-campus class and there is no plan to change the form of delivery at this time. Nevertheless, please see the university website for current COVID information and sign up for Flash Alerts to be notified if the university makes changes to course delivery at any point during the semester. Please let me know if you become ill during the semester and we will make arrangements where appropriate. I will do the same if I become ill. Please follow the Flashes Safety Principles, take care of yourself and each other. I am confident we will have a great semester.

HOW TO SUCCEED IN THIS CLASS - "*Tell me and I forget, teach me and I may remember, involve me and I learn."* B. Franklin

• ***Do the readings*** **–** so much of this class depends on the reading! If you have already had coursework in physical geography or geology, you might not need to read the text extensively. If you haven't, your life in this class will be much easier if you read the text! **Allow adequate time to read the discussion articles**. Some of them might be difficult, but it's important to put in time and push through them so you can contribute in discussion and know the material for the exams.
• ***Participation and attendance*** – participating in class discussions will increase your awareness of the material and issues; take notes of key points. Only "legitimate" reasons for an excuse are accepted – communicate with the instructor know if you will miss class.
• ***Collegiality and professionalism*** – Respect your instructors, peers and colleagues. Please silence phones/laptops and refrain from using except for class related purposes.
• ***Always ask questions*** – if there is something that you do not understand do not be afraid to ask questions, even if this means interrupting the class.
• ***Late work*** – points will be deducted for late submissions.

University Policies

Important Dates

The official registration deadline for this course is **September 1st**. University policy requires all students to be officially registered in each class they are attending. Students who are not officially registered for a course by published deadlines should not be attending classes and will not receive credit or a grade for the course. Each student must confirm enrollment by checking his/her class schedule (using Student Tools in FlashLine) prior to the deadline indicated. Registration errors must be corrected prior to the deadline. The course withdrawal deadline is **November 3rd**.

Academic Dishonesty

University policy 3-01.8 deals with the problem of academic dishonesty, cheating, and plagiarism. None of these will be tolerated in this class. The sanctions provided in this policy will be used to deal with any violations. If you have any questions, please read the policy at http://www.kent.edu/policyreg/administrative-policy-regarding-student-cheating-and-plagiarism

Accommodations & Accessibility

University policy 3-01.3 requires that students with disabilities be provided reasonable accommodations to ensure their equal access to course content. If you have a documented disability and require accommodations, please contact the instructor at the beginning of the semester to make arrangements for necessary classroom adjustments. Please note, you must first verify your eligibility for these through Student Accessibility Services (contact 330-672-3391 or visit www.kent.edu/sas for more information on registration procedures).

Survey of Instructor

The Student Survey of Instruction (SSI) is now online. We will dedicate a portion of a class period later in the semester for students to complete this survey.

Course Policies

Respect for Diversity, Equity, and Inclusion

In this class, we are seriously committed to supporting diversity and inclusion among all classroom community members (our university is too!). We treat one another fairly and honor each other's experiences, beliefs, perspectives, abilities, and backgrounds, regardless of race, religion, language, immigration status, sexual orientation, gender identification, ability status, socio-economic status, national identity, or any other identity markers. It is my intent that students from all diverse backgrounds and perspectives be well served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength, and benefit. Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups. In addition, if any of our class meetings conflict with your religious events, please let me know so that we can make arrangements for you.

Land Acknowledgment

We acknowledge that the territory on which Kent State University stands is that of The Kaskaskia and The Erie People. This statement is one small step in acknowledging the history that brought us to reside on the land, and to help us seek understanding of our place within that history. For more information, please visit the Native American Indian Center of Central Ohio.

Mental Health

College life can be incredibly stressful, and you may experience a range of issues that can cause barriers to learning and your well-being. Learn more about university sponsored resources to help.

Course Schedule (next page)

Note: chapter readings refer to the recommended reference text; papers are required reading

Week	Date	Day	Topic	Reading
1	30-Aug	M	Intro to Natural Disasters and Society	
	1-Sep	W	Natural Hazards, Disasters, Mitigation	Ch. 1; Hoskins article
2	6-Sep	M	Labor Day - No Class	
	8-Sep	W	Dynamic Earth	Ch. 2
3	13-Sep	M	Earthquakes	Ch. 3-4
	15-Sep	W	Disc: DeRoches et al. 2011 (Haiti)	Paper
4	20-Sep	M	Tsunami	Ch. 5
	22-Sep	W	Disc: Bernard et al. 2006 (Indonesia)	Paper
5	27-Sep	M	Volcanoes	Ch. 6-7
	29-Sep	W	Disc: Bird et al. 2010 (Iceland)	Paper
6	4-Oct	M	Landslides	Ch. 8
	6-Oct	W	Disc: Petley et al. 2007 (Nepal)	Paper
7	11-Oct	M	Exam 1	
	13-Oct	W	Weather	Ch. 10
8	18-Oct	M	Disc: Tornadoes, Krocack et al. 2020 (Oklahoma, USA)	
	20-Oct	W	Disc: Heatwaves, Robine et al. 2008 (Europe)	Paper
9	25-Oct	M	Climate Change	Ch. 11-12
	27-Oct	W	Disc: Climate Change (TBD)	Paper
10	1-Nov	M	Disc: Ecological Drought (TBD)	Paper
	3-Nov	W	Exam 2	
11	8-Nov	M	Floods	Ch. 14
	10-Nov	W	Disc: Kienzler et al. 2015 (Germany)	Paper
12	15-Nov	M	Coastal Hazards	Ch. 15
	17-Nov	W	Disc: Cooper et al. 2008 (New Jersey, USA)	Paper
13	22-Nov	M	Open Date – TBD; **Disaster Chronicle due**	
	24-Nov	W	Thanksgiving Break - No Class	
14	29-Nov	M	Cyclones (Hurricanes and Typhoons)	Ch. 16
	1-Dec	W	Disc: Paul 2009 (Bangladesh)	Paper
15	6-Dec	M	Wildfires	Ch. 17
	8-Dec	W	Disc: Alexandre et al. (USA)	Paper
	13-Dec	M	Final Exam Period (10:15 am - 12:30 pm)	