

**GEOG/ENVI-258**

# **GEOGRAPHY OF ENVIRONMENTAL HAZARDS**

**Fall 2022**

**MWF 10:50-11:50 am, Carnegie 105**

**Instructor:** Eric D. Carter

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TBA

## **Course Description and Objectives:**

The study of environmental hazards stands at a key point of intersection between the natural and social sciences. Geography, with its focus on human-environment interactions, provides key analytical tools for understanding the complex causes and uneven impacts of hazards around the world. We will explore the geophysical nature and social dimensions of disasters caused by floods, droughts, earthquakes, volcanoes, tsunamis, tornadoes, hurricanes, and wildfires. For each of these hazard types, we apply theoretical concepts from major hazards research paradigms, including quantifying the human and economic impacts of disaster; assessing, managing, and mitigating risk; and reducing the impacts of disaster, not only through engineering works but also by reducing social vulnerability and enhancing adaptive capacity. Looking into the future, we will discuss how global-scale processes, such as climate change and globalization, might affect the frequency, intensity, and geographical distribution of environmental hazards in the decades to come. Since this is a WA (writing for argument) course, we will also emphasize developing your skills in written and oral communication, scholarly research, and information literacy.

*This course fulfills the following general education requirements: WA (writing for argument). It also counts for a social science course in distribution requirements, for the Geography and Environmental Studies majors, and the CGH (Community and Global Health) concentration.*

## **Required Readings:**

### Books:

Gaul, G. M. (2019). *The Geography of Risk: Epic Storms, Rising Seas, and the Cost of America's Coasts*. Sarah Crichton Books.

Graff and Birkenstein (2018). *They Say / I Say: The Moves That Matter in Academic Writing*. Norton, 4th ed. ISBN: 978-0393631678 (3rd or 5th editions acceptable)

All other readings for this course will be available electronically, via Moodle.

## **Course Policies:**

**1. Attendance and Participation.** In this class, 20 percent of your grade derives from attendance and participation. Attendance plays an essential role in learning, so you are warmly invited and expected to attend all class meetings. Attendance will be important not only for your learning, but also for our ability to build a community together and maintain a sense of connection and commitment to one another. Your presence in class matters. If you will not be in class for any reason, it is your responsibility to inform me in advance, or as early as possible, via email. It is also your responsibility to make up work you missed in your absence. Participation is distinct from attendance and is also an essential part of this course. In-class

discussions, on-line discussion forums, responses to brief ungraded writing assignments, quizzes, etc. will be factored into your participation grade. In general, "participation" means speaking up, sharing your thoughts, and making yourself noticed in positive, productive, and supportive ways. It also means listening carefully and respectfully to your fellow students. It is important to remember that we all have different styles of expression. If you have not been able to participate in a class discussion for any reason but want to demonstrate your active engagement, please send me an email after class with a comment or an idea you had that you would have liked to share, but were not able to during class. Students with any concerns, questions, or need for consideration for flexibility should connect with me as soon as possible to determine an appropriate plan.

**2. Reaction papers on campus events and current events.** You can improve your attendance and participation grade, and exercise your writing skills frequently, by writing reaction (reflection) papers about campus events or current events. I will advise you of these opportunities. The reaction papers should be 1-2 pages long. I am interested in a clear summary and a thoughtful critique, ideally one that connects the event to course themes. Please turn in these papers in a Moodle dropbox I will create specifically for this purpose, within a week after the event takes place. I will try to give you feedback within a week. As a general rule of thumb, satisfactorily completing three of these reaction papers during the semester would raise your course participation grade by one letter grade (e.g. from a B to an A).

**3. Late work.** You must turn in your work on time. I will indicate due dates for every assignment, and you must respect them. I will penalize you 10 percent of your grade (or a full letter grade) for a given assignment for every day that it is late. If there are extenuating circumstances (e.g. illness, accident, bereavement, etc.) and you contact me before the due date, I will consider granting an extension. Under the conditions of the "contract for a B" you will receive two free "tokens" for late assignments without penalty (see appendix). But if you submit more than two assignments late, you are no longer in compliance with the "contract for a B."

**4. Turning in written work.** I will be using electronic submission for some assignments. For a given assignment, I will create a "dropbox" on Moodle that has a specific time that work is due (and the dropbox then "closes"). Please do **not** submit assignments via email or as "shared" documents in Google Docs.

**5. Academic integrity.** As in every course, you will be expected to follow the college's policies on academic honesty: specifically, "Students are expected to maintain the highest standards of honesty in their college work. Forgery, cheating and plagiarism are serious offenses and students found guilty of any form of academic dishonesty are subject to disciplinary action." For more details, see the college's guidelines on Academic Integrity at <http://www.macalester.edu/academicprograms/academicpolicies/academicintegrity/> .

**6. Special accommodations.** If you have a physical or learning disability that will require special accommodations, please contact me to discuss arrangements. All conversations will be confidential. You will also need to meet with a representative from Disability Services, which determines accommodations. They can be contacted here: [disabilityservices@macalester.edu](mailto:disabilityservices@macalester.edu) .

**7. Communication.** You are welcome to come see me during my scheduled office hours. If you can't meet during those times, please send me an email or call my office and we'll schedule an appointment. In general, I answer emails within 24 hours. But I always prefer to discuss important matters in person, not electronically or by phone. Also, make sure that you check your email frequently, because I do send email messages – either from my own email address or via Moodle – frequently to the class. Per the terms of the contract for a B, all students are required to meet with me and with Megan (writing assistant) at least once during office hours over the course of the semester.

**8. Use of Electronic Devices in Class.** Laptops are permitted in class but only for note-taking and for activities in class when specifically indicated. When we are having a lecture, discussion, student project presentation, or similar activity, I expect everyone's eyes and attention to be focused on that activity. You definitely should not be browsing the web, checking email, doing your homework, and so on during these class activities. The use of cell phones is strictly prohibited: no calling, texting or other uses of your cell phone during class time.

**9. Recording Policy.** The Macalester College Classroom Recording (MCCR) policy sets forth community expectations regarding the recording (whether audio, video, or streaming) of class lectures, discussions, office hours, and other course-related activity. As an academic community, we value the free exchange of ideas and the privacy of community members. We are also committed to providing appropriate accommodations to students who require recorded lectures as an academic adjustment for documented disabilities. The MCCR policy balances the legitimate uses of classroom recording, the intellectual property of the faculty, and the privacy of individual students and faculty. The entire policy can be found [here](#). In short, the policy requires students to submit a completed Student Recording Agreement to the appropriate office (Disability Services for students with approved accommodations; Academic Programs and Advising for all others) prior to engaging in any type of recording. The faculty member who signed the Recording Agreement (or is notified by Disability Services that recording will occur as an accommodation) is responsible for notifying the class that recording will be occurring. The required Student Agreement Recording form is available [here](#).

**10. Religious Observance.** Students may wish to take part in religious observances that occur during this semester. If you have a religious observance/practice that conflicts with your participation in the course, please contact me before the end of the first week of the semester to discuss appropriate accommodations. In an effort to respect religious diversity, I request that students who desire to observe a religious holiday during a scheduled class meetings/ class requirements talk to me about reasonable consideration by the end of the second week of the course.

**11. Health and Wellness.** You are encouraged to make your health and well-being a priority throughout this semester and during your career at Macalester. Taking care of yourself will help you engage more fully in your academic experience. Remember that beyond being a student, you are a human being carrying your own experiences, thoughts, emotions, and identities with you. It is important to acknowledge any stressors you may be facing, which can be mental, emotional, physical, cultural, financial, etc., and how they can have an impact on your academic experience. I encourage you to remember that you have a body with needs. In the classroom, eat when you are hungry, drink water, use the restroom, and step out if you are upset and need some air. Please do what is necessary so long as it does not impede your or others' ability to be mentally and emotionally present in the course. Outside of the classroom, sleeping, moving your body, and connecting with others can be strategies to help you be resilient at Macalester. If you are having difficulties maintaining your well-being, please don't hesitate to contact me and/or find support from Health & Wellness Center. I have included contact information for health and wellness resources on the course Moodle page.

**12. Inclusivity.** I am committed to providing a safe and equitable learning environment that welcomes and supports everybody. As learners and teachers, we all bring various experiences and life contexts to this course. These differences will emerge in class and be part of what we negotiate and benefit from as a developing community. I acknowledge that academic institutions have evolved within a historical context that privileges certain students over others, and in this classroom, we will do our best to be aware of how these inequities may manifest. I hope you will feel comfortable coming to us to express any concerns or suggestions; this is an iterative process that requires the collaboration of all.

**13. Pandemic Business.** In this class, we will follow the [latest guidelines on the College's COVID-19 pandemic response](#). As of this writing (August 29), this means classes will be held in person, not remotely, and face coverings are required in indoor spaces, until Wed., Sept. 14. After that date, our class meetings will be **mask-optional** (it's up to you). If the guidelines change, we will adapt accordingly.

### **Class Format:**

In this course there will be a mix of lecture- and discussion-based meetings. My lectures are meant to be interactive and not a one-way monologue, so feel free to ask questions, and expect that I will ask you questions, too. If we are having discussions or scholarly skills workshops in class, I will give you some guidelines ahead of time of what to expect.

### **Course Assignments:**

- **Attendance and Participation:** see above.
- **Writing Portfolio.**
  - Most of your grade in this course will come from a writing portfolio you will work on throughout the semester. There are several reasons for using the portfolio format. First, writing-intensive FYCs require at least 20-25 pages of work in revision. Second, the portfolio format is meant to encourage you to make writing and revision a habit, something you do almost continuously throughout the semester, since the best way to improve your writing is through constant practice. Third, the portfolio format means that most of your grade comes from your best work at the end of the term, which incorporates all the lessons you've learned throughout the semester. These essays will be generally short (around 350-500 words).
  - First drafts of essays will be due at specific times, and you will be graded on these drafts. However, the *total* of all first drafts will be worth just one-quarter of your course grade, while the *final* portfolio will be worth half of your course grade. There will also be a partial version of the portfolio due at mid-semester, so you can receive additional feedback. Throughout the semester, you will receive intensive writing instruction and feedback from Prof. Carter and Megan, your TA.
  - It might seem like you have a lot of writing in this class, but writing frequently and well is the main focus for the course. Note that we do not have exams or quizzes in this class, so you won't need to spend time "studying" in the conventional sense.
- **Oral presentations.** There will be brief oral presentations on your research project during the last week of class.

### **Grading:**

Attendance and Participation	20%
Writing Portfolio – all first drafts	25%
Final Portfolio	50%
Oral Presentation	5%
<b>TOTAL</b>	<b>100%</b>

Any written assignments or other activities that don't go specifically into the writing portfolio will be counted as part of your attendance and participation grade.

For grading, I will also be using a "contract for a B" format. More details can be found in the accompanying document (see appendix), but in short, you are guaranteed a minimum final grade of B if you fulfill certain basic requirements.

**DETAILED COURSE SCHEDULE:**

**Notes:** "REQ"="Required"; "RCM"="Recommended"; schedule subject to change (with fair warning).

**How to read *They Say, I Say*:** keep up with the chapters of *TSIS* as assigned in the syllabus. Be sure to do the short exercises at the end of each chapter. These usually involve a close reading of a sample text, a re-reading of one of your own pieces of writing, and sometimes, a short assignment to write something new. I trust you to do these; your writing—and just as importantly, how you diagnose problems in your own writing—is going to improve (trust me). Frequently we will discuss *TSIS* in class, as part of our scholarly skills workshops.

**WEEK 1****Aug. 31 (Wed.) Introduction and Course Business****Sept. 2 (Fri.) Paradigms of Hazards Research and Measuring Disaster Impacts**

REQ: Smith, K. (2013). Hazard in the Environment (ch. 1) and Dimensions of Disaster (ch. 2) in *Environmental Hazards* (6th ed.).

REQ: *They Say, I Say*, Preface and Introduction

REQ: Lowrey, A. (2017, Dec. 20). The Most Expensive Weather Year Ever. *The Atlantic* online.

**WEEK 2****Sept. 5 (Mon.) LABOR DAY – NO CLASS****Sept. 7 (Wed.) Risk Assessment 1**

REQ: Smith, K. (2013). Risk assessment and management (ch. 4) in *Environmental Hazards* (6th ed.).

RCM: Ropeik, D. (2012, Feb. 26). The wages of eco-angst, *New York Times*.

RCM: Ropeik, D. (2006, Oct. 16). How Risky is Flying? PBS Nova (online source).

RCM: Mueller, B. (2022, April 18). Is Covid More Dangerous Than Driving? *New York Times*.

**Sept. 8 (Thurs.)**

**Assignment 1 DUE.** Argument about disaster trends backed with quantitative data and analysis. (350-500 words)

**Sept. 9 (Fri.) Risk Assessment 2**

REQ: Ritchie, L., & Gill, D. (2021). Considering COVID-19 through the Lens of Hazard and Disaster Research. *Social Sciences*, 10(7), 248.

REQ: Krewski, D., et al. (2022). Principles of risk decision-making. *Journal of Toxicology and Environmental Health, Part B*, 1-29. <https://doi.org/10.1080/10937404.2022.2107591>

RCM: Julavits, H. (2019, Dec. 31). What I Learned in Avalanche School. *New York Times* ([link](#))

RCM: Weller, S. C., Baer, R., & Prochaska, J. (2016). Should I stay or should I go? Response to the Hurricane Ike evacuation order on the Texas Gulf Coast. *Natural Hazards Review*, 17(3), 04016003.

RCM: Kasperson, R. E., & Kasperson, J. X. (1996). The Social Amplification and Attenuation of Risk. *Annals of the American Academy of Political and Social Science*, 545, 95-105.

RCM: Dillon, R. L., et al. (2011). Why Near-Miss Events Can Decrease an Individual's Protective Response to Hurricanes. *Risk Analysis*, 31(3), 440-449.

**WEEK 3****Sept. 12 (Mon.) Vulnerability and Reducing the Impacts of Disaster**

REQ: Cutter, S. L. (2018). Compound, cascading, or complex disasters: what's in a name? *Environment*, 60(6), 16-25.

REQ: Allen, A., et al. (2017). From state agencies to ordinary citizens: reframing risk-mitigation investments and their impact to disrupt urban risk traps in Lima, Peru. *Environment and Urbanization*, 29(2), 477-502.

RCM: Comfort, L., et al. (1999). Reframing disaster policy: the global evolution of vulnerable communities. *Environmental Hazards*, 1(1), 39-44.

RCM: Klinenberg, E. (2002). *Heat wave : a social autopsy of disaster in Chicago*. Chicago: University of Chicago Press. (excerpt)

REQ: *They Say, I Say*, Chapter 1

**Sept. 13 (Tues.)**

**Assignment 2 DUE.** Making a decision, using an analytical framework and backed with quantitative data. Use a risk analysis to decide whether to hold an outdoor concert given certain probabilities of extreme weather events. (350-500 words)

**Sept. 14 (Wed.) Mass-Movement Hazards**

RCM: Highland, L., & Bobrowsky, P. T. (2008). *The Landslide Handbook: A Guide To Understanding Landslides*. Reston: US Geological Survey.

REQ: *They Say, I Say*, Chapters 2-3

**Sept. 16 (Fri.) Mass-Movement Hazards (cont'd)**

Case study on Oso, Washington landslide (related reading packet on Moodle)

**WEEK 4****Sept. 19 (Mon.) Tectonic Hazards: Earthquakes**

REQ: Schulz, K. (2015). The really big one. *The New Yorker*

Watch Video: "NOVA: Deadliest Earthquakes" (2012)

REQ: *They Say, I Say*, Chapters 4-5

**Sept. 20 (Tues.)**

**Assignment 3 DUE.** A post-mortem analysis of the Oso, Washington landslide (Use an analytical framework and scientific evidence to assign responsibility for a disaster). (350-500 words)

**Sept. 21 (Wed.) Earthquakes: Haiti Case Study**

Reading Packet on 2010 Haiti Earthquake

**Sept. 23 (Fri.) Discussion/Scholarly Skills Workshop**

REQ: *They Say, I Say*, Chapter 6

**WEEK 5****Sept. 26 (Mon.) Na-Tech Disasters: Japan's 2011 Triple Disaster**

REQ: Pescaroli, G., & Alexander, D. (2015). A definition of cascading disasters and cascading effects: Going beyond the "toppling dominos" metaphor. *Planet@ risk*, 3(1), 58-67.

REQ: Funabashi, Y., & Kitazawa, K. (2012). Fukushima in review: A complex disaster, a disastrous response. *Bulletin of the Atomic Scientists*, 68(2), 9-21.

REQ: Perrow, C. (2011, April 1). Fukushima, risk, and probability: Expect the unexpected. *Bulletin of the Atomic Scientists web edition*.

RCM: Rich, M. (2017, March 10). The lonely towns of Fukushima. *New York Times*.

RCM: Beck, U. (2006). Living in the world risk society. *Environment and Society*, 35(3), 329-345.

RCM: Clarke, L. B. (2006). "The Sky Could be Falling." Chapter 2 in *Worst Cases: Terror and Catastrophe in the Popular Imagination* (Chicago: University of Chicago Press).

**Sept. 28 (Wed.) Volcanoes**

REQ: Degg, M. R., & Chester, D. K. (2005). Seismic and volcanic hazards in Peru: changing attitudes to disaster mitigation. *Geographical Journal*, 171(2), 125-145.

**Sept. 30 (Fri.) Discussion/Scholarly Skills Workshop**

REQ: *They Say, I Say*, Chapter 6

**Oct. 1 (Saturday). FIELD TRIP ON LOCAL ENVIRONMENTAL HAZARDS!**

Details TBA

**WEEK 6****Oct. 3 (Mon.) Tropical Storms**

Readings TBA

REQ: *They Say, I Say*, Chapters 8-9

**Oct. 4 (Tues.)**

**Assignment 4 DUE.** Apply a hazards paradigm to explain the causes of a disaster, the 2010 Haiti earthquake. (350-500 words)

**Oct. 5 (Wed.) Global Climate Change, Variability, and Extreme Events**

Guest Lecture by Kenny Blumenfeld, Ph.D., State Climatology Office, Minnesota DNR

REQ: Irfan, U. (2021). Climate change worsens extreme weather. A revolution in attribution science proved it. Vox.com ([link](#))

REQ: Hayhoe, K. and F. Otto (2021). What Cutting-Edge Science Can Tell Us About Extreme Weather. *NY Times*, August 17.

RCM: Herring, S. C., et al., eds. (2017). Explaining Extreme Events of 2016 from a Climate Perspective. *Bull. Amer. Meteor. Soc.*, 98 (12), S1-S157.

RCM: Cullen, H. (2013, July 18). Extreme Weather Within the Context of Our Changing Climate. Briefing to the United States Senate Committee on Environment and Public Works

**Oct. 7 (Fri.) Discussion**

Recap and discuss Blumenfeld guest lecture

**WEEK 7****Oct. 10 (Mon.) Hurricane Katrina case study**

REQ: Various Authors (2005-present). Understanding Katrina: Perspectives from the Social Sciences. SSRC website.

Other readings TBA

**Oct. 12 (Wed.) The "Nature" of Flooding**

REQ: McPhee, J. (1987, February 23). Atchafalaya. *The New Yorker*.

REQ: Madrigal, A. (2011). What We've Done to the Mississippi River: An Explainer. *The Atlantic* online.

RCM: USGS Flood Information ([link](#))

RCM: Adger, W. N., Quinn, T., Lorenzoni, I., & Murphy, C. (2016). Sharing the pain: perceptions of fairness affect private and public response to hazards. *Annals of the American Association of Geographers*, 106(5), 1079-1096.

**Oct. 14 (Fri.) U.S. Flood Policy and Management**

REQ: Steinberg, T. (2006) "Uncle Sam, Floodplain Recidivist." Chapter 5 in *Acts of God* (Oxford U. Press).

REQ: Chen, D.W. (2018, Jan. 7). In New York, Drawing Flood Maps Is a 'Game of Inches.' *New York Times*.

Reading Packet on U.S. Flood Policy (also for use in week 9)

Discuss mid-semester portfolio revising process

**WEEK 8****Oct. 17 (Mon.) Climate Change and Coastal Flooding**

REQ: Klinenberg, E. (2013, Jan. 7). Adaptation: How can cities be 'climate-proofed'? *The New Yorker*.

REQ: Jarvis, B. (2017, April 18). When rising seas transform risk into certainty. *New York Times Magazine*.

REQ: Kimmelman, M. (2017, Dec. 21). Jakarta Is Sinking So Fast, It Could End Up Underwater. *New York Times*.

RCM: Flavelle, C. (2016, Nov. 29). The areas America could abandon first. *Bloomberg View*.

**Oct. 19 (Wed.) NO CLASS**

Mid-semester portfolio DUE (updated drafts of assignments 1-4 only)

**Oct. 21 (Fri.) NO CLASS – FALL BREAK**

**WEEK 9**

**Oct. 24 (Mon.) Geography of Risk: Climate Change Impacts on America's Coasts**

Begin Gaul, *Geography of Risk*

Discussion in class

**Oct. 26 (Wed.) Geography of Risk: Climate Change Impacts on America's Coasts**

Continue Gaul, *Geography of Risk*

Discussion in class

**Oct. 28 (Fri.) Geography of Risk: Climate Change Impacts on America's Coasts**

Finish Gaul, *Geography of Risk*

REQ: Palm and Bolsen (2022, March 25). Coastal home buyers are ignoring rising flood risks, despite clear warnings and rising insurance premiums. *TheConversation.com*.

RCM: Wilkinson, F. (2022, August 8). We Will All End Up Paying for Someone Else's Beach House. *New York Times*.

Discussion in class

**WEEK 10**

**Oct. 31 (Mon.) Scholarly Skills Workshop**

Special guest: Joe Linstroth, Macalester College Communications, on op-ed writing

REQ: *They Say, I Say*, Chapters 10-11

Other readings TBA

**Nov. 1 (Tues.)**

Assignment 5 DUE (on "geography of risk")

**Nov. 2 (Wed.) US Flood Policy Stakeholder Debate Activity**

Prepare for in-class debate on U.S. flood policy (stakeholder-oriented debate)

**Nov. 3 (Thurs.)**

Brief research topic statement due

**Nov. 4 (Friday) US Flood Policy Stakeholder Debate Activity**

In-class debate on U.S. flood policy (stakeholder-oriented debate)

**WEEK 11**

**Nov. 7 (Mon.) Discussion/Scholarly Skills Workshop**

Share drafts of op-ed for peer review

REQ: *They Say, I Say*, Chapter 12

**Nov. 8 (Tues.)**

Assignment 6 DUE (op-ed on US flood policy due)



**Nov. 9 (Wed.) Drought in the Western US**

Readings on Western drought TBA

**Nov. 11 (Fri.) Drought, Famine, and Hunger**

REQ: Sen, A. (1999). Famine and Other Crises, from *Development as Freedom*.

REQ: De Waal, A. (2018). The end of famine? Prospects for the elimination of mass starvation by political action. *Political Geography*, 62, 184-195.

RCM: Wisner, B., et al. (2004). "Famine and Natural Hazards." Chapter 4 in *At Risk*, 2nd ed. (Routledge).

**WEEK 12****Nov. 14 (Mon.) Library Day**

Visit to the library, focusing on more advanced research techniques to help with final project assignment

REQ: *They Say, I Say*, Chapters 13-14

**Nov. 15 (Tues.)**

**Assignment 7 DUE.** Research Project mini-proposal: articulate a research question and justify its significance, i.e. a very brief research proposal (250 words or fewer)

**Nov. 16 (Wed.) Wildfires and Climate Change**

REQ: Running, S. W. (2006). Is Global Warming Causing More, Larger Wildfires? *Science*, 313(5789), 927-928.

REQ: Gabbert, B. (2018, Nov. 25). Climate assessment predicts increasing wildfires. *Wildfire Today*.

RCM: *Fourth National Climate Assessment* (US), esp. chapter 6 on Forests.

RCM: McCarthy, P. (2012). Climate Change Adaptation for People and Nature: A Case Study from the U.S. Southwest. *Advances in Climate Change Research*, 3(1), 22-37.

RCM: McCaffrey, S. (2004). Thinking of Wildfire as a Natural Hazard. *Society & Natural Resources*, 17(6), 509-516.

**Nov. 18 (Fri.) California wildfires case study**

REQ: "Why Does California Have So Many Wildfires?" *New York Times*, Sept. 22, 2020.

REQ: Boxall, Bettina (2019, January 11). "Southern California's ecosystems evolved to survive fire. But not like this." *Los Angeles Times* (<https://www.latimes.com/local/lanow/la-me-fire-los-padres-20190111-htmlstory.html>)

RCM: Davis, M. (1998). "The case for letting Malibu burn." In *Ecology of fear : Los Angeles and the imagination of disaster*. New York: Metropolitan Books.

Other readings on California wildfires TBA

**WEEK 13****Nov. 21 (Mon.) Tornadoes**

REQ: Simmons, K. M., D. Sutter, and R. A. Pielke, Jr. (2013). Normalized tornado damage in the United States: 1950-2011. *Environmental Hazards* 12 (2) 132-147.

**Nov. 22 (Tues.)**

**Assignment 8 DUE.** Evaluate the evidence for causes of a trend: Is climate change leading to more frequent wildfires? (350-500 words)

**Nov. 23 (Wed.) and Nov. 25 (Fri.) NO CLASS—THANKSGIVING BREAK****WEEK 14****Nov. 28 (Mon.) Scholarly Skills Workshop****Nov. 30 (Wed.) Scholarly Skills Workshop**

**Dec. 2 (Fri.) Scholarly Skills Workshop -or- Student Oral Presentations****WEEK 15****Dec. 5 (Mon.) Student Oral Presentations****Dec. 6 (Tues.)**

Assignment 9 DUE. Final Project (~2000 words) This will be the subject of your oral presentations at the end of the semester, as well.

**Dec. 7 (Wed.) Student Oral Presentations****Dec. 9 (Fri.) Student Oral Presentations**

Last day of classes for semester

**FINALS WEEK**

**Dec. 14 (Wed.) Hold date for oral presentations, if necessary, during assigned final exam time,  
10:30 am – 12:30 pm**

**Dec. 15 (Thurs.) FINAL PORTFOLIO DUE**

## COURSE SCHEDULE AT-A-GLANCE

	Monday	Tuesday	Wednesday	Thursday	Friday
1	29 (AUG)	30	31 Introduction Course Business Meaning of a Liberal Arts Education	1	2 Hazards Paradigms Measuring Impacts of Disaster
2	5 LABOR DAY	6	7 Risk Assessment 1	8 Assignment 1 (Disaster Trends) Due	9 Risk Assessment 2
3	12 Vulnerability, Risk, and Reducing Impacts of Disaster	13 Assignment 2 (Risk Analysis) Due	14 Mass-Movement Hazards	15	16 Mass-Movement Hazards (Oso Landslide Case Study)
4	19 Earthquakes	20 Assignment 3 (Oso Landslide Post- Mortem) Due	21 Earthquakes (Haiti case study)	22	23 Discussion/Scholarly Skills Workshop
5	26 Earthquakes (Na-Tech disasters – Japan 2011 Triple Disaster)	27	28 Volcanoes	29	30 Discussion/Scholarly Skills Workshop FIELD TRIP OCT. 1 →
6	3 (OCT) Tropical Storms	4 Assignment 4 (Hazards Paradigms) Due	5 GCC, Variability, and Extreme Events (Kenny Blumenfeld guest)	6	7 Discussion
7	10 Hurricane Katrina case study	11	12 Flooding	13	14 Flooding
8	17 Coastal Flooding and GCC	18	19 NO CLASS Mid-Semester Portfolio due	20 NO CLASS FALL BREAK	21 NO CLASS FALL BREAK

9	24 Begin "The Geography of Risk"	25	26 Continue "The Geography of Risk"	27	28 Finish "The Geography of Risk"
	31 Scholarly Skills Workshop (Joe Linstroth guest)	1 (NOV) Assignment 5 (Geog. of Risk) Due	2 Prep Stakeholder Debate	3 Brief Topic Statement for final project due	4 Stakeholder Debate on US Coastal Policy
11	7 Discussion/Scholarly Skills Workshop	8 Assignment 6 (Op-Ed) Due	9 Drought in Western US	10	11 Drought, Famine, and Hunger
	14 Library Day	15 Assignment 7 (research proposal) due	16 Wildfires & GCC	17	18 CA Wildfires case study
13	21 Tornadoes	22 Assignment 8 (wildfires and GCC) due	23 THANKSGIVING BREAK	24 THANKSGIVING BREAK	25 THANKSGIVING BREAK
	28 Scholarly Skills Workshop	29	30 Scholarly Skills Workshop	1 (DEC)	2 Scholarly Skills Workshop
15	5 Oral Presentations	6 Assignment 9 (final project) due	7 Oral Presentations	8	9 Oral Presentations Last Day of Classes
	12 Study Day	13	14 (Hold date for oral presentations, if necessary)	15 Final Writing Portfolio due	16
F I N A L S					

## Appendix: Contract for a Final Grade of "B"

Conventional grading often leads students to think more about grades than about writing; to worry more about pleasing me than about figuring out what you really want to say or how you want to say it; to be reluctant to take risks with your writing; sometimes even to feel you are working against me or having to hide part of yourselves from me.

At the same time, it is crucial to have opportunities for revision, to show how you are improving and learning new things as the semester goes on. That is why I favor the "final portfolio" format for writing – you will have a chance to revise your work many times, if you wish, and present revised versions of all your work together in one package, the final portfolio. In this course, the portfolio is worth 50 percent of your overall grade. I will give you plenty of qualitative feedback on your writing (including letter grades on your first drafts, based on clear grading criteria).

Understandably, having so much of your grade determined by a final portfolio can cause some anxiety, especially if you're not accustomed to non-traditional grading strategies.

For these reasons, I am using a kind of contract for grading.

You are guaranteed a final grade of B if you meet the following conditions:

- Attendance. Don't miss more than one week's worth of classes. (If you miss class, you still need to do the assignment.)
- Punctuality. Don't be habitually late. (If you are late or miss a class, you are still responsible to find out what assignments were made.)
- Late assignments. All your assignments must be turned in on time. I will give you two "tokens" that offer you a 48-hour extension on an assignment. These tokens cannot be used on the final portfolio, which is due unconditionally on Thursday, December 15.
- Participating, sharing and responding. Work cooperatively in groups. Be willing to share some of your writing, to listen supportively to the writing of others and, when called for, give full and thoughtful responses.
- Completeness. The essays you turn in must be complete, meeting the minimum word count and looking like an actual essay. You can't just write a few bullet points and turn that in, even as a first draft.
- Meeting in office hours. Before the end of week 13, you must meet at least once with Prof. Carter **and** at least once with your TA to discuss writing for this class. You are welcome to attend office hours more frequently.

I will let you know if you have broken the contract. At that point, a minimum grade of B is no longer guaranteed, but you could still earn a B or better by doing good-to-excellent work.

As you see, the grade of B depends on behaviors. Grades of A, A- or B+, however, depend on quality. Thus, you earn a B if you put in good time and effort; I will push you all to get a B. But to get a higher grade, you have to make your time and effort pay off into writing of genuine excellence, while also meeting the conditions for a B.

To be clear, I will be giving you letter grades on assignments as the semester goes along, and I will use the weighting scheme outlined in the syllabus to determine your final grades. If you have complied with all the conditions of the contract above, a "B" is the *lowest* final course grade you could achieve. But you could well earn a much higher grade, depending on performance.

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