

GEOG 306: Human Dimensions of Natural Hazards

Winter 2019

Department of Geography, University of Waterloo

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Calendar Description

This course will investigate the human dimensions of the global experience with natural hazards and associated disasters. The physical nature of a wide range of geophysical and biophysical hazards will be explored, paying particular attention to the ways in which hazards become dangerous to humans, and the pathways by which humans can either increase or decrease their vulnerability in the face of natural hazards.

Overview

Natural hazards and associated disasters are, in part, a product of inappropriate human modifications or management of the natural landscape. In a decade in which the human dimensions of natural hazards are becoming increasingly recognized, (e.g. Both Haiti's 2010 and Nepal's 2015 earthquake saw heavy casualties due in large part to poor building standards, and damages from both the 2011 Japan earthquake/tsunami and the 2013 Typhoon Haiyan disaster in the Philippines have been linked to inadequate coastal zone planning), it is appropriate that this course focus on the ways in which humans increase or decrease the risks posed by natural hazards.

This course investigates the human dimensions of the global experience with natural hazards and associated disasters. The physical nature of a wide range of geophysical and biophysical hazards are first explored, paying particular attention to: the ways in which hazards become dangerous to humans, and the pathways by which humans can either increase or decrease their vulnerability in the face of natural hazards. The course will then examine how humans adjust to the presence of hazard and disaster, with a particular concentration on disaster preparedness, disaster risk reduction and hazard mitigation. Throughout the course, case studies and examples drawn from countries and regions around the world will be used to clarify conceptual and methodological issues. Through assignments and in-class participation, students are encouraged to explore hazards and world regions of personal interest.

Course Learning Objectives

By the end of the course, students should be able to:

- Understand conceptual & methodological frameworks for the examination of natural hazards
- Understand common human dimensions of natural hazards, disasters & disaster risk reduction
- Understand the relative risks posed by different types of natural hazards
- Be aware of newly-emerging trends in natural hazards knowledge, planning & disaster risk reduction
- Be able to compare & contrast natural hazards & disaster risk reduction theory with real-world case studies, and apply knowledge in order to reduce the risks of hazards.

Readings:

1. Smith, K. 2013. Environmental Hazards: Assessing Risk and Reducing Disaster. 6th edition, Routledge: New York, ISBN 978-0-415-68106-3. <https://www.routledge.com/Environmental-Hazards-Assessing-Risk-and-Reducing-Disaster/Smith-Smith/p/book/9780415681063>
Where to buy:
 - UW Bookstore (South Campus Hall): Soft cover copy (\$130)
 - Amazon.ca (\$52-\$88 used)
 - FESD Used Bookstore (\$99...24 copies available as of Dec 13/2018)
 - E-book (\$48usd and up depending on type/length of rental)
 - Dana Porter Reserves (3 hr loan)
2. Clinton, W.J. 2006. Key propositions for Building Back Better. Office of the UN Secretary General's Special Envoy for Tsunami Recovery. www.preventionweb.net/files/2054_VL108301.pdf
3. Abramovitz, J. 2001. Unnatural Disasters. Worldwatch Paper No. 158. <http://www.worldwatch.org/node/832>

Course Evaluation: Your final mark will be determined on the basis of 2 tests + 2 assignments. No final exam.

1. **Assignment #1** (25%): Sunday Jan. 27 (11:59pm)
2. **Test #1** (25%): Tuesday Feb. 12th – short answer format
3. **Test #2** (20%): Thursday March 21st – M/C
4. **Assignment #2** (30%): Saturday April 6th (11:59pm)

Evaluation Policies

- **Assignment deadlines:** Assignments must be handed in by 11:59pm on the date assignments are due
- **Late submissions:** 5% deduction per day will be applied for late assignments. Late assignments may be submitted up until the date that marked assignment grades are released on LEARN (typically about 7-10 days after the original due date). As soon as Assignment marks are released on LEARN, late assignments are no longer accepted. Deductions may be waived if appropriate explanation is provided.
- **Test/assignment/late deduction waivers:** NOTE: a formal doctor's or counsellor's note is NOT required to have a test or assignment waived (let's not burden the healthcare system!). You do have to provide a detailed typed/emailed explanation of why you missed a test or were late in submitting an assignment.
- **Assignment feedback/grading sheets:** all assignments will be marked electronically and feedback will be posted on LEARN.

Grading

Numeric grades on a scale from 0-100 are used in grading all tests and assignments at the University of Waterloo. The following list will give you an idea of the basis upon which numeric grades are assigned:

- **90-100%:** Work that shows a high level of initiative and is clearly above and beyond what is expected at a third year level. Referencing, style, grammar/spelling, content and the development of ideas are all superior.
- **80-89%:** Work that shows good initiative and is above what is expected at a third year level. Referencing, style, grammar/spelling, content and the development of ideas are all good.
- **70-79%:** Work that shows initiative and is about what is expected at a third year level, but one or more problems are evident in referencing, style, grammar/spelling, content and/or the development of ideas.
- **60-69%:** Work that does not demonstrate initiative, has a series of problems in referencing, style, grammar/spelling, content and/or the development of ideas, and overall, does not fully convince the reader that the topic has been well considered
- **50-59%:** Work that is substandard/sloppy in places, has many problems in referencing, style, grammar/spelling, content and/or the development of ideas, and overall, raises more questions in a reader's mind than the work answers.
- **40-49%:** Work that is of consistently poor quality, demonstrates gaps in comprehension of the assigned material, and/or indicates that not enough time was taken to properly address the assignment
- **<40:** Work that is clearly of poor quality, demonstrates a lack of comprehension of the assigned material, shows little attempts at a personal development of ideas or efforts to back up arguments with suitable evidence, and/or indicates that the work was completed 'at the last minute'. Possibly contains plagiarized material.

Assignment #1: Using the DRR Toolkit for “Pre-disaster DRR” (25%)

SUMMARY: Non-essay format research report evaluating the types of “disaster risk reduction” actions that can be carried out pre-disaster at a variety of levels. Length: 4-6 pages 1 ½ spaced 12 font (excluding graphics, figures, tables and bibliography).

This assignment requires you to choose one particular hazard, research and describe various DRR actions that can reduce the risks posed by that hazard, and to then identify which actor(s) is most likely to carry out these actions.

1. Choose one hazard from the diagram that is presented on January 10th (“Natural Hazard Types”), i.e. choose a type of Meteorological, Hydrological, Geophysical or Biological hazard. The only exception is “(human) disease” which is outside the scope of this course (**do NOT choose Human Disease as your hazard**).
2. Indicate clearly which hazard you have chosen. If you choose a category of hazard that has sub-categories, specify which sub-category you’re reviewing (for example, “Flood” has numerous sub categories: river floods, coastal floods, storm surge floods, urban flash floods, ice jam floods, etc). Earthquake on the other hand has no particular sub-categories).
3. Describe in bullet list form at least 10 DRR actions/initiatives relevant for “your” hazard. Each bulleted item should name the DRR action and then give a few sentences describing that item (e.g. describe the action, variations of that action, or perhaps give a real-world example of that action).
4. Think about which of the following actors would be most likely to carry out each of the 10 actions you have identified:
 - Homeowner: i.e. DRR actions that are economically feasible for households, and are typically carried out at the ‘household level’
 - Municipality: i.e. DRR actions that are economically feasible for municipalities, and are typically carried out at the ‘municipal level’
 - Provincial OR Federal government: i.e. DRR actions that are economically feasible for Provinces/Countries, and are typically carried out at the ‘Provincial or Federal level’.
 - Other relevant actors (e.g. NGOs, private companies, media, insurance companies, research centres, etc).
5. Create a table which lists all 10 potential DRR actions, and then indicate using a checkmark or “X” which actions can be attempted by each of the types of actor (i.e. some actions such as “financial compensation for damages” can be done at all three levels, whereas “installing a sewer backflow valve” can only be done by a homeowner). NOTE: if you list one or more ‘other relevant actors’, use a separate column for each other actor.
6. You must use and cite the textbook. You must also use an additional 7 sources. However, there is no upper limit to the number of sources you CAN use...

*Further details will be provided as the course gets underway (e.g. a marking rubric)

Assignment #2: Team-based Briefing Report (30%)

SUMMARY: Team-based briefing report explaining post-disaster “build back better” efforts in a defined community or region. Length: 12-15 pages (approx. 3000-4000 words), 1.5 spaced, 12 font (excluding maps, figures, tables and bibliography). This assignment requires you to form a small “team” (2-4 members).

You have been hired as a co-op/summer student by the Ministry of Public Safety in a country that has had one or more significant disasters in the last 15-20 years. One month into your job, your unit gets an urgent request from the Minister to draft a briefing report about post-disaster recovery progress for one of these disasters. This report will be delivered to the press in 2 weeks time.

This assignment is an examination of post-disaster “build back better” efforts in a defined community or region which had experienced a disaster. Your task is to create a 12-15 page (excluding diagrams, tables, figures, photos, appendices, etc.) “briefing report” which could be delivered to elected officials who often have to summarize their government’s response to disaster. The report should be understandable to someone with no prior knowledge of your specific disaster & region and should be written in clear, concise language and using appropriate headings and sub-headings to guide the reader. It will be critically important to choose the “right” disaster event – one which has occurred after the beginning of the “build back better” concept (around 2002), and has occurred long enough ago that reports, journal articles, news stories, etc, have been written on the recovery process.

The following topics should be addressed in your team’s report.

Briefing Report: Components

1. Introduction & overview of report, including a clear identification of the community/region **(5%)**
2. Overview of the disaster event which hit this community/region **(15%)**
3. Brief summary of the “build back better”(BBB) concept **(10%)**.
(Note: sometimes the phrases ‘building resilience’ or ‘reducing vulnerability’ are used instead of ‘build back better’, but all of these concepts are an attempt to reduce the future risks of disasters through the recovery process, so you can include such efforts under the general umbrella term “BBB”. Also, a reminder that there are many aspects of recovery which are not ‘physical reconstruction’ or ‘building’ in a physical sense (e.g. helping communities to reconnect damaged social networks, or helping trauma victims to recover via psychosocial counselling).
4. Summary of BBB activities to date. Explain to the reader the many ways in which the recovery process has reduced disaster vulnerability or increased community resilience to disasters, and how the recovery process has reduced the risk of similar disasters from occurring in the future **(30%)**
5. Conclusion: briefly summarize for the reader the extent to which recovery is now ‘complete’ (or for more recent disasters, the extent to which there is still work remaining) **(5%)**
6. Bibliography + Citations **(10%)**
7. Style: professionalism, clarity, sentence construction, grammar, logic, overall appearance of paper, appropriate length **(25%)**
8. **OPTIONAL**: Appendix. If you have additional material you think is relevant (e.g. maps, tables, charts, photos, etc) that does not naturally fit in your report feel free to add an appendix. There are no additional marks for including an appendix (although it may influence your overall “style” marks), and no marks deducted if you decide to not have an appendix.

(NOTE: The division of responsibilities for this assignment will be left up to each team. Each member will have the opportunity to assess the contribution of the other team member so equal effort is strongly advised!).

COURSE AND UNIVERSITY POLICIES

Attendance

Attendance in class is at your discretion. However, there is often extra content in the notes displayed in class vs. the notes posted on the course webpage (E.g. discussion points or questions asked of the class, graphics-heavy images such as maps or diagrams), and all in-class discussions are valid “testable” materials. Also, all A/V materials (e.g. DVDs screened in class) are valid, “testable” materials, so complete notes should be taken for each DVD screened. For these reasons, attendance at each lecture is HIGHLY RECOMMENDED.

Responding to Student Inquiries (e.g. explaining material, quiz formats, etc)

If you have course-related questions, I strongly encourage you to either ask question during the class (so all other students can also benefit) or come to see me during my office hours. My email ‘traffic’ gets almost unmanageable at times, so please do not expect a timely response to questions asked via email. For example, an email sent at 2:00am the morning of a quiz will almost CERTAINLY not prompt an answer before the quiz is held! Also, Geography 306 has at 3 teaching assistants who would love to answer any and all of your questions, so please feel free to drop in to teaching assistant office hours.

Missed Quiz:

All quizzes are mandatory, and thus, every effort should be made to attend each quiz. The only exceptions to this are those students who have a valid medical reason, personal or family emergency, etc:

- Valid medical reason such as illness or accident. **A formal doctor’s or counsellor’s note is NOT required to have a test or assignment waived (let’s not burden the healthcare system!).** You will however have to provide a **detailed typed/emailed explanation** of why you missed a test or were late in submitting an assignment.
- Significant personal or family emergency, death in the family, etc (with detailed typed/emailed explanation);
- Other valid reasons beyond the control of the student (to be approved on a case-by-case basis at the discretion of the instructor). If you know in advance that you will not be able to make a quiz, please contact the instructor as far in advance as possible to discuss alternatives.

If you miss a quiz for any reason:

- 1) Communicate in writing (e.g. email) to the instructor the reason you missed the quiz. Please be as detailed as possible.
- 2) Due to the time consuming nature of creating a make up quiz, quizzes can usually only be written on the day originally scheduled. Please do NOT assume a make up quiz is possible!

◆ Intellectual Property:

Students should be aware that this course contains the intellectual property of their instructor, TA, and/or the University of Waterloo. Intellectual property includes items such as:

- Lecture content, spoken and written (and any audio/video recording thereof);
- Lecture handouts, presentations, and other materials prepared for the course (e.g., PowerPoint slides);
- Questions or solution sets from various types of assessments (e.g., assignments, quizzes, tests, final exams); and
- Work protected by copyright (e.g., any work authored by the instructor or TA or used by the instructor or TA with permission of the copyright owner).

Course materials and the intellectual property contained therein, are used to enhance a student’s educational experience. However, sharing this intellectual property without the intellectual property owner’s permission is a violation of intellectual property rights. For this reason, it is necessary to ask the instructor, TA and/or the University of Waterloo for permission before uploading and sharing the intellectual property of others online (e.g., to an online repository). **Example: if you upload course notes, assignment solutions or quiz questions to**

CourseHero, OneClass, etc, without the instructor's permission you are violating intellectual property rights and are then subject to academic integrity discipline.

Permission from an instructor, TA or the University is also necessary before sharing the intellectual property of others from completed courses with students taking the same/similar courses in subsequent terms/years. In many cases, instructors might be happy to allow distribution of certain materials. However, doing so without expressed permission is considered a violation of intellectual property rights.

Please alert the instructor if you become aware of intellectual property belonging to others (past or present) circulating, either through the student body or online. The intellectual property rights owner deserves to know (and may have already given their consent).

◆ **Academic Integrity:**

In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility. The University's guiding principles on academic integrity can be found here: <http://uwaterloo.ca/academicintegrity>. ENV students are strongly encouraged to review the material provided by the university's Academic Integrity office specifically for students: <http://uwaterloo.ca/academicintegrity/Students/index.html>

Students are also expected to know what constitutes academic integrity, to avoid committing academic offenses, and to take responsibility for their actions. Students who are unsure whether an action constitutes an offense, or who need help in learning how to avoid offenses (e.g., plagiarism, cheating) or about "rules" for group work/collaboration should seek guidance from the course professor, academic advisor, or the Undergraduate Associate Dean. Students may also complete the following tutorial:

<https://uwaterloo.ca/library/get-assignment-and-research-help/academic-integrity/academic-integrity-tutorial>

When misconduct has been found to have occurred, disciplinary penalties will be imposed under Policy 71 – Student Discipline. For information on categories of offenses and types of penalties, students should refer to Policy 71 - Student Discipline: <https://uwaterloo.ca/secretariat-general-counsel/policies-procedures-guidelines/policy-71>. Students who believe that they have been wrongfully or unjustly penalized have the right to grieve; refer to Policy #70, Student Grievance:

<https://uwaterloo.ca/secretariat-general-counsel/policies-procedures-guidelines/policy-70>

Within ENV, those committing academic offences (e.g. cheating, plagiarism) will be placed on disciplinary probation and will be subject to penalties which may include a grade of 0 on affected course elements, 0 on the course, suspension, and expulsion.

Definition of Plagiarism: *"The act of presenting the ideas, words or other intellectual property of another as one's own."* (Source: University of Waterloo, Policy 71.)

To Avoid Plagiarism: The use of other people's work **must** be properly acknowledged and referenced in all written material such as take-home examinations, essays, laboratory reports, work-term reports, design projects, statistical data, computer programs and research results. The properly acknowledged use of sources is an accepted and important part of scholarship. Use of such material without complete and unambiguous acknowledgement, however, is an offence under policy 71.

◆ **Note for students with disabilities:** AccessAbility Services, located in Needles Hall, Room 1401, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with AccessAbility Services at the beginning of each academic term.

◆ **Mental Health:** The University of Waterloo, the Faculty of Environment and our Departments/Schools consider students' well-being to be extremely important. We recognize that throughout the term students

may face health challenges - physical and / or emotional. **Please note that help is available.** Mental health is a serious issue for everyone and can affect your ability to do your best work. Counselling Services <http://www.uwaterloo.ca/counselling-services> is an inclusive, non-judgmental, and confidential space for anyone to seek support. They offer confidential counselling for a variety of areas including anxiety, stress management, depression, grief, substance use, sexuality, relationship issues, and much more.

◆ **Religious Observances:** Students need to inform the instructor at the beginning of term if special accommodation needs to be made for religious observances that are not otherwise accounted for in the scheduling of classes and assignments. Test dates for Geog 306 are posted in the course outline distributed on Jan 8th so please make any requests for religious accommodation by the end of the following week (Jan. 15th).

◆ **Grievance:** A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. See Policy 70 - Student Petitions and Grievances, Section 4, www.adm.uwaterloo.ca/infosec/Policies/policy70.htm. When in doubt please contact your Undergraduate Advisor for details.

◆ **Appeals:** A decision made or penalty imposed under Policy 70 - Student Petitions and Grievances (other than a petition) or Policy 71 – (Student Discipline) may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to Policy 72 (Student Appeals) www.adm.uwaterloo.ca/infosec/Policies/policy72.htm

◆ **Unclaimed quizzes & assignments:**

Unclaimed assignments will be retained for one month after term grades become official in QUEST. After that time, they will be destroyed in compliance with UW's [confidential shredding procedures](#).

◆ **Communications with Instructor and Teaching Assistants:**

All communication with students must be through either the student's University of Waterloo email account or via Learn. If a student emails the instructor or TA from a personal account they will be requested to resend the email using their personal University of Waterloo email account. (NOTE: emails sent from a non-uwaterloo email account (e.g. Gmail, Hotmail, etc) may or may not be treated as spam, and may be quarantined automatically by the uwaterloo email system, so your instructor may not ever see your email!)

◆ **Group Work**

Tests #1 and #2, and Assignments #1 are to be completed individually. Assignment #2 is a group assignment, so collaboration is allowed and expected.

◆ **Recording lectures:**

- o Use of recording devices during lectures is allowed for personal use only.
- o Video recordings may only include images of the instructor and not fellow classmates.
- o Posting of videos or links to the video to any website, including but not limited to social media sites such as: facebook, twitter, etc., is strictly prohibited due to intellectual property restrictions described previously.

Co-op interviews and class attendance: Co-op students are encouraged to try and choose interview time slots that result in the least amount of disruption to class schedules. A co-op interview does not relieve the student of any requirements associated with that class meeting.

When a co-op interview conflicts with an in-class evaluation mechanism (e.g., quiz), class attendance takes precedence and the onus is on the student to reschedule the interview. CECA provides an interview conflict procedure to manage these situations.

Students will be required to provide copies of their interview schedules (they may be printed from WaterlooWorks) should there be a need to verify class absence due to co-op interviews.

Late Assignments:

The assignment will be graded as per the above guidelines, and then **5% will be deducted for each day an assignment is late**. The instructor reserves the right to waive this deduction if the following prevents the student from handing in an assignment on time:

- Valid medical reason such as illness or accident (appropriate explanation is required);
- Personal or family emergency (with suitable explanation);
- Other valid reasons beyond the control of the student (to be approved on a case-by-case basis at the discretion of the instructor).

NOTE: If you know in advance that you will not be able to meet a particular deadline **for any reason**, please contact the instructor to make alternative arrangements. Also note that late assignments will not be accepted after marked assignments are handed back in class, or after the beginning of the final examination period.

Please ensure that you are diligent in *backing up computer files* and making *draft copies* of all assignments, as computer/disk failures, printer problems, etc, will not normally be considered a valid reason to waive the late assignment deduction. NOTE: Perhaps the easiest way to prevent computer file loss is to send to yourself an email attachment of your assignment after each significant work session, or, invest in a monthly cloud storage account.

Course Notes: Information for Students Using Desire to Learn (...course webpage for Geog 306)

Desire to Learn or “LEARN” is a web-based course management system that enables instructors to manage course materials (posting of lecture notes etc.), interact with their students (drop boxes for student submissions, on-line quizzes, discussion boards, course e-mail etc.), and provide feedback (grades, assignment comments etc.). The degree to which LEARN is utilized in a particular course is left to the discretion of the instructor and therefore, you may find a large variance in how LEARN is being used from course to another. I personally use LEARN as a place to post Powerpoint notes and grades files, and as a way to quickly send messages to the entire class. I do not use LEARN for chat, discussion forums, etc.

Logging Into LEARN

Users can login to LEARN via: <https://learn.uwaterloo.ca/>
(using your WatIAM/Quest username and password)

Checking Your Userid and Password

Your password can be checked by going to: <https://watiam.uwaterloo.ca/idm/user/login.jsp>

If you still cannot get on after checking your password, please confirm with your instructor that you are on the class roster.

Getting Help

LEARN student help can be found at:

<https://uwaterloo.ca/learn-help/students>

Downloading Notes

About 70% of the content of any given day’s lecture is posted on Desire to LEARN (LEARN) in PowerPoint format (in the “Lessons” section of the webpage), normally before any given lecture. It is recommended that you download and save, (or print off) these notes ahead of each class, and bring these to class regularly so you can add the remaining 30% of content (discussion notes, additional points, off-the-cuff examples given in class, etc). Do NOT rely on the availability of LEARN notes stored ‘in the cloud’ ... LEARN has periodically gone down for as long as 3 days (see this news article for details: <http://www.therecord.com/news-story/2623550-desire2learn-in-recovery-mode-says-there-has-been-no-data-loss-to-u/>)

Multimedia Notes (DVDs, Videos, in-class internet-based videos, etc).

Approximately 20% of course content is delivered through multi-media materials (DVDs, online audio or video clips), and ALL of this material is valid testing/quiz material. Therefore, each student should attend regularly and take comprehensive notes. If you miss a day when this material is shown, please arrange to obtain the notes from a classmate, and if possible, discuss these notes briefly with the note-taker. Many materials shown are the personal property of the instructor and only some are available on the internet.

Printing Notes

For best results, under the Print command select "Handouts", "Pure black and white", and then the number of slides per page you wish to view (6 per page conserves paper, but 3 per page allows for detailed additional notes to be added). If you want to print on both sides of the paper select "Properties", "Print on both sides", then "Flip on long edge".

Assignment Checklist – Individual submissions

Assignment Checklist	
Please read the checklist below following the completion of your assignment. Once you have verified these points, hand in this signed checklist with your assignment.	
1. I have referenced and footnoted all ideas, words or other intellectual property from other sources used in the completion of this assignment.	
2. I have included a proper bibliography, which includes acknowledgement of all sources used to complete this assignment.	
3. This assignment was completed by my own efforts and I did not collaborate with any other person for ideas or answers.	
4. This is the first time I have submitted this assignment or essay (either partially or entirely) for academic evaluation.	
Signed: _____	Date: _____
Print Name: _____	UW-ID# _____

Lecture Schedule: (Note: the dates topics are covered are approximate and are subject to minor changes)

Week	Topics Covered	Readings
Week 1 (Jan. 8, 10)	INTRODUCTION -Introduction & course overview -In-class survey CONTEXT: HAZARDS & DISASTERS -Definitions, hazard/risk/disaster, hazard research -Hazard typology -From Hazard to Disaster	<ul style="list-style-type: none"> • Ch. 1 (pgs. 3-14) • Ch. 2
Week 2 (Jan. 15, 17)	DISASTER RISK REDUCTION -Protection vs. Mitigation vs. Adaptation (p.98/Fig. 5.3) -DRR Toolkit Part 1 & 2	<ul style="list-style-type: none"> • Ch. 5
Week 3 (Jan. 22, 24)	TECTONIC HAZARDS: -Earthquakes -Tsunamis -Assignment #1 due: Sunday Jan. 27th (11:59pm)	<ul style="list-style-type: none"> • Ch. 6
Week 4 (Jan. 29, 31)	-Documentary #1: Japan's Killer Quake https://www.youtube.com/watch?v=d2lPhsjkMrs -Volcanoes	<ul style="list-style-type: none"> • Ch. 7
Week 5 (Feb. 5, 7)	-Mt. Merapi, Indonesia case study MASS MOVEMENT HAZARDS -Mass Movement Hazards : part 1(Landslides)	<ul style="list-style-type: none"> • Ch. 8
Week 6 (Feb. 12, 14)	Test #1 (Tuesday Feb. 12) Short Answer format -Documentary #2: Sandy - Anatomy of a Superstorm https://www.youtube.com/watch?v=y_JkKSmn1JM	
Week 7 (Feb.19, 21)	Reading Week (Feb. 19-23rd) No Classes	
Week 8 (Feb.26, 28)	-Mass Movement Hazards: part 2 (Avalanches, Erosion) SEVERE WEATHER HAZARDS -Cyclonic storms	<ul style="list-style-type: none"> • Ch. 9
Week 9 (Mar. 5,7)	-Extreme Weather (e.g. winds, heat, lightning, etc) & Wildfire HYDROLOGICAL HAZARDS -Hydrological hazards (Floods)	<ul style="list-style-type: none"> • Ch. 10 (p. 268-272 & p.286-298) • Ch. 11
Week 10 (Mar. 2, 14)	- Documentary #3: "Water's Edge" -Hydrological hazards (Drought)	<ul style="list-style-type: none"> • Ch. 12
Week 11 (Mar.19, 21)	- Documentary #4: "God's Tears" - Test #2 MC format: Thursday March 21st	
Week 12 (Mar. 26, 28)	BEFORE & AFTER DISASTER -Paradigms of hazard (incl. "Unnatural Hazard" and "Build Back better") -After a disaster: the cycle of recovery -Disasters and displacement -Climate change & hazards connections	<ul style="list-style-type: none"> • Abramovitz http://www.worldwatch.org/node/832 • Clinton https://www.preventionweb.net/files/2054_VL1_08301.pdf
Week 13 (Apr. 2, 4)	-Fostering disaster resilience -Carousel: in-class exercise -Assignment #2 due: Saturday April 6th (11:59pm)	<ul style="list-style-type: none"> • Optional Reading: https://knowledge.aidr.org.au/media/2153/nationalstrategyfordisasterresilience.pdf

Useful Hazard & Disaster links

Realtime Disaster Monitoring & Event Reporting:

<http://reliefweb.int/disasters>
<http://earthobservatory.nasa.gov/NaturalHazards/>
<http://www.emdat.be/disaster-week>
<http://www.usgs.gov/hazards/>
<http://earthquake.usgs.gov/earthquakes/map/>
<http://www.disastercenter.com>

Hazards/Disasters Journals (NOTE: must be connected as a UW user for free access)

Disasters <http://www.blackwellpublishing.com/journal.asp?ref=0361-3666&site=1>
Disaster Management and Response www.sciencedirect.com/science/journal/15402487
Disaster Prevention & Management
<http://www.emeraldinsight.com/Insight/viewContainer.do?containerType=Journal&containerId=10806>
Environmental Hazards http://elsevier.net/wps/find/journaldescription.cws_home/706537/description
Int. Jour. Of Mass Emer. And Disasters <http://www.usc.edu/schools/sppd/ijmed/cumulative.php>
Jour. Of Emergency Management <http://www.pnpco.com/pn06001.html>
Natural Hazards <http://www.springerlink.com/content/0921-030X>
Natural Hazards and Earth Systems Sciences
http://www.nat-hazards-earth-syst-sci.net/volumes_and_issues.html
Natural Hazards Observer <http://www.colorado.edu/hazards/o/>
Natural Hazards Review <http://scitation.aip.org/nho>
Global Environmental Change
http://www.elsevier.com/wps/find/journaldescription.cws_home/30425/description#description

Hazards Research Centres

<http://www.colorado.edu/hazards/>
<http://www.benfieldhrc.org/>
<http://www.cas.sc.edu/geog/hrl/>
<http://www.aoml.noaa.gov/hrd/>
<http://www.ihc.fiu.edu/>

Latin America/Caribbean

http://www.disaster-info.net/socios_eng.htm
<http://www.cdema.org/>
<http://www.eird.org/index-eng.htm>

Asia/Pacific

<http://www.adpc.net/>
<http://www.pdc.org/iweb/pdchome.html>
<http://www.unisdr.org/asiapacific/asiapacific-index.htm>
<http://www.adrc.or.jp/top.php>

Africa

<http://www.unisdr.org/africa/africa-index.htm>
<http://www.irinnews.org/webspecials/DR/ISDR-Map-African-Natural-Hazards.pdf>

Canada

<http://www.publicsafety.gc.ca/prg/em/cdd/index-eng.aspx>
http://ess.nrcan.gc.ca/2002_2006/nher/index_e.php

USA

<http://www.fema.gov/>

<http://www.bt.cdc.gov/disasters/>

Hazard Mitigation & Disaster Reduction

<http://www.fema.gov/plan/mitplanning/index.shtm>

<http://www.unisdr.org/>

<http://www.ibhs.org/>

<http://www.iclr.org/>

<http://www.gdrc.org/uem/disasters/disenvi/index.html>

Other links

<http://www.disasterlinks.net/>

<http://www.intute.ac.uk/sciences/hazards/>

Disaster simulation games

<http://www.stopdisastersgame.org/en/>

<http://insidedisaster.com/haiti/experience>

<http://environment.nationalgeographic.com/environment/natural-disasters/forces-of-nature/>