

# Hazards & Humans

IDS 2935

## Course Description

Natural disasters such as earthquakes, volcanoes, hurricanes, and floods have devastating impacts on human lives. This course will use geologic principles to provide a framework for evaluating earthquake and volcanic hazards, explore the limits of our predictive abilities, the challenges of forecasting weather disasters in a changing climate, and the necessity for decision-making despite scientific uncertainty. By analyzing recent and historical disasters, we will explore the interactions of natural and built environments before, during, and after major events. This course lays out the geologic mechanisms behind disasters, as well as the role of key players - scientists, engineers, developers, government officials, reporters, first responders, and the public in disaster preparedness and response.

The following questions will be examined during this course:

- How can scientific understanding help us prepare for and minimize the impacts of natural disasters?
- What are the cultural and historical ties to hazardous landscapes around the world and how do those ties influence how populations deal with disasters?
- How do disasters impact different economic/social populations?
- How do our actions (collectively and individually) reduce or exacerbate the impact of a disaster?

## Textbook:

**Natural Disasters**, 12th Edition, 2017 Patrick L. Abbott. Any format (digital or print, new or used) is fine. 11<sup>th</sup> edition will work also! Any additional readings will be freely available online or provided by the instructor.



## When and Where

**Lectures M/W 4:05 – 4:55 pm**  
Computer Science (CSE), A101

### Breakout Labs\*, Fridays

Williamson Hall 210

Period 3: 9:35 am - 10:25 am

Period 4: 10:40 am - 11:30 am

Period 5: 11:45 am - 12:35 pm

*\*Check your class schedule to make sure you attend the right one.*

## Contact Info

### Dr. Anita Marshall (she/her)

Email: [anita.marshall@ufl.edu](mailto:anita.marshall@ufl.edu), or message through Canvas.

Office Phone: See Canvas

Office Location: Williamson 255

### Office Hours:

Tues 11:00 am – 12:00 pm

Wed 2:30 am – 3:30 pm

(in-person or Zoom)

### TA: Samuel Kwafo (he/him)

Email: [skwafo@ufl.edu](mailto:skwafo@ufl.edu)

Office Location: Williamson 253

### Office Hours:

Fridays, 1:00 – 3:00 pm

# COURSE DETAILS

**Fulfills:** Quest 2 course requirements, Physical Science (P) and International (N) Gen Ed Requirements. There are no prerequisites for this course.

**Format:** Hazards and Humans is an in-person course that meets 3 times per week: twice for lectures and once for Breakout activities. We will also utilize the Canvas course page for online activities that complement the course. Weekly quizzes and some Discussions will be online.

**Content Warning:** People get hurt and die in disasters. While we will not dwell on macabre details, it is impossible to discuss hazards without talking about death and human suffering - disasters are called disasters because of the impact on human lives! If you feel you may struggle with this aspect of the course, please contact me as soon as possible so we can determine the best course of action.

**Goals:** Students will analyze recent and historical disasters and explore the interactions of humans with natural and built environments before, during, and after major events. The goals of this course include:

1. Examine the current state of scientific understanding about natural disasters.
2. Analyze scientific data and case studies to understand how hazards can impact human lives and how preparation for and response to disasters can be improved.
3. Reflect on the social context in which disasters occur and how those social contexts interact with disaster preparation and response.
4. Explore how human actions reduce or exacerbate the impact of disasters.
5. As a Quest 2 course, you will also be challenged to reflect on your intellectual, personal, and professional development at UF and beyond.

# COURSE MATERIALS

**Textbook:** Natural Disasters 12<sup>th</sup> edition by Patrick L. Abbott in any format (digital or print). You won't need access codes for supporting material, so used copies are fine. You may purchase the book through the UF bookstore or rent/buy through 3rd party sellers. Supplementary reading material will be provided by the instructor.

**Materials & Supplies:** There is no Supply Fee associated with this course. You will need a way to keep notes in class. Paper notebooks, tablets or laptops are all good options, whatever works best for you. PowerPoint files for lectures will be posted before class starts on the class Canvas page to aid in note-taking. Any other needed materials will be provided.

# YOUR RESPONSIBILITIES

- Check the announcements on Canvas and your e-mail regularly - it is the only way I can directly communicate with you outside of class.
- Complete course assignments and activities in a timely fashion.
- Attend and participate in class to the best of your ability.

# COURSE DELIVERABLES

A Canvas page for each week lists everything you need to read or do all in one place: reading assignments, PowerPoint files for lectures, links to quizzes, assignment materials, etc. These pages are posted at least a week in advance of any due dates.

**Quizzes:** Weekly online quizzes encourage you to keep up with readings and assigned videos to be prepared for the week's activities. Quizzes will be due on Monday each week before the start of class. Each quiz is worth 20 points. Your lowest quiz grade will be dropped, even if it's a zero/missing. Quizzes are worth 20% of your overall grade.

**Assignments:** Assignments can be given in lecture or Friday Breakout sessions, or sometimes started in lecture and finished in Breakout sessions. Breakout sessions compliment the reading and lecture material and enable a deeper connection to the concepts of the course by providing a variety of ways of engaging in the material. Most of the work on Assignments will be completed during class time. Each assignment is worth 40 to 50 points and the lowest Assignment grade is dropped, even if it is a zero/missing. Assignments count for 30% of your overall grade.

**Discussions:** We will have frequent class discussions on the assigned material. There will be multiple modes of participation so that everyone can feel comfortable contributing. Discussions are worth 20 points each, lowest grade will be dropped. These are easy participation points, so share your thoughts and get your points. Discussions are worth 20% of your overall grade.

**Section Reflection Essays:** We don't have exams in in this course. Instead, you will write two essays, one in the middle and one at the end of the semester. Essays give you the opportunity to demonstrate your knowledge and reflect on what you've learned in the course through the readings, activities, and discussions. Section Reflections are each worth 10% of your grade for a total of 20% of your overall grade.

**Bridge Questions:** At the end of each lecture (on Mon & Wed), the class will define a question that bridges the lecture content to the upcoming lecture or Breakout activities. You will turn in your answer to Monday's question in class on Wednesday, and Wednesday's answer at Friday Breakouts. These must be turned in during class time. There will be 25 total and 5 will be dropped. We won't take attendance, but these Bridge questions are worth 10% of your grade to encourage your attendance and engagement in class.

**Extra Credit:** Small extra credit assignments may be available to the entire class occasionally. Requests for individual extra credit assignments will not be granted. Extra credit can provide up to a 1% bonus to your grade.

# GRADING POLICIES

**Weighting:** Grades for each type of activity are weighted to balance out how they impact your final grade:

- Quizzes 20% of total
- Assignments 30% of total
- Discussions 20% of total
- Section Reviews 20% of total
- Bridge Questions 10% of total
- Extra Credit 1% of total

**Grading Scale:** See <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx> for UF grading policies. Final grades for this course will be assigned with the following criteria:

% Grade	Letter Grade	GPA Value
90 +	A	4.0
85-90	B+	3.5
80-84.9	B	3.0
75-79.9	C+	2.5
70-74.9	C	2.0
65-69.9	D+	1.5
59-65.9	D	1
< 58.9	E	0

**Plagiarism:** This course encourages collaboration, but you are ultimately responsible for your own work. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” See the [UF Conduct Code](#) website for more information.

**Appropriate Use of Artificial Intelligence:** AI programs are not a replacement for human creativity and critical thinking. You are free to use AI tools to enhance their understanding of the course content, but you need to be aware of the potential biases and pitfalls of AI, and its potential to both aid and suppress learning. You are responsible for ensuring that you are providing assignment responses that are high-quality and correct. Simply put: if you write a discussion response or essay using ChatGPT you will not be marked down for using ChatGPT; you will be marked down because the ideas are generic, expressed poorly, or contain elements that uncited, inaccurate or off-base. It is your responsibility to review and ensure the appropriateness and accuracy of assignment submissions.

**Late Policy & Missed Work:** Assignments, Quizzes and Section Reviews have a one-week grace period with no penalty. However, discussions are hard to make up after they end, so you will need to contact the TA to get permission and instructions on if/how to make those up. Bridge questions will only be available in class, or from a classmate that was in class. We will work with you as best as possible if you need to miss class.

**Religious Observances, Military Duty & other Unavoidable Absences:** Students who anticipate the necessity of missing deadlines due to religious observances must provide notice of the dates to the instructor, in writing (email is fine) at least one week in advance of the missed class days so accommodations to be made. For other unavoidable absences, contact me as soon as you know the dates. Please do not wait until after you have missed assignments to ask for an exception, as we may not be able to help - especially near the end of the semester.

## COURSE SCHEDULE

This schedule is subject to change as the semester progresses. Weekly reading and/or viewing assignments, activities and assignments will be listed on the class website at least one week in advance of the due date.

Week	Topic
1: Breakouts 8/23  <i>*No M/W class with Thursday start.</i>	<b>Introduction to Disasters</b> <u>To Do:</u> <ul style="list-style-type: none"> <li>• Read the Syllabus before class on 8/23</li> <li>• Homework: Discussion - The More Who Die, the Less we Care</li> </ul>
<b>Section 1 Tectonic Hazards</b>	
2: 8/26 + 8/28 Breakouts 8/30	<b>Plate Tectonics</b> <u>To Do:</u> <ul style="list-style-type: none"> <li>• Read: Ch 2 – Internal Energy and Plate Tectonics, pgs 23-45</li> <li>• Reading Quiz - Plate Tectonics</li> <li>• Breakout Activity: Exploring Plate Tectonics</li> </ul>
3: 9/2* + 9/4 Breakouts 9/6 <i>*Mon 9/2 is Labor Day, no classes.</i>	<b>Volcanoes Part 1</b> <u>To Do:</u> <ul style="list-style-type: none"> <li>• Read: Ch 6 - Volcanic Eruptions, pgs 143-170</li> <li>• Reading Quiz: Volcanoes part 1</li> <li>• Breakout Activity: Volcano in a Cup</li> </ul>
4: 9/9 + 9/11 Breakouts 9/13	<b>Volcanoes Part 2</b> <u>To Do:</u> <ul style="list-style-type: none"> <li>• Read: Ch 7, Volcano Case Histories, pgs.185-200</li> <li>• Reading Quiz: Volcanoes part 2</li> <li>• Breakout Activity: Reading Volcanic Rocks</li> </ul>
5: 9/16 + 9/18 Breakout 9/20	<b>Earthquakes Part 1</b> <u>To Do:</u> <ul style="list-style-type: none"> <li>• Read: Ch 3 - Earthquake Geology and Seismology, pgs 47-74</li> <li>• Reading Quiz: Earthquakes part 1</li> <li>• Homework: Exploring Intraplate Earthquakes</li> <li>• Breakout Activity: Geolocating Earthquakes</li> </ul>
6: 9/23 + 9/25 Breakouts 9/27	<b>Earthquakes Pt 2</b> <u>To Do:</u> <ul style="list-style-type: none"> <li>• Read: Ch 4 – Plate Tectonics &amp; Earthquakes, pgs 78-105</li> <li>• Reading Quiz: Earthquakes part 2</li> <li>• Discussion: Who’s At Fault? Role of govt &amp; science in disasters</li> <li>• Breakout Activity: Earthquake Impacts &amp; Recovery</li> </ul>
<b>Section 2: Weather, Climate and Erosional Hazards</b>	
7: 9/30 – 10/2 Breakouts 10/4	Severe Weather <u>To Do:</u> <ul style="list-style-type: none"> <li>• Read: Ch 10 – Tornadoes &amp; Lightning, pgs 151-181</li> <li>• Reading Quiz: Severe Weather</li> <li>• Breakout Activity: Weather Forecasting around the World</li> <li>• <b>REFLECTION 1 DUE 10/4</b></li> </ul>
8: 10/7 + 10/9 Breakouts 10/11	Hurricanes and Typhoons 1 <u>To Do:</u> <ul style="list-style-type: none"> <li>• Read: Ch 11 – Hurricanes, pgs 238-250</li> </ul>

	<ul style="list-style-type: none"> <li>• Reading Quiz: Hurricanes &amp; Typhoons</li> <li>• Breakout Activity: Interpreting Hurricane Data</li> </ul>
9: 10/14+ 10/16 No Breakouts* <i>*Fri 10/18 is Homecoming, no classes.</i>	Hurricanes and Typhoons 2 <u>To Do:</u> <ul style="list-style-type: none"> <li>• Read: Ch 11 - Hurricanes, 251-312</li> <li>• Reading Quiz: Hurricanes &amp; Typhoons pt 2</li> <li>• Discussion: Stay or Go? Evacuations &amp; Decision Making</li> </ul>
10: 10/21 – 10/23 Breakouts 10/25	Extreme Heat and Cold <u>To Do:</u> <ul style="list-style-type: none"> <li>• Read: Ch 10 – Heat and Cold, pgs 252-257 &amp; 279-281</li> <li>• Reading Quiz: Heat and Cold</li> <li>• Breakout Activity: Hazards and Warming Oceans</li> </ul>
11: 10/28 – 10/30 Breakouts 11/1	Wildfires <u>To Do:</u> <ul style="list-style-type: none"> <li>• Read: Ch 14 - Wildfires, pgs 382-407</li> <li>• Reading Quiz: Wildfires</li> <li>• Breakout Activity: Fire Forecasting</li> </ul>
12: 11/4 + 11/6 Breakouts 11/8	Landslides & Mass Wasting <u>To Do:</u> <ul style="list-style-type: none"> <li>• Read: Ch 15 – Mass Movements, pgs 409-439</li> <li>• Reading Quiz: Landslides</li> <li>• Breakout Activity: Hazardous Hillsides</li> </ul>
13: 11/11* + 11/13 Breakouts 11/15 <i>*Mon is Veterans Day, no classes.</i>	Subsidence & Sinkholes <u>To Do:</u> <ul style="list-style-type: none"> <li>• Read: Ch 15, pgs 440-443 &amp; this webpage about <a href="#">Sinkholes</a></li> <li>• Reading Quiz: Sinkholes</li> <li>• Breakout Activity: Campus Sinkhole Tour</li> </ul>
14. 11/18 + 11/20	Floods <u>To Do:</u> <ul style="list-style-type: none"> <li>• Read: Ch 13 - Floods, pgs 351-380</li> <li>• Reading Quiz: Floods</li> <li>• Breakout Activity: Flooding on the Brazos</li> </ul>
15. 11/25-11/29	FALL BREAK – no classes
16: 12/2-12/4 No Breakouts* <i>*Fri 12/6: Reading Day, no classes</i>	Global Change & Wrap-up <u>To Do:</u> <ul style="list-style-type: none"> <li>• Read: Ch 12 – Climate Change, pgs 320 - 348</li> <li>• Quiz 12: Climate Change</li> </ul>
17: 12/9 - 12/13	FINALS WEEK No class meetings, no final exam. <b>Second Reflection Essay due 12/11</b>

# ACCESSIBILITY, INCLUSION & RESPECT

**Respect & Inclusion:** Everyone should feel welcome to share their thoughts in a respectful way in this class. If something in the course material, instruction or class interactions make you feel excluded or uncomfortable, please let me or the TA know so we can address it. We will do our best to ensure you are called by the name you prefer and with the correct pronunciation. You can specify your pronouns on the Canvas course page, privately to us, or in class. Please correct us if we say your name or pronouns incorrectly – we want to get it right.

**UF Statement on Accommodating Students with Disabilities:** Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center. Click here to get started with the Disability Resource Center: <https://disability.ufl.edu/get-started/>. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

**My Personal Statement on Accessibility:** We all learn differently. You don't have to have a formally recognized disability to find yourself having difficulty with some aspect of the college learning environment. Please let me know if something in the course material presents a barrier to your full participation so we can work together to find a reasonable solution – *even if you don't have, or don't yet have, a formal accommodation letter*. And please contact me during the semester if your accommodation needs change or aren't working so we can re-adjust.

**Masking Policy:** Masking is optional on campus and welcome in my classroom, especially if you are sick. There will be no tolerance for harassment regarding mask wearing. Medically vulnerable students, staff and faculty are part of our campus community and deserve access to educational spaces like everyone else.

## NEED HELP?

**Instructor Help:** Office hours are for your benefit - ask questions, get assignment help, discuss class topics or geoscience degrees and career options, or just say hello. Office hours are hosted in our offices and on Zoom with live captioning available. While I have a limited window of time listed for office hours, you can always set up an appointment at a time that works for you.

**Emailing the Instructor:** I teach multiple large classes – my inbox can get out of hand at times. I try my best, but please don't expect an immediate reply to emails. Please tell me which class you are in somewhere in the email -it's very helpful! If it's not regarding sensitive info (like grades or accommodations), faster replies are often achieved by emailing the TA, or by posting your question on the Class Questions Discussion thread on Canvas where anyone can answer.

**Mental Health and well-being:** College life can take a toll on your mental health. If you are mentally or emotionally struggling for any reason, you can contact the [Counseling and Wellness Center](#). They have one-click access to people who can help. If these struggles are negatively impacting your performance your courses, I encourage you to contact the [Dean of Students Care Area](#) - a support team that facilitates temporary accommodations, authorization to make up missing course work, etc. Additionally, if you

are comfortable doing so, please reach out to me and I will provide any accommodations in this course that I can.

**Food Pantry:** The Field and Fork Pantry is a resource on the University of Florida campus committed to supporting anyone in the UF community experiencing food insecurity. <https://pantry.fieldandfork.ufl.edu/>

**Financial Assistance:** UF's [Aid-A-Gator](#) program has small grants available to help students with unexpected financial needs.

**Technical Support:** For issues with technical difficulties with the Canvas page, your UF email or other online resources, please contact the UF Help Desk: <http://helpdesk.ufl.edu>, or (352) 392-4357.

## STUDENT FEEDBACK & COURSE EVALUATION

### UF POLICIES

**Student Feedback and Course Evaluation:** Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

**University Policy on Academic Misconduct:** Academic honesty and integrity are fundamental values of the University community. Students should be sure that they understand the UF Student Conduct Code: <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>, which includes the Honor Pledge.

**UF Undergraduate Student Handbook:** The student handbook has all the details on UF policies for students. <https://dso.ufl.edu/resources/student-handbook/>

*That was a ton of information – thanks for reading to the end!*