

Earthquakes, Volcanoes & Other Hazards

GLY 1880 (Online)

Course Description

Natural disasters such as earthquakes, volcanoes, hurricanes, and floods have devastating impacts on human lives. We will examine the geologic principles and scientific understanding of natural hazards, the limits of our predictive abilities, the challenges of preparing for 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 people in disaster preparedness and response.

Course Goals

- Examine the current state of scientific understanding about natural disasters.
- Analyze scientific data and use case studies to understand how hazards can impact human lives and how preparation for and response to disasters can be improved.
- Reflect on the social context in which disasters occur and how social contexts influence disaster preparation and response.
- Practice and improve science communication skills.

Prerequisites and Course Info: This is an introductory course with no prerequisites. It satisfies GenEd Physical Science course requirements. Credit hours: 3.

Suggested Textbook:

Natural Disasters, 11th Edition, 2017 Patrick L. Abbott. I will post all required readings on the Canvas site. However, this book will be very useful in helping you complete your written assignments. Therefore, it is suggested but not required.



Contact Info

Instructor:

Dr. Elyssa Rivera

Email: message through canvas,
erivera1@ufl.edu (only if unable to
use canvas)

Office Location: Williamson Hall 377

Virtual Office Hours*: Mon & Wed
10:00 - 11:00 am EST, or by
appointment

TA: Megan Williams

Email: message through Canvas.

Virtual Office Hours*: TBA

***Zoom links are available on
Canvas**

Key Dates

Exam 1 Window: Oct 2 - 6

Reflection 1: Oct 2 - 6

Exam 2: Oct. 30 to Nov 3rd

Reflection 2: TBA

Exam 3 Window: TBA

COURSE DETAILS

Format: This course is fully online and asynchronous, which means you work through modules on your own and there are no required “live” class meetings. However, you can chat with the instructor or TA during weekly Office Hours on Zoom, and make use of the class Hazards Chat discussion board to interact with the whole class.

YOUR RESPONSIBILITIES

- Acquire the textbook by the second week of class.
While it isn't absolutely necessary, the textbook will be a great resource to you and it is strongly suggested you acquire it early in the semester.
- Complete all assignments in a timely fashion.
Each Week includes reading assignments from the textbook and other sources, video lectures and other video content, a Quiz, and an Assignment and/or Discussion. Requirements for class participation, make-up exams and other work is consistent with university policies:
<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>
- Check the announcements and your e-mail regularly.
I recommend daily. It is the only way I can directly communicate with you in an online class. Checking in on course Discussion boards is also highly encouraged.
- Ask for help when you need it, sooner rather than later.

Course Deliverables

Assignments: Assignments are designed to enhance the reading and lecture material. Earth Science is a broad discipline, and these exercises incorporate a variety of methods to assist you in learning the concepts presented. Each assignment is worth 50 points. Assignments are worth 30% of your total grade.

Discussions: This is your chance to thoughtfully engage in topics in the hazards and disasters. You will be expected to post a thoughtful, detailed response according to the Substantive Post Guidelines and Discussion Rubric on the class website. Participation in a Discussion, as outlined in the instructions for each Discussion, is worth 50 points. Discussions count for 20% of your total grade.

Quizzes: There are assigned readings and/or viewings for each week. Each Module has a quiz worth 20 points that draws from all assigned module material – lecture, other assigned videos and readings. Module Quizzes are not timed or proctored, and you have two chances on each quiz. Your lowest quiz grade will be dropped, even if it is a zero/missing. Quizzes are worth 20% of your grade.

Reflections: At two points in the course, you will be asked to reflect on the scientific context of disasters and the social and economic drivers of the decision-making process during disasters. The second reflection should ideally build on the first by examining how your thinking has evolved during the course. Each Reflection should be about 1 page in length is worth 200 points. More details and rubric will be provided on Canvas. Reflections are worth 10% of your total grade.

Exams: There are 3 exams, one for each Section of the Course. Exams are 20% of your overall grade and proctored with Honorlock. Here are some key points about Honorlock Proctoring:

- You do not need to make a separate account or pre-schedule your exam, just log in to Canvas and access the exam when you are ready to begin.
- You will be required to show picture identification at the time of your exam. Approved forms of identification include, but are not limited to, a driver's license, military identification card, passport, or school-issued identification card.
- Internet browsing will be disabled while your exam is open, so it is important that any digital notes you wish to access are stored on your device and not online.

Extra Credit: There will be a few opportunities for extra credit throughout the course, not to exceed 1% of the total grade for the course. These will be made available to everyone. Individual extra credit assignments will not be available.

GRADES

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

Assignments	30% of total grade
Discussions	20% of total grade
Quizzes	20% of total grade
Exams	20% of total grade
Reflections	10% of total grade

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
93 +	A	4.0
90-92	A-	3.67
87-89	B+	3.33
83-86	B	3.0
80-82	B-	2.67
77-79	C+	2.33
73-76	C	2.0
70-72	C-	1.67
67-69	D+	1.33
63-66	D	1.0
60-62	D-	.67
Below 60	E	0

Late Policy & Missed Work: Assignments, and Quizzes have a one-week grace period with no penalty (no additional extensions will be granted). Discussions, Reflections, and Exams are not accepted late without proper documentation, justification as spelled out in the student handbook, and approval from the instructor. You must contact me as soon as reasonably possible to obtain an extension, failure to do so will result in rejection of your request.

Religious Observances, Military Duty & other Unavoidable Absences: Students who anticipate missing deadlines due to religious observances, military duty, jury duty, or any other absence where the dates are known in advance must provide notice of the date(s) to the instructor, in writing in advance of the missed class days so deadlines can be adjusted accordingly. 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 extension as these requests may not be honored, especially if is near the end of a semester. Of course emergencies happen and I don't expect you to know those are coming ahead of time. Just reach out to the TA or Instructor as soon as you can.

COURSE SCHEDULE

The following table outlines the course. Each "week" opens and closes on Tuesdays. Each new module opens at 12:01 am, and previous modules close at 11:59 pm (US Eastern Time). The best place to find the most up to date course schedule and specific due dates is on our class Canvas website. An announcement will always be made if the schedule changes.

Week	Topic
Section 1: Tectonic Hazards	
1: 08/21* – 09/02	Introduction to Hazards, Disasters & Plate Tectonics
2: 9/02 – 9/09	Earthquakes Part 1
3: 9/09 – 9/16	Earthquakes Part 2
4: 9/16 – 9/23	Volcanoes Part 1
5: 9/23 – 9/30	Volcanoes Part 2
6: 9/30 – 10/07	Reflection 1 and Exam 1. Exam Window: Oct. 2 - 6th
Section 2: Surface Hazards – Landslides, Sinkholes, wildfires & floods	
7: 10/07 – 10/14	Landslides & Sinkholes
8: 10/14 – 10/21	Wildfires
9: 10/21 – 10/28	Floods
10: 10/28 – 11/04	Severe weather Exam 2 – Window: Oct. 30 to Nov 3rd
Section 3: Severe Weather and Climate Impacts	
11: 11/04 – 11/11	Hurricanes & Typhoons
12: 11/11 – 11/18	Coastal Hazards
13: 11/18 – 12/02	"week 13 and 14" Climate Impact on Hazards
Exam Period	TBA

**Modules start and end on Tuesdays, but the semester starts on a Thursday so you are given extended time for the first "week".*

ACCESSIBILITY

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.

NEED HELP?

Help from the Instructor and TA: Office hours are for your benefit - ask questions, get assignment help, discuss geoscience degrees and career options, etc. We are happy to set up a virtual chat at another time if you can't meet during office hours. You may also email us, but please check to make sure your question hasn't been answered already in the Announcements or Class Questions Discussion Board before reaching out. ***For questions about grading, please contact the TA first*** (feel free to cc me on emails to the TA if you like, but it usually isn't necessary).

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.

Mental Health and well-being: Sometimes being a college student 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 you connect to the right resources for your situation. If these struggles are negatively impacting your performance your courses, I encourage you to contact the [Dean of Students Care Area](#) to connect with a support team that can help with 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.

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

Other Resources: For more support for online students please see <http://www.distance.ufl.edu/getting-help>.

STUDENT FEEDBACK & 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.bluer.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

UF POLICIES

University Policy on Academic Misconduct: UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity by abiding by the Honor Code. 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." The [Honor Code](#) specifies a number of behaviors that are in violation of this code and the possible sanctions. It is expected that all work submitted for assignments is original and cited correctly. Violations to the code will be reported and plagiarism will result in a failing grade. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

The above rules also apply to the use of AI and language learning models (e.g., Chatgpt, copilot, etc.). You may use these tools to assist you in finding sources. However, you may not use them to write or complete your assignments, and they generally shouldn't be considered sources on their own. If you must quote or paraphrase AI, you must follow the rules of proper paraphrasing and citations. If you are unsure of these rules please contact us.

Netiquette – Communication Courtesy: All members of the class are expected to not share login information and follow rules of common courtesy in all email messages, threaded discussions and chats. More information at: https://www.cise.ufl.edu/wp-content/uploads/2019/08/CISE_Netiquette_Guide.pdf

UF Online Handbook: Available at: <http://handbook.ufonline.ufl.edu/>

DISCLAIMER

This syllabus represents my current plans and objectives. As we go through the semester, those plans may need to change to enhance the class learning experience. Such changes, communicated clearly, are not unusual and should be expected.