

SUST 260: Natural Disasters Course Policy Statement

Contact Information

Instructor: Dr. Eury Speir

Instructor Pronouns: They/Them/Theirs

Office Location: 249 Brooks Hall (Downtown Campus)

Office Hours: 10:00AM–11:00AM Tuesday & Thursday; 1:00PM–2:00PM Friday; or by appointment

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Course Information

Course Number: SUST 260 – E81

Credit Hours: 3

Classroom: 151 Brooks Hall (Downtown Campus)

Meeting Time: 10:30AM–11:20AM Monday, Wednesday, Friday

Final Exam Time: 2:00PM–4:00 PM Thursday, May 7

Required Materials and Online Resources

We will use the iClicker system for this class. You will need to bring a smartphone, tablet, or laptop to every class to access iClicker. If you do not have access to a device to run the iClicker, please let me know as soon as possible so we can work on a solution.

There are no required textbooks for this course. Any resources and readings used within the course will be made available through eCampus.

Course Description

Introduction to natural disasters and the natural processes and human actions that cause them. This course will introduce common natural disasters (including floods, landslides, earthquakes, volcanoes, and severe weather) and investigate their frequency, magnitude, global distribution, and impacts on society. The course will also discuss the promise and pitfalls of common natural disaster mitigation techniques.

Eberly EDGE Description

The Eberly EDGE is more than a curriculum—it is a distinctive experience that creates a unifying foundation for all Eberly students, integrating practical skill development, community engagement, and career preparation. As an Eberly EDGE student, you'll discover meaningful connections across the arts and sciences, develop a clear sense of identity and belonging within the WVU community. You will build the kind of character that employers value. Hands-on experiences like internships, study abroad, service projects, and research will prepare you for whatever comes next. With Eberly EDGE, you will earn more than a degree: you will graduate, capable, confident and ready to lead a rewarding life. **Your EDGE Starts Here.** ([Learn more about the Eberly EDGE program here.](#))

Course Goals

SUST 206 (Natural Disasters) is an Eberly EDGE course and fulfills the objectives described under EDGE 1—Data and Information Literacy. The primary learning objective for EDGE 1 is to **evaluate the reliability, validity, and scope, including assessing the role of technology in creation, analysis, representation and accessibility of information.** In alignment with Edge 1, the objective of this course is to develop a basic understanding of how natural disasters occur and their impact on society, including how human activity has altered the impact of natural disasters through time.

By the end of the course, you will be able to:

- Apply science and engineering practices to address questions about major natural disasters and their relevant Earth systems.
- Analyze and interpret data to investigate the relationship between humans and Earth processes and make decisions about societally-relevant issues.
- Identify and evaluate the societal impact of potential natural disaster management and mitigation plans.
- Work in teams to problem-solve and communicate the results of scientific investigations.
- Reflect on your ability to use science and engineering practices in your everyday life and how those relate to sustainability development goals.

Course Assessment

The effectiveness of SUST 260 in achieving the listed student learning outcomes and course goals will be assessed using pre-, mid-, and post-course quizzes. These quizzes are self-reflective, as you will assess your confidence on a variety of skills and knowledge areas. **It is okay if your confidence starts out low or if your confidence fluctuates throughout the semester, so long as you are being truthful in your responses.**

In addition, this particular course's strengths and weaknesses will be assessed through iClicker questions, in-class exercises, homework assignments, and exams.

iClicker Questions

This course will use the iClicker system to administer in-class questions and feedback. All WVU students are provided access to the iClicker system as part of your enrollment, which can be accessed for free via mobile phone, tablet, or laptop. If you are unable to use iClicker due to a lack of access, please contact me as soon as possible.

The iClicker questions will range from multiple choice to reflective short-answer to polling questions, with each class typically having anywhere between three (3) to seven (7) questions. You will be able to earn up to 5 points each day from iClicker questions up to a maximum of 200 points, equal to full points across 40 class periods.

In-class Exercises and Reflections

Over the course of the semester, you will be tasked with completing various exercises during our regular class meeting time. These exercises will range from in-class discussions to worksheets to learning how to manipulate and visualize in Excel or Google Sheets. Some exercises and assignments will be paper-based and others may be submitted through eCampus. In addition, you will occasionally be tasked with reading and watching videos and completing the Journal Reflection (JR) through eCampus.

In-class exercises and reflections are worth 10 points each, with most class periods having an in-class exercise. We will complete roughly 45 in-class exercises and reflections over the course of the semester, with the 40 highest scores counting toward your final grade.

Mid- and End-Semester Projects

Rather than providing you with a traditional exam, you will complete a team-based project on natural disaster preparedness and management strategies. You will be provided dedicated class time to work on these projects, in addition to any work completed outside of class time. The projects will culminate with a short, team-based presentation—between 5 and 7 minutes—followed by self and peer evaluations. Each project is worth 100 points each for a total of 200 points.

More information about the Mid- and End-Semester Projects will be provided in class and through eCampus.

Grading Summary and Scale

Assignment Category	Points Each	# of Items	Points Available	% of Grade
iClicker Questions	5	40 (of ~45)	200	25%
In-Class Exercises and Homework Assignments	10	40 (of ~45)	400	50%
Mid-Semester Project	100	1	100	12.5%
End-Semester Project	100	1	100	12.5%
Total Points			800	

Grading Scale			
A	100–90	B	89.9–80
C	79.9–70	D	69.9–60
F	59.9–0		

As the instructor of this course, I reserve the option of curving grade boundaries.

Selected University Policies

A comprehensive list of University Policies and Procedures can be found under the “Start Here; Introduction and Important Information” Module in our eCampus site as well on the [WVU Syllabus Policies and Statements webpage](#).

Academic Integrity Statement

The integrity of the classes offered by any academic institution solidifies the foundation of its mission and cannot be sacrificed to expediency, ignorance, or blatant fraud. Therefore, instructors will enforce rigorous standards of academic integrity in all aspects and assignments of their courses. For the detailed policy of West Virginia University regarding the definitions of acts considered to fall under academic dishonesty and possible ensuing sanctions, please see the West Virginia University [Academic Standards Policy](#). Should you have any questions about possibly improper research citations or references, or any other activity that may be interpreted as an attempt at academic dishonesty, please see your instructor before the assignment is due to discuss the matter.

Artificial Intelligence Statement

Unless notified otherwise, content-generating AI is not to be used in this course. The instructor will clearly state when and how it is permissible for students to use these tools. When allowed, students must clearly identify writing, text, or media generated by AI and show how AI tools were used in the process of creating a final product. Any attempt to treat AI output as a student’s own work or failing to identify AI-generated work will be treated as academic dishonesty. Students should think critically about the appropriate use of AI to achieve learning goals.

Attendance Policy

While attendance is not mandatory, it is highly recommended. If you are unable to attend class, please let me know as soon as possible so that proper arrangements can be made regarding any missing coursework and materials. As the instructor of the course, I will be monitoring attendance and in-class participation and may contact you if there is a noticeable decline in attendance or participation. The course is designed so that there are more activities to be completed than will count toward your grade in the event of unforeseen absences.

It is your responsibility to inform me of any absences, including those that are unexpected or University-Sanctioned. You are responsible for your own academic work and progress are required to complete any missing work or equivalent work as deemed appropriate.

Inclusivity Statement

The West Virginia University community is committed to creating and fostering a positive learning and working environment based on open communication, mutual respect, and inclusion.

If you are a person with a disability and anticipate needing any type of accommodation in order to participate in your classes, please advise your instructors and make appropriate arrangements with [the Office of Student Accommodations](#).

Course Schedule

Week	Date	Unit	Topic	Assignments
1	1/12	Introduction + You can be a scientist!	What is science? ^T	ICA 1 ^T
	1/14		Observations and Investigations ^T	ICA 2 ^T
	1/16		Science and Engineering Practices ^T	ICA 3 ^T + JR 1 ^T Due
2	1/19	NO CLASS	NO CLASS	NO CLASS
	1/21	You can be a scientist!	Science and Engineering Practices ^T	ICA 3 ^T
	1/23		Google Earth Observations	ICA 4 ^T + JR2 ^T Due
	1/26		Plate Boundary Observations ^T	ICA 5 ^T + JR3 ^T Due
	1/28	Preparing for earthquakes and volcanoes	Plate Boundary Observations ^T	ICA 6 ^T
	1/30		Investigating Plate Motion & Earthquake Basics ^T	ICA 7 ^T + JR 4 ^T Due
4	2/2		Investigating Plate Motion & Earthquake Basics ^L	
	2/4		Earthquake Magnitude and Frequency ^L	ICA 8 ^L
	2/6		Earthquake Prediction & Hazards ^L	JR5 ^T Due
5	2/9		Lava ash and Rock: Volcanos	
	2/11		Lava ash and Rock: Volcanos	
	2/13		Monitoring Volcanic Activity: Eyjafjallajökull ^L	ICA 9 ^L + JR6 ^L Due
6	2/16		Volcanic Hazards of Mt. St. Helens ^L	ICA 10 ^L
	2/18		Simulated Volcanic Crisis Day 1 ^L	ICA 11 ^L + JR7 ^L Due
	2/20		Simulated Volcanic Crisis Day 2 ^L	ICA 12 ^L
7	2/22	Are you prepared for severe weather?	Simulated Volcanic Crisis Day 3 ^L	ICA 12 ^L + J8 ^L Due
	2/24		How to Become a Weather Spotter ^T	ICA 13 ^T
	2/26		How to Become a Weather Spotter ^T	ICA 13 ^T + JR9 ^L Due
8	3/2		Plotting Weather with Google Sheets ^T	ICA 14 ^T
	3/4		Investigating Climate Normals ^T	ICA 15 ^T
	3/6	Mid-Semester Project: Where Does Severe Weather Occur and Why?	Project Prep Day 1 ^T	ICA 16 ^T
9	3/9		Project Prep Day 2 ^T	ICA 17 ^T
	3/11		Team Presentation & Evaluation ^T	Team Project ^T
	3/13		Team Presentations & Discussion ^T	Team Project ^T
10	3/16	NO CLASS	NO CLASS	NO CLASS
	3/18	NO CLASS	NO CLASS	NO CLASS
	3/20	NO CLASS	NO CLASS	NO CLASS
11	3/23	Are you prepared for severe weather?	Mid-Latitude Cyclones ^T	ICA 18 ^T
	3/25		Extratropical Cyclones	
	3/27		Are hurricanes causing more damage? ^T	ICA 19 ^T
12	3/30	How do you prepare for floods and landslides?	Climate Change & Hurricanes ^T	ICA 20 ^T
	4/1		The Water Cycle ^T	ICA 21 ^T + JR 11 ^T Due
	4/3		Flooding, Flood Risk, & Communities ^{T; E}	
13	4/6		Urban Resilience & Stormwater ^{T; E}	ICA 22 + JR 12 Due
	4/8		Designing Flood Resilient Communities Part 1 ^T	ICA 21 ^T
	4/10		Designing Flood Resilient Communities Part 2 ^T	ICA 23 ^T + JR13 Due
14	4/13		Designing Flood Resilient Communities Part 3 ^T	ICA24 ^T
	4/15		Designing Flood Resilient Communities Part 4 ^T	ICA 25 ^T
	4/17		Should We Rebuild After Disaster? ^T	ICA 26 ^T
15	4/20		Heavy Rainfall and Landslides ^T	JR14 ^T Due
	4/22		Heavy Rainfall and Landslides ^T	ICA 27 ^T
	4/24		Project Prep Day 1 ^M	ICA 28 ^M
16	4/27		Project Prep Day 2 ^M	ICA 29 ^M
	4/29		Project Prep Day 3 ^M	ICA 30 ^M
	5/1	OPEN OFFICE HOURS	OPEN OFFICE HOURS	OPEN OFFICE HOURS
FINAL	5/7	End-Semester Project: Map Your Hazards!	Team Presentation and Evaluation ^M	Team Project ^M

The above schedule is tentative and subject to change. Changes to the schedule will be announced in class and eCampus.

JR = Journal Reflection; ICA = In-Class Activity

^T = [Teaching with Investigation and Design in Science \(TIDeS\): Earth Science](#); ^L = [InTeGrate: Living on the Edge](#); ^E = [InTeGrate: An Ecosystem Services Approach to Water Resources](#); ^M = [InTeGrate: Map Your Hazards!](#)