

GEOL 100: Natural Disasters, Spring 2023 Section 1001

TuTh 2:30-3:45 pm, WRI C148

Faculty:

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Office Hours:

Tuesday 12:30-2:00 pm, Thursday 12:30-2:00 pm. Please email me for hours outside of these times. If its a very quick question and my door is open, feel free to pop in.

Course Format:

Twice weekly lecture

Required Textbook:

Natural Hazards: Earth's Processes as Hazards, Disasters, and Catastrophes, Keller, 5th Edition, Edward A. and Duane E. DeVecchio

Prerequisites:

No university prerequisites

Learning outcomes of this class:

This course is designed for anyone with an interest in natural catastrophic events and a desire to learn more about how the physical environment functions (particularly with regard to the hazards presented by cataclysmic natural disasters). During this semester we will focus on impending disasters, potential planet-altering events, and the way that society has responded in the past and may respond in the future to natural disasters. Topical areas of particular focus will comprise those disasters with a potential for occurrence in the Western US, including: volcanoes, earthquakes, wildfires, flooding droughts, and rapid anthropogenic-driven climate change. Throughout the semester, we will discuss personal and local preparedness in the face of potential future disasters.

Upon completion of this course, you should be able to:

- Identify the locations in the United States that are subject to the major hazards (earthquakes, volcanic eruptions, tsunamis, floods, landslides, extreme weather, and wildfires) and explain the basic earth processes involved in these natural events
- Evaluate the potential and risks for the occurrence of the afore listed major hazards by accessing and interpreting available hazard maps available from government agencies
- Demonstrate practical knowledge with regard to preparing for potential disasters at home and in the community
- Model the ability to share knowledge with the general public about risks from natural events and human-induced hazards

Grading Policy:

Final grades are rounded to nearest whole number

A	≥93	C	73-76
A-	90-92	C-	70-72
B+	87-89	D+	67-69
B	83-86	D	63-66
B-	80-82	D-	60-62
C+	77-79	F	less than 60

Final grades will be computed as follows:

3 Exercises (30 points each) for a total of 90 points

3 Participation (10 points each) for a total of 30 points

4 Exam (60 questions, 120 points) for a total of 480 points

Final grades will be calculated as a percent out of a potential 600 points earned

No extra credit or make-up will be given. You must attend lectures and not miss any of the participation or exam dates to qualify to earn those points. Any qualifying University excuse must be arranged with the instructors and be supported with a written medical, military, or university excuse. Lastly, no end of the semester grade requests will be granted. It is inappropriate to ask a professor at the end of a semester to alter your grade and it would be unfair to other students.

Suggested weekly work routine

1. Read the assigned chapter in the textbook
2. Logon to Webcampus and enter the appropriate chapter learning module
3. Print out pdf lecture notes pages for use in lecture
4. Attend all lectures (participation points) and communicate with the professor
7. Submit all exercises on time (due dates on syllabus)
8. Prepare for (study outlines posted) and sit all exams (exam dates listed on syllabus)

Changes to syllabus: Adjustments to the schedule of topics and reading assignments may be made in accordance with the rate and progress in the class and to reflect world events.

Class schedule:

Week 1

Jan 17th - Course Introduction/Introduction to Natural Hazards (Chapter 1)

- Read textbook Chapter 1

Jan 19th - Introduction to Natural Hazards (Chapter 1)

Week 2

Jan 24th - Internal Structure of Earth and Plate Tectonics (Chapter 2)

Jan 26th - Internal Structure of Earth and Plate Tectonics (Chapter 2)

- Read textbook Chapter 2

Week 3

Jan 31st – Earthquakes (Chapter 3)

Feb 2nd - Earthquakes (Chapter 3)

- Read textbook Chapter 3
- **Complete exercise 1, due by 11:59pm on Feb 9th (available 12 AM on 2nd of Feb)**

Week 4

Feb 7th – Tsunamis

Feb 9th - Tsunamis (Chapter 4) (+ revision session)

- Watch “Tsunami: The Wave that Shook the World” on YouTube
<https://www.youtube.com/watch?v=3YOf44bNzw4&t=31s>
- Read textbook Chapter 4

Week 5

Feb 14th – **EXAM 1 (Chapters 1-4)**

Feb 16th – Volcanoes (Chapter 5)

Week 6

Feb 21st - Volcanoes (Chapter 5)

- Read textbook Chapter 5

Feb 23rd – Flooding (Chapter 6)

Week 7

Feb 28th- Flooding (Chapter 6)

- Read textbook Chapter 6
- Watch “The Flood Channel: Episode 95 ‘The Best Of’” on YouTube
<https://www.youtube.com/watch?v=pJL8LAWW3Gk&list=PL2JWaMIYEr8-1JfljaWsqfwnsTHpjatZU&index=14>
- **Complete exercise 2, due by 11:59pm on 2nd of March (available 12AM 23rd Feb)**

Mar 2nd Mass Wasting (Chapter 7)

Week 8

Mar 7th - Mass Wasting (Chapter 7)

- Read textbook Chapter 7

Mar 9th - **EXAM 2 (Chapters 5-7)**

Week 9

21st Mar - Atmospheric Processes and Severe Weather (Chapter 9)

- Read textbook Chapter 9

23rd Mar - Atmospheric Processes and Severe Weather

Week 10

Mar 28th - Hurricanes and Extratropical Cyclones (Chapter 10)

Mar 30th - Hurricanes and Extratropical Cyclones (Chapter 10)

- Read textbook Chapter 10
- **Complete exercise 3, due by 11:59pm on Apr 4th (available 12 AM on 28th Feb)**

Week 11

Apr 4th – Coastal Hazards

Apr 6th - Coastal Hazards (Chapter 11)

- Read textbook Chapter 11

Week 12

Apr 11th - **EXAM 3 (Chapters 9-11)**

Apr 13th – Climate Change (Chapter 12)

Week 13

Apr 18th – Climate Change (Chapter 12)

Apr 20th - Climate Change

- Read textbook Chapter 12

Week 14

Apr 25th - Wildfires (Chapter 13)

- Watch the video “Fire in Paradise” on YouTube

<https://www.youtube.com/watch?v=F3OX1PR2SCM>

Apr 27th – Wildfires

- Read textbook Chapter 13

Week 15

May 2nd- Impacts and Extinctions (Chapter 14)

- Watch the video “Dinopocalypse” on YouTube

<https://www.youtube.com/watch?v=ZYoqtBEzuiQ>

May 4th - Impacts and Extinctions (Chapter 14)

TBD **EXAM 4 (Chapters 12-14)**

Course Policies:

Public Health Directives

Face coverings are currently optional for all faculty and students in the classroom. Students must follow all active UNLV public health directives while enrolled in this class. UNLV public health directives are found at Health Requirements for Returning to Campus, <https://www.unlv.edu/coronavirus/health-requirements>. Students who do not comply with these directives may be asked to leave the classroom. Refusal to follow the guidelines may result in further disciplinary action according to the UNLV Student Conduct Code, https://www.unlv.edu/sites/default/files/page_files/27/StudentConduct-Code.pdf, including being administratively withdrawn from the course.

The following are specific policies I have called out for your additional attention:

Attendance

This course is an in-person course and attendance for lecture is necessary for your success. While pdfs of the lectures are provided ahead of time, they are meant to assist you during lecture, so you don't have to copy all the definitions provided. You still need to be attentive, participate and take your own notes. Combined with readings, these notes are your primary source of materials when preparing for each exam.

Academic Misconduct

Academic integrity is a legitimate concern for every member of the University community. We all share in upholding the fundamental values of honesty, trust, respect, fairness, responsibility, and professionalism. By choosing to join the UNLV community, students accept the expectations of the Student Academic Misconduct Policy, and are encouraged to always take the ethical path whenever faced with choices. Students enrolling at UNLV assume the obligation to conduct themselves in a manner compatible with UNLV's educational mission. An example of academic misconduct is plagiarism. Plagiarism is using the words or ideas of another person, from the Internet or any other source without proper citation of the source(s). See the Student Conduct Code, <https://www.unlv.edu/studentconduct/student-conduct>.

Auditing a Course

Auditing a course allows a student to continue attending the lectures and/or laboratories and discussion sessions associated with the course, but the student will not earn a grade for any component of the course. Students who audit a course receive the same educational experience as students taking the course for a grade, but will be excused from exams, assessments, and other evaluative measures that serve the primary purpose of assigning a grade.

Classroom conduct

Students have a responsibility to conduct themselves in class and in the libraries in ways that do not interfere with the rights of other students to learn, or of instructors to teach. Use of devices

such as cellular phones and pagers, or other potentially disruptive activities are only permitted with the prior explicit consent of the instructor. Students are specifically prohibited to record classes without instructor authorization, including online/remote classes (either audio only, or video and audio). The instructor may rescind permission at any time during the class. If a student does not comply with established requirements or obstructs the functioning of the class, the instructor may initiate an administrative withdrawal of the student from the course. Since the COVID-19 pandemic forced some instruction to be delivered remotely starting in Spring 2020, numerous students have asked instructors to record their synchronous classes, so that they can access them at their convenience. Instructors who agree to record their classes (audio only, or video and audio) should inform students in advance. Recorded lectures may not be broadly released to anyone, but made available exclusively to those students enrolled in the class during the particular academic term. Recorded lectures must be stored securely, and are subject to the Nevada System of Higher Education's Records Retention Policy, meaning that the recordings can only be deleted 120 days after the end of class (i.e., after grades are posted). Once this requirement is met, the recordings should be deleted. Class recordings are protected from disclosure, as they are deemed part of an educational record under the Family Educational Rights and Privacy Act (FERPA).

Copyright

The University requires all members of the University Community to familiarize themselves with, and to follow copyright and fair use requirements. You are individually and solely responsible for violations of copyright and fair use laws. The University will neither protect nor defend you, nor assume any responsibility for student or employee violations of fair use laws. Violations of copyright laws could subject you to federal and state civil penalties and criminal liability, as well as disciplinary action under University policies. Additional copyright policy information is available at <https://www.unlv.edu/provost/copyright>.

Disability Resource Center (DRC)

The UNLV Disability Resource Center (Student Services Complex, SSC-A, Room 143, <https://www.unlv.edu/drc>, telephone 702-895-0866) provides resources for students with disabilities. Students who believe that they may need academic accommodations due to a permanent disability, temporary or permanent medical need, or academic support due to pregnancy are encouraged to contact the DRC as early as possible in the academic term. A Disabilities Specialist will discuss what options may be available to you. Students who are already registered with the DRC should request their accommodations online each semester, and make an appointment to discuss their accommodations with their instructors

Diversity Statement

As an institution of higher learning, UNLV represents a rich diversity of human beings among its faculty, staff, and students, and is committed to aspiring to maintain a Campus environment that values that diversity. Accordingly, the University supports understanding and appreciation of all members of its community, regardless of race, sex, age, color, national

origin, ethnicity, creed, religion, disability, sexual orientation, gender, gender identity, marital status, pregnancy, genetic information, veteran status, or political affiliation. Please see University Statements and Compliance, <https://www.unlv.edu/about/statements-compliance>. A successful learning experience requires mutual respect and trust between the students and the instructor. Accordingly, the instructor asks that students be willing to listen to one another's points of view, acknowledging that there may be disagreements, keep discussion and comments on topic, and use first person, positive language when expressing their perspectives.

Final Examinations

The University requires that final exams given at the end of a course occur on the date and at the time specified in the Final Exam schedule. The Final Exam schedule is typically available at the start of the semester, and the classroom locations are available approximately one month before the end of the semester. See the Final Exam Schedule, <https://www.unlv.edu/registrar/calendars>.

Identity Verification in Online Courses

All UNLV students must use their Campus-issued ACE ID and password to log in to WebCampus-Canvas. UNLV students enrolled in online or hybrid courses are expected to read and adhere to the Student Academic Misconduct Policy, <https://www.unlv.edu/studentconduct/misconduct/policy>, which states that "acting or attempting to act as a substitute for another, or using or attempting to use a substitute, in any academic evaluation or assignment" is a form of academic misconduct. Intentionally sharing ACE login credentials with another person may be considered an attempt to use a substitute, and could result in investigation and sanctions, as outlined in the Student Academic Misconduct Policy. UNLV students enrolled in online courses are also expected to read and adhere to the Acceptable Use of Computing and Information Technology Resources Policy, <https://www.it.unlv.edu/policies/acceptable-use-computing-and-information-technology-resources-policy>, which prohibits sharing university accounts with other persons without authorization. To the greatest extent possible, all graded assignments and assessments in UNLV online courses should be hosted in WebCampus-Canvas or another UNLV-managed platform that requires ACE login credentials for access.

Incomplete Grades

The grade of "I" (Incomplete) may be granted when a student has satisfactorily completed three-fourths of course work for that semester/session, but cannot complete the last part of the course for reason(s) beyond the student's control and acceptable to the instructor, and the instructor believes that the student can finish the course without repeating it. For undergraduate courses, the incomplete work must be made up before the end of the following regular semester. Graduate students receiving "I" grades in 500-, 600-, or 700-level courses have up to one calendar year to complete the work, at the discretion of the instructor. If course requirements are not completed within the period indicated, a grade of "F" will be

recorded, and the student's GPA will be adjusted accordingly. Students who are fulfilling an Incomplete grade do not register for the course, but make individual arrangements with the instructor who assigned the "I" grade.

Library Resources

Librarians are available to consult with students on research needs, including developing research topics, finding information, and evaluating sources. To make an appointment with a subject expert for this class, please visit the Libraries' Research Consultation website, <https://guides.library.unlv.edu/appointments/librarian>. You can also ask the library staff questions via chat and text message at <https://ask.library.unlv.edu/>.

Missed Course Work

Any student missing class, quizzes, examinations, or any other class or laboratory work because of observance of religious holidays will be given an opportunity during that semester to make up the missed work. The make-up opportunity will apply to the religious holiday absence only. It is the responsibility of the student to notify the instructor within the first 14 calendar days of the course for Fall and Spring courses (except for modular courses), or within the first 7 calendar days of the course for Summer and modular courses, of their intention to participate in religious holidays which do not fall on state holidays or periods of class recess. For additional information, please visit the Missed Classwork policy, under Registration Policies, on the Academic Policies webpage, <https://catalog.unlv.edu/content.php?catoid=39&navoid=10666>.

In accordance with the policy approved by the Faculty Senate regarding missed class time and assignments, students who represent UNLV in any official extracurricular activity will also have the opportunity to make up assignments, provided that the student submits official written notification to the instructor no less than one week prior to the missed class(es).

The spirit and intent of the policy for missed classwork is to offer fair and equitable assessment opportunities to all students, including those representing the University in extracurricular activities. Instructors should consider, for example, that in courses which offer a "Drop one" option for the lowest assignment, quiz, or exam, assigning the student a grade of zero for an excused absence for extracurricular activity is both contrary to the intent of the Faculty Senate's policy, and an infringement on the student's right to complete all work for the course. This policy will not apply in the event that completing the assignment or administering the examination at an alternate time would impose an undue hardship on the instructor or the University that could be reasonably avoided. There should be a good faith effort by both the instructor and the student to agree to a reasonable resolution. When disagreements regarding this policy arise, decisions can be appealed to the Department Chair/School Director, College/School Dean, and/or the Faculty Senate Academic Standards Committee. For purposes of definition, extracurricular activities may include, but are not limited to academic recruitment activities, competitive intercollegiate athletics, fine arts activities, liberal arts competitions,

science and engineering competitions, and any other event or activity sanctioned by a College/School Dean, and/or by the Executive Vice President and Provost.

Rebelmail

Rebelmail is UNLV's official email system for students and by University policy, instructors and staff should only send emails to students' Rebelmail accounts. Rebelmail is one of the primary ways in which students receive official University communications, information about deadlines, major Campus events, and announcements. All UNLV students receive a Rebelmail account after they have been admitted to the University. Sending emails within WebCampus-Canvas is also acceptable.

Tutoring and Coaching

The Academic Success Center (ASC), at the Claude I. Howard Building, provides tutoring, academic success coaching, and other academic assistance for all UNLV undergraduate students. For information regarding tutoring subjects, tutoring times, and other ASC programs and services, please visit the ASC website, <https://www.unlv.edu/asc>, or call 702-895-3177. The ASC is located across from the Student Services Complex (SSC). Academic success coaching is located on the second floor of SSC A, Room 254. Drop-in tutoring is located on the second floor of the Lied Library, and on the second floor of the College of Engineering building (TBE A 207).

UNLV Writing Center

One-on-one or small group assistance with writing is available free of charge to UNLV students at the Writing Center, <https://writingcenter.unlv.edu/>, located in the Central Desert Complex, Building 3, Room 301 (CDC 3-301). Walk-in consultations are sometimes available, but students with appointments receive priority assistance. Students may make appointments in person or by calling the Center, telephone 702-895-3908. Students are requested to bring to their appointments their Rebel ID Card, a copy of the instructions for their assignment, and two copies of any writing they have completed on their assignment.

988 Free 24/7 Suicide and Crisis Lifeline

In addition to campus resources such as the Counseling and Psychological Services (CAPS) website at <https://www.unlv.edu/caps>, visiting the YOU@UNLV website at <https://you.unlv.edu/>, and Early Alert (for graduate students, at <https://www.unlv.edu/graduatecollege/academy/early-alert>), you may now call or text 988 or chat at 988lifeline.org if you or someone you know is in crisis and in need of support