



# INTRODUCTION TO ENVIRONMENTAL AND ENGINEERING GEOLOGY


UNIVERSITY OF FLORIDA, GLY2030C, FALL 2021


## CONTACT

Dr. Courtney Sprain

 [csprain@ufl.edu](mailto:csprain@ufl.edu)

 Williamson Hall 355

 352-294-6319

 Virtual Office Hrs: On  
Zoom Mon. noon–1PM &  
8–9 PM or by appt.

TA: Ranpeng Li  
([ranpeng.li@ufl.edu](mailto:ranpeng.li@ufl.edu))

See Canvas page for office  
hours.

## COURSE MATERIALS:

**Text:** Introduction to  
Environmental Geology,  
Keller 5<sup>th</sup> edition

**Access Code:** No Access  
Code needed, used  
textbook OK!

**Lab Manual:** [Laboratory  
Manual for  
Introductory Geology](#)  
(Open Access)

## KEY DATES

**Course Starts:** Aug 23<sup>rd</sup>

Welcome to Environmental & Engineering Geology! In this course we'll explore the fundamental concepts of geology and investigate the interactions of nature and people (both individually and as a society) including natural hazards, resource utilization, and environmental issues. Please read through the syllabus for important information to help you succeed in this course.

### COURSE QUESTIONS AND CONTACTS:

Please post general questions about the course in the Discussion Forum so the question can be answered for everyone. Before posting, please check to see if your question has already been asked and answered. For personal questions, use email or Canvas messaging. For questions about grading, please email me and also cc your TA. For accommodations and other personal non-grading related questions, please contact me by email, Canvas, or office hours. Throughout the semester, I will provide information to you through Canvas announcements. Be sure that you check announcements regularly and set up Canvas to have announcements delivered to you as emails as well.

### COURSE MATERIAL:

**Course Webpage:** Access this course by logging in at:  
<https://elearning.ufl.edu/>, and looking for the course title.

**Textbook:** The text for this course is "Introduction to Environmental Geology", 5<sup>th</sup> edition, by Edward A. Keller. We will NOT be using the Pearson learning activities, which means rentals, used books, pdf versions or any other way to get the text is fine! The e-text is also available through UF All Access. The lab manual is online for free at:

<https://open.umn.edu/opentextbooks/textbooks/laboratory-manual-for-introductory-geology>

**Other materials:** Supplemental readings and videos may be assigned. Captioning and transcripts will be provided for all external videos, but some online readings may have limited accessibility features (such as missing alt text for images). If presenting information only in visual form creates a barrier to

**Exam 1:** Avail. Sept. 30<sup>th</sup>–  
Oct. 4<sup>th</sup>.

**Exam 2:** Avail. Nov. 4<sup>th</sup>–  
Nov. 8<sup>th</sup>.

**Exam 3:** Avail. Dec 6<sup>th</sup>–  
Dec. 8<sup>th</sup>.

your full participation in this course, please contact me ASAP so we enact solutions.

### TECHNOLOGY REQUIREMENTS

**Computer & Internet:** Course work will require use of a computer and reliable internet. In addition, students are required to have a webcam to take the proctored exams. Competency in the basic use of a computer is required. For additional information on UF College of Liberal Arts and Sciences policy regarding computer requirements you can visit: <http://it.clas.ufl.edu/policies/student-computer-requirement/>

## COURSE DETAILS

**Prerequisite Knowledge:** This is a GenEd physical science (P) course. This course does not have prerequisites, but a basic knowledge of mathematics (middle school math, occasional basic algebra) is very helpful.

**Course Summary & Goals:** The focus of this course is investigating human interactions with the natural world – how the environment impacts us, and how we impact our environment. To accomplish this, we will establish foundational knowledge about geology and the scientific process. We will then apply that knowledge to understand the processes that shape the Earth’s surface and natural systems. From this context we can also examine the complex relationship between humans and their environment. The goals of this course include:

- Learning about the materials, processes and events that comprise and shape the Earth to better understand the environment in which we live.
- Investigating how the intersection of human activity and geology relates to and impacts modern engineering and environmental issues such as resource utilization, environmental impacts of human activity, and natural hazards.
- Understanding the process of scientific inquiry to refine critical thinking skills.
- Improving scientific literacy - the concepts and terminology needed to understand science stories in the news, or to make informed decisions on science-based issues.
- Building scientific communication skills – the skills and mindset to understand, articulate, and discuss technical concepts to peers and the public. This will be done through discussions and the course project.

**Course Responsibilities:** Assignments are listed by week in the chart below, and specific due dates can be found in the Calendar and Syllabus page in Canvas. You will need to have regular internet access and the time to explore the resources available on each topic. Over the course of the semester, you will have the following responsibilities:

- Complete all Module assignments in a timely fashion. Each module includes reading assignments, video lectures with accompanying PowerPoint presentations, a module quiz, assignments/labs and/or discussions.
- Actively participate in class discussions as specified in each module.
- Complete online multiple-choice quizzes for each module.
- Complete the course project, which transpires during modules 6-13.
- Check the course announcements at least three times a week or have them forwarded to your inbox. Announcements are the primary means of communication with the class.

**Course Schedule:** We will cover 13 topical Modules in this course, one per week. Please reference the syllabus/course calendar in Canvas for due dates of individual course assignments and any changes in due dates throughout the course.

<b>Rough Schedule</b>		
<b>Module</b>	<b>Topics</b>	<b>Text Chapter</b>
<b>Module 1:</b> 8/23-8/30	Start Here Module & Module 1: Introduction to Environmental Geology	Chapter 1
<b>Module 2:</b> 8/30-9/7	Module 2: Earth Structure and Plate Tectonics	Chapter 2
<b>Module 3:</b> 9/7-9/13	Module 3: Minerals and Rocks Part 1	Chapter 3
<b>Module 4:</b> 9/13-9/20	Module 4: Minerals and Rocks Part 2	Chapter 3
<b>Module 5:</b> 9/20-9/27	Module 5: Soils and Ecology	Chapters 4 & 17
9/27-10/4	Exam 1: Modules 1–5. Exam window Sept. 30 <sup>th</sup> –Oct. 4 <sup>th</sup> .	
<b>Module 6:</b> 10/4-10/11	Module 6: Intro to Natural Hazards	Chapter 5
<b>Module 7:</b> 10/11-10/18	Module 7: Earthquakes, Tsunamis, and Volcanoes	Chapter 6, 7, & 8.
<b>Module 8:</b> 10/18-10/25	Module 8: River Processes, Flooding, and Human Impacts on Systems	Chapter 9
<b>Module 9:</b> 10/25-11/1	Module 9: Slope Stability and mass movements	Chapter 10
11/1-11/6	Exam 2: Modules 6–9. Exam window Nov. 4 <sup>th</sup> –Nov. 8 <sup>th</sup> .	
<b>Module 10:</b> 11/8-11/15	Module 10: Coastal Geology and Hazards	Chapter 11
<b>Module 11:</b> 11/15-11/22	Module 11: Groundwater Processes and Water Resources	Chapters 13 & 14
<b>Module 12:</b> 11/22-11/29	Module 12: Mineral and Energy Resources	Chapters 15 & 15
<b>Module 13:</b> 11/29-12/6	Module 13: Global Change and Climate	Chapter 18
12/6-12/8	Exam 3: Modules 10–13. Exam window 12/6–12/8	

## COURSE ACTIVITY CATEGORIES

Each Module has a main page which can be accessed from the homepage of the course website. The Module main page will clearly list reading and viewing assignments, activities, quizzes and anything else you need to complete for that Module. Unless otherwise stated, all Module activities are due by midnight on the listed due date. Each Module will have some combination of the following:

**Lab Assignments:** Most Modules have associated Lab Assignments. Lab Assignments for each module are worth 100 points. Lab Assignment formats vary, but each one requires answers to be submitted online. Lab Assignments count for 30% of your overall grade.

**Quizzes:** There are 12 quizzes for the course, one for each module. The lowest quiz grade will be dropped at the end of the semester, even if it is a zero. This leaves 11 quizzes that count towards your grade. Each quiz is worth 100 points each, you have two attempts, and have no time limit. Quizzes are worth 20% of your grade.

**Discussions:** Online discussion will be used for further exploration of the topics we study each week. Discussions are the places where we can go beyond what the text has to say and look at case studies and current events collaboratively. For each module that contains a Discussion Forum, you will be expected to post a thoughtful, detailed response according to the Substantive Post Guidelines and Discussion rubric that is provided in each discussion. Deadlines for discussion posts are listed on the course calendar. Each Discussion is worth 50 points (30 points for the initial post and 20 for follow up interactions) and Discussion participation counts for 20% of your grade.

**Project:** During the course you will have the opportunity to investigate a specific geohazard in more depth and practice communicating scientific information. For your project you will create an information page in Canvas on a geohazards topic. You will have the opportunity to improve/revise your page based on the feedback from your peers before it is assigned a final grade. This project is described in much greater detail on a Canvas page on the class website. The project is worth 10% of your grade.

**Proctored Exams:** There are three proctored Exams and each Exam covers on average 4 modules. The Exams are open book and open note, but are timed. There is no comprehensive exam for this course. Exams make up 20% of your overall grade in the course. Here are some key points about Honorlock Proctoring:

- You do not need to make a separate account or pre-schedule your exam.
- You will need a computer with reliable internet access, a webcam and microphone. Honorlock works best in the Chrome internet browser.
- Take your exam in a well-lit room where the primary light source is not coming from behind you.
- 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.
- You will not be video recorded during your exam, but you will need video capabilities to show your id. Internet browsing will be disabled while your exam is open, so it is important that any notes you wish to access are not stored on online or on cloud storage.

## GRADING

See <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx> for general UF grading policies. Grades will be based on points accumulated through course activities:

**Percent Breakdown of Total Grade:**

Lab Assignments	30% total grade
Module Quizzes	20% total grade
Discussions	20% total grade
Project	10% total grade
Exams	20% total grade

**Grading Scale for Overall Course Grade:**

% Grade	Letter Grade	GPA Value
90 +	A	4.0
85-89.9	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

**Late work:** Assignments and Quizzes can be turned in up to one week late. After that, no points will be given. Discussions and Exams are not accepted late without approval from the instructor.

\*\*\*\*\*Any technology issues encountered during online activities must be documented with screenshots of error messages, etc.\*\*\*\*\*

**ATTENDANCE**

Students are responsible for satisfying all academic objectives of this course. To do this, it is important to watch lecture videos and readings as the course progresses, and not right before exams (or never!). It will be hard to have meaningful discussions without having watched the videos and completed the readings. Additionally, this information will aid in the successful completion of lab assignments. I will be assigning each of you to a discussion group at the beginning of the semester that will not change. Please, get to know these people and use them as an additional resource! You are encouraged to engage outside of formal discussion assignments. In general, acceptable reasons for assignment extensions include illness, serious family emergencies, special curricular requirements, military obligation, severe weather conditions, religious holidays, and participation in official university activities. Absences from class for court-imposed legal obligations (e.g., jury duty or subpoena) will be excused. Other reasons also may be approved. The biggest thing is communication. Let me know if you need an extension but please, if possible, do so BEFORE the missed assignment. Additionally, you will be given plenty of time to complete assignments so try to not leave it all until the last minute! You'll be permitted a reasonable amount of time to make up the material or activities covered in your absence. I know this course is online, but I think we can all benefit from more social interaction and your participation will enhance your course experience. So, please participate!

## LECTURE RECORDINGS

- Lecture recordings are provided for students in this course. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

## ACCESSIBILITY, INCLUSION & RESPECT

**Respect & Inclusion:** In this classroom (physical or virtual), everyone should feel welcome to share their thoughts in a respectful way. Treat your classmates the way you would like to be treated. You deserve to be called by the name you prefer and have me pronounce it correctly. Please correct me if I write your name (or pronouns) incorrectly! If something in the course material, instruction, or class interactions makes you feel excluded or uncomfortable, please let me know so I can address it. Please see the Netiquette section under “UF Policies” for more details on how to interact respectfully online.

**UF Statement on Accommodating Students with Disabilities:** Students with disabilities requesting accommodations should first register with the Disability Resource Center by calling 352-392-8565 or by computer at: <https://disability.ufl.edu/> and provide appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students should follow this procedure as early as possible in the semester, as accommodations are not retroactive.

**My Statement on Accessibility:** We all learn differently. You do not have to have a formally recognized disability to find yourself having difficulty with some aspect of the college learning environment. For example, colorblindness is not typically recognized in formal accommodations, but very much impacts a student’s ability to process visual information. Please let me know if something in the course material presents a barrier to your full participation in the class so we can work together to find a reasonable solution – *even if you don’t have a formal accommodation letter.*

**Religious Observances:** Students who anticipate the necessity of missing homework deadlines and discussions due to religious observances *must provide notice of the date(s) to the instructor*, in writing at least two weeks in advance of the missed class days so accommodations can be made for missed work. Do not wait until after you have missed assignments to ask for an exception, as these requests may not be honored.

## 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/>.

## UF POLICIES

**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 Honor Code at: <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>.

The University of Florida Honor Code was voted on and passed by the Student Body in the Fall 1995 semester. The Honor Code reads as follows:

**Preamble:** In adopting this Honor Code, the students of the University of Florida recognize that academic honesty and integrity are fundamental values of the University community. Students who enroll at the University commit to holding themselves and their peers to the high standard of honor required by the Honor Code. Any individual who becomes aware of a violation of the Honor Code is bound by honor to take corrective action. A student-run Honor Court and faculty support are crucial to the success of the Honor Code. The quality of a University of Florida education is dependent upon the community acceptance and enforcement of the Honor Code.

**The Honor Code:** "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity."

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."**

If you are caught cheating or helping someone else cheat, you will be subject to sanctions according to the procedures of Student Conduct and Conflict Resolution (SCCR). If you suspect another student of cheating, please let me know, or call the Cheating Hotline (352-392-6999).

For more information about academic honesty, contact Student Judicial Affairs, P202 Peabody Hall, 352-392-1261.

In addition to the general University academic policy, it is important to stress the importance of individual work on all assignments. You will be allowed to collaborate on some of the discussion assignments; however, each individual must turn in their work in their own words and must show all calculations/etc.. Failure to follow this procedure will result in a zero for the assignment. This is particularly important for laboratory work.

**Netiquette – Communication Courtesy:** All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions and chats. More information at: <https://teach.ufl.edu/wp-content/uploads/2020/04/NetiquetteGuideforOnlineCourses.docx>

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

## NEED HELP?

**Technical Support:** For issues with technical difficulties for E-learning, please contact the UF Help Desk: <http://helpdesk.ufl.edu>, or (352) 392-4357 and select option 2. If you miss a deadline due to technical issues, requests for extensions or make-up activities MUST be accompanied by the ticket number received



from The Help Desk when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail your instructor within 24 hours of the technical difficulty if you wish to request a make-up.

**Help from me and/or TA:** While I have a short window of time listed for office hours, I am happy to set up a virtual chat at another time. Office hours are for your benefit - ask questions, get assignment help, discuss geoscience degrees and career options, etc. You may also email me, but please check to make sure your question has not been answered already in the Announcements or Class Questions discussion board before reaching out. For questions about grading, please contact both me and TA in one email. They are also a great resource for questions about the material. Please be aware that your instructor and TA are humans that sleep at night and are not tied to their computers all weekend, so there are times when your email may go unanswered for up to 24 hours.

### **Campus Resources:**

#### Health and Wellness

*U Matter, We Care:* If you or someone you know is in distress, please contact [umatter@ufl.edu](mailto:umatter@ufl.edu), 352-392-1575, or visit U Matter, We Care website (<https://umatter.ufl.edu/>) to refer or report a concern and a team member will reach out to the student in distress.

*Counseling and Wellness Center:* Visit the Counseling and Wellness Center website (<https://counseling.ufl.edu/>) or call 352-392-1575 for information on crisis services as well as non-crisis services.

*Student Health Care Center:* Call 352-392-1161 for 24/7 information to help you find the care you need, or visit the Student Health Care Center website (<https://shcc.ufl.edu/>).

*University Police Department:* Visit UF Police Department website (<https://police.ufl.edu/>) or call 352-392-1111 (or 9-1-1 for emergencies).

*UF Health Shands Emergency Room / Trauma Center:* For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; Visit the UF Health Emergency Room and Trauma Center website (<https://ufhealth.org/emergency-room-trauma-center>).

### **Academic Resources:**

*E-learning technical support:* Contact the UF Computing Help Desk (<https://helpdesk.ufl.edu/>) at 352-392-4357 or via e-mail at [helpdesk@ufl.edu](mailto:helpdesk@ufl.edu).

*Career Connections Center* (<https://career.ufl.edu/>): Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services.

*Library Support* (<https://uflib.ufl.edu/find/ask/>): Various ways to receive assistance with respect to using the libraries or finding resources.

*Teaching Center* (<https://teachingcenter.ufl.edu/>) : Broward Hall, 352-392-2010 or to make an appointment 352- 392-6420. General study skills and tutoring.

*Writing Studio* (<https://writing.ufl.edu/writing-studio/>): 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers.

*Student Complaints On-Campus:* Visit the Student Honor Code and Student Conduct Code webpage for more information (<https://sccr.dso.ufl.edu/policies/student-honor-%20code-student-conduct-code/>).

*On-Line Students Complaints:* View the Distance Learning Student Complaint Process (<https://distance.ufl.edu/getting-help/student-complaint-process/>).

**Other Resources:** For support regarding Counseling and Wellness, disability, documenting student concerns and complaints, and a link to the Library Help Desk, please see: <http://www.distance.ufl.edu/getting-help>.