

Instructor: Professor Heidi Houston

Office: ZHS 101

Office Hours: Tue 11:00AM -12 PM, Wed 7:00-8:00 PM

Contact Info: If you have in-depth questions related to class content, you will probably find it most effective to ask me in person, either immediately after lecture or lab or during office hours held by me or one of our TAs. If you are systematically unavailable during office hours due to a scheduling conflict, I am also available by appointment. When all else fails, my e-mail is houstonh@usc.edu; please include GEOL105 in the subject.

TAs:

Name	Abra Atwood	Naomi Rodgers	Will Schmidt
E-mail (@usc.edu)	aatwood	nrodgers	wlschmid

Course Description

Welcome to GEOL105, “Planet Earth.” This course provides an introduction for non-geologists and non-scientists to the inner workings, origin, and history of our dynamic planet. We will learn how the Earth’s internal heat drives the engine that builds mountains, moves the continents, creates the ocean basins, and produces earthquakes and volcanoes. We examine the way the circulation of the atmosphere and hydrosphere are driven by solar energy, and interact with the solid Earth to produce landscapes, erode and deposit sediment, and create environments for life and evolution. We investigate the techniques by which we can image the Earth’s interior, track plate motion, and infer how the planet has evolved through time. Each step of the way we ask ourselves how we know what we know, what we don’t know, and how we use the scientific method to test and validate hypotheses. This syllabus outlines the contacts, requirements, and schedule for the course. Additional information will be posted on Blackboard as needed.

Learning Objectives

After taking this course a student will be able to:

- understand the scientific process in the Earth sciences from observation to theory
- describe a variety of different geological processes and structures relate to plate tectonics
- discuss how the major Earth systems interact
- describe the vast timeline of the Earth and many geologic processes
- understand natural hazards
- evaluate the nature and limits to natural resources and how they relate to sustainability

Grading Weights

Student grades are based on the cumulative score across five grade elements: lab section work, quizzes from the Achieve platform, participation via polls during lecture and a few assignments in Blackboard, a mid-term exam, and a final exam. The breakdown of the five grade elements is shown in the table to the right. The questions will be similar in style to the questions that will be asked on the midterm and final exams, and are intended to help prepare you for the mid-term and final exams.

Grade element	Percent
Lab section work	35
Quizzes in Achieve platform	20
Lecture polls and assignments	5
Midterm exam	15
Final exam	25
Total	100

Required Text

Course will follow the material in *Understanding Earth*, by John Grotzinger and Tom Jordan (W.H. Freeman and Company). Because we will be using a new adaptive quizzing platform from Macmillan (see below), only two versions of the text are acceptable. They are listed at the USC Bookstore and can be purchased from them. They can also be purchased directly from Macmillan (use your official USC name and email). The chapters in *Understanding Earth* that cover the material presented during each lecture are listed in the weekly schedule.

Achieve Read and Learn Platform

This is a new web platform from Macmillan Learning that provides an ebook version of our textbook and also administers adaptive quizzes. It is required and can be purchased at the USC Bookstore (check out their two acceptable options there) or directly from Macmillan online. Any financial aid that covers regular textbooks also covers Achieve Read and Practice, so to purchase it with financial aid, please buy it from the USC Bookstore.

For each chapter assigned, students will receive either full credit for completing the chapter quiz by the due dates (Mondays at 6PM) or no credit. I estimate that this may take 2 - 4 hours for each chapter. The quiz adapts to your previous answers and is thus different for each student.

Should you require assistance with Achieve Read and Practice at any time, due to the fact that they may require specific user information to troubleshoot these issues, please contact their Support Team directly via this form: <https://macmillan.force.com/macmillanlearning/s/contactsupport>, or by calling (800) 936-6899.

Online Policies

Attendance at lecture is strongly encouraged, but not required. **Please enter the class through the Zoom link in Blackboard and mute your microphone.** Lectures will be recorded on Zoom. Participation will be assessed based on your response to PollEverywhere questions, which will remain open and available for 24 hours following lecture. Attendance at Lab is required if it occurs within the time interval of 7am to 10pm your local time (see below).

In lecture, but especially in lab sections and breakout groups, you are encouraged to “show your face”. Although not required, this is becoming the norm at workplaces. It is easier to interact with even a small talking head than with a black box with your name on it. Even for introverts or on bad hair days, it’s preferable to have the camera on if internet connectivity permits.

Exams will be open book, and therefore questions may be harder and a good knowledge of the text and lecture materials is important. To that end, working through quizzes on the Achieve Read and Practice platform is a significant part of the grade (20%).

Lab Sections

Lab sections will start the second week of class. Your TA will provide you the lab syllabus on your first day of lab. Synchronous attendance at lab section is required if it occurs with 7am to 10pm your local time. Interaction with other students is a valuable and important part of lab section and of a USC education. If your lab section does not occur with those hours and there are other sections that do, please contact your TAs to reschedule into a section that does fit within 7am to 10pm for you.

Exams

The two examinations will evaluate student comprehension of material covered in the lectures and the text. Due to the online format, all exams will be open book. Consequently, the exam questions may be harder, and it will be important for you to be very familiar with our course materials. The questions that will be asked on the exams will be similar in style to this in the Achieve quizzes, which are intended to help prepare you for the exams. The exam dates and the material covered are as follows:

- Midterm exam will be given in class on Oct 6th; it will cover the material presented in lectures from the start of the class through Oct 1st.
- Final exam date and time will be announced; the exam will cover all material presented in the course, with emphasis on lectures from Sept. 30th to the end of the term.

Doing well in the course

Doing well in this survey course involves reading almost all of our excellent textbook. To do well in the course, you are advised to attend class and lab regularly, take notes in class, read the text and complete the Achieve Read and Practice assignments, and review. Lectures will be recorded and .pdf versions of the lecture slides posted on Blackboard. The exams will be multiple choice questions, and grading will be done automatically using Blackboard.

The lab section and the quizzing in Achieve Read and Practice constitute large parts of your grade, so completion of these activities will help greatly.

Assignment of Final Grades

Each student will receive a final grade (including + or -, like B+ or C-) based on their scores out of the total number of points possible. The grading curve will have an approximate distribution as follows:

Grade	A	B	C	D
Percentage of total enrollment	25%	40%	25%	10%

The curve will only increase your grade. For example: an 80% will never be anything less than a B- and could be higher depending on the curve, a 77% C+ could be bumped up to a B-. This curve will be determined once all exams, quizzes, and lab work have been completed.

Pass/No Pass: the cut-off for Pass/No Pass is anything greater or equal to a C- letter grade. Additionally, more than two lab absences will result in an automatic no pass.

Extra Credit

The only opportunity for extra credit is a 3-page essay. This opportunity will be made available to all students during the last third of the class (after the mid-term but before the final exam). The subject of the essay and its format will be announced in lecture and posted on blackboard. The essay will be graded on a credit/no-credit basis. If the essay quality is sufficient, this will provide a one-third letter grade boost after the curve (i.e. from a B+ to an A-).

No other extra credit opportunities will be available.

Make-ups

If you have to miss an exam because of illness or an academic conflict, you must inform the instructor by email as soon as possible, and provide documentation. Make-ups of examinations will, in general, NOT be permitted except for extraordinary circumstances (e.g., documentable conflicts with other USC-related commitments). If the exam period falls outside the 7am to 10pm time window in your time zone, some accommodation will be made, such as setting a second exam period for those individuals only (probably at 7pm Pacific Standard Time).

Disability Services

Students requesting academic accommodations based on a disability are required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to an instructor as early in the semester as possible. DSP is located in Grace Ford Salvatori Hall, 120, and is open 8:30 a.m. - 5:00 p.m., Monday through Friday. The phone number is (213) 740-0776; email is ability@usc.edu. The website is dsp.usc.edu.

Weekly Course Schedule

	Tuesday	Thursday	Related Chapter in <i>Understanding Earth</i>
Week 1	Aug 18: Intro to GEOL105 and the Earth system	Aug 20: Plate Tectonics	Ch. 1, 2
Week 2	Aug 25: Plate Tectonics	Aug 27: Earth Materials	Ch. 2, 3
Week 3	Sep 1: Earth Materials	Sep 3: Igneous Rocks	Ch. 4
Week 4	Sep 8: Sedimentary Rocks	Sep 10: Sedimentary Rocks	Ch. 6, 7
Week 5	Sep 15: Metamorphic Rocks	Sep 17: Deforming Rocks	Ch. 7, 8
Week 6	Sep 22: Volcanoes	Sep 24: Geologic Time	Ch. 5, 9
Week 7	Sep 29: Structure of N America	Oct 1: Earthquakes	Ch. 21 (part), 10
Week 8	Oct 6: Midterm Exam	Oct 8: Earthquakes	Ch. 10
Week 9	Oct 13: Exploring Earth's Interior	Oct 15: Formation of Earth's Major Layers	Ch. 11, 20 (part)
Week 10	Oct 20: the Climate System	Oct 22: Landscape Evolution	Ch. 12, 16
Week 11	Oct 27: Hydrologic Cycle and Groundwater	Oct 29: Stream Transport	Ch. 17, 18
Week 12	Nov 3: Stream Transport	Nov 5: Coastlines and Oceans	Ch. 18, 19 (part)
Week 13	Nov 10: Resources and Sustainability	Nov 12: Resources and Sustainability	Ch. 13
Final	Thursday Nov 19 8:00-10:00 AM		

We will cover all chapters in *Understanding Earth (8th Ed.)* except Ch 15 and 22

Academic Conduct:

Plagiarism - presenting someone else's ideas as your own, either verbatim or recast in your own words - is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Part B, Section 11, "Behavior Violating University Standards" policy.usc.edu/scampus-part-b. Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, <http://policy.usc.edu/scientific-misconduct>.

Support Systems:

Student Counseling Services (SCS) - (213) 740-7711 - 24/7 on call

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention. engemannshc.usc.edu/counseling

National Suicide Prevention Lifeline - 1 (800) 273-8255

Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week. www.suicidepreventionlifeline.org

Relationship and Sexual Violence Prevention Services (RSVP) - (213) 740-4900 - 24/7 on call

Free and confidential therapy services, workshops, and training for situations related to gender-based harm. engemannshc.usc.edu/rsvp

Sexual Assault Resource Center

For more information about how to get help or help a survivor, rights, reporting options, and additional resources, visit the website: sarc.usc.edu

Office of Equity and Diversity (OED)/Title IX Compliance - (213) 740-5086

Works with faculty, staff, visitors, applicants, and students around issues of protected class. equity.usc.edu

Bias Assessment Response and Support

Incidents of bias, hate crimes and microaggressions need to be reported allowing for appropriate investigation and response. studentaffairs.usc.edu/bias-assessment-response-support

The Office of Disability Services and Programs

Provides certification for students with disabilities and helps arrange relevant accommodations. dsp.usc.edu

Student Support and Advocacy - (213) 821-4710

Assists students and families in resolving complex issues adversely affecting their success as a student EX: personal, financial, and academic. studentaffairs.usc.edu/ssa

Diversity at USC

Information on events, programs and training, the Diversity Task Force (including representatives for each school), chronology, participation, and various resources for students. diversity.usc.edu

USC Emergency Information

Provides safety and other updates, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible. emergency.usc.edu

USC Department of Public Safety - UPC: (213) 740-4321 - HSC: (323) 442-1000 - 24-hour emergency or to report a crime.

Provides overall safety to USC community. dps.usc.edu