

Geology of Planet Earth
GEOLOGY 101 F 11:00 a.m. – 1:45 p.m.

Instructors: Dr. Richard Heermance and Dr. Elena Miranda

Heermance Office: Live Oak Bldg., Room 1212B; Email: richard.heermance@csun.edu

Miranda Office: Live Oak Bldg., Room 1204; Email: elena.miranda@csun.edu

Miranda Office Hours: (Aug. 27-Oct. 5) Fridays 2:00 p.m. - 3:00 p.m., or by prior appointment.

Heermance Office Hours: (Oct. 8 – Dec. 7) Tuesday, 1:30-3:30 p.m. or by prior appointment.

TEXTBOOK: The Essential Earth (1st or 2nd edition), by Thomas H. Jordan and John Grotzinger

SYLLABUS

Course objectives:

This course will introduce you to geology, which is *the scientific study of the origin, history, and structure of the Earth*. Through the study of minerals, rocks, topography, bathymetry, geologic hazards and natural resources, you will gain a deeper and more critical understanding of the active and dynamic world around you. Geology incorporates traditional concepts in chemistry, mathematics, and physics for application to the study of dynamic Earth processes. The material covered in this course is presented at a level appropriate for a non-science major college freshman. The course is intended to provide you with a better understanding of your natural surroundings so that you can better enjoy your physical environment and make informed decisions about the myriad of problems facing it.

Professional geologists in industry (eg. petroleum), education, and research are particularly active in the state of California. This course will give you an overview of some of these fields that include: environmental science, engineering geology, hydrogeology, atmospheric and oceanographic science, earthquake geology and geophysics.

Class Structure:

This class is a hybrid geology course currently team-taught by two professors in ~3 hours blocks on Fridays. Because of this unique block of time, this course will combine both traditional lecture with daily classroom exercises, field trips, multimedia presentations, and discussion forums. As such, attendance is essential to get the most out of this class. You should come to class each day prepared to discuss geology, walk around outside if necessary, and take notes on the material. In addition, the geology department has provided funds to support transportation for two field trips DURING CLASS TIME (see course schedule below). These trips will allow you to practice geology “in the field” and have hands-on experience with geological methods. Homework assignments will be distributed in class and/or on Moodle.

The first half of the class will be taught by Dr. Miranda, and she will be responsible for the course grades from August 31-October 12. Dr. Heermance will teach the latter half of the course, and he will be responsible for your class grades from October 13-December 14.

POLICIES

1. **Please adhere to our posted office hours or make an appointment *in advance*; the hour before class is our preparation time, and we do not have time to speak with you about office hours matters.**
2. As a rule of thumb, one unit of undergraduate course credit for an average student at an accredited university (that's CSUN!) will require 2 hours of outside study. This course is worth 3 credits; an average student (C grade) can expect to work at least 6 hours *outside of class* for this course per week. If you want to earn a B or an A in the course, then you should expect to work more hours than the minimum expectation. We expect that you will spend at least this amount of time outside of lecture reading the textbook *before* coming to class, doing the lecture homework, using the resources on Moodle and reviewing/studying key concepts. We expect punctual attendance, participation, and mental engagement in the lectures. We encourage you to take advantage of office hours and the classroom forum for your learning; we are here to help you with your learning process. **That being said, we want to emphasize that the responsibility for learning the material is ultimately yours.** Learning new material means that you have internalized and retained new concepts well enough to apply to new situations to solve geologic problems—this comes with time and effort.

Some tips for how to succeed in this class:

- **Read your syllabus** and follow the policies outlined within it.
 - **Ask questions** in class if you do not understand a concept.
 - Be fully engaged in the material during class. You can minimize study time if you **come to class** and give it your **full attention**.
 - **Read** ahead and write down your questions. You'll enjoy it and be more engaged in the class.
 - Explore methods of how to **take notes** with PowerPoint lectures.
 - **Complete all assignments** and turn them in on time.
 - If you miss a lecture – **read** the material and get a copy of the notes from a classmate.
 - If you don't do well on the first exam, come to office hours and **ask for help** right away.
 - If you have questions or thoughts, **come by during office hours**; this is designated time for you to use.
 - **Check your final exam schedule** for ALL your classes NOW for any conflicts.
3. It is the student's responsibility to know and follow the rules and policies that I have outlined in this syllabus. You agree to abide by these policies by accepting this syllabus and any subsequent updated syllabi that are posted on Moodle.
 4. All course material will be posted in Moodle, with some important course information sent on the Moodle News Forum, which is also sent to your CSUN email. Check your email account or Moodle for important 'GEOL 101' messages. University policy states that you are responsible for course information sent via email. Your responsibility includes keeping your inbox under quota in order to receive incoming messages, understanding how to

forward email to an off-campus account (if you choose to do so), understanding how to download and save files shared via Moodle, and following instructions and due dates for assignments, announcements, or queries sent via Moodle News Forum. Be advised: we do not re-send or forward course email correspondence to alternate email addresses for students who cannot successfully forward their CSUN email to an off-campus account.

5. PowerPoint lectures will be made available to you for download on Moodle. A word to the wise: this is not a substitute for attending class! Updated syllabi will also be available on Moodle. You are responsible for all updated due dates for assignments, exams, and activities in the updated syllabi.
6. No late work will be accepted or graded for feedback. We are extremely strict about this policy. An assignment is considered 'late' whether it is turned in one minute or one hour after a deadline.

EVALUATION DETAILS

EXAMS

There will be two exams in this course. Each exam will be a combination of multiple choice, true-false, and matching questions, and each will be taken on SCANTRON FORM **19641**. Please be sure to have purchased your own scantron prior to coming to the exam.

GRADING

• Homework Assignments (~4)	30%
• Midterm (October 12)	20%
• Final Exam (Friday, Dec 14, 10:15 AM– 12:15)	25%
• Participation on BOTH field trips	10%
• Class projects, quizzes, and attendance	15%

You are required to take the exams as they are scheduled. We do not give make-up exams.

Therefore, if you miss an exam, a grade of '0' will be recorded. Be sure to check the exam schedule *immediately* so that you avoid missing any exams; buying a plane ticket home prior to the exam time, or failing to show up to the designated exam time are not valid excuses, and will result in you receiving a grade of '0'. If you miss an exam due to an *extraordinary* circumstance (such as a serious illness or a medical or family emergency), you must have official documentation available for us to verify those circumstances, and you must supply that documentation within 24 hours of the exam date. In the event of such an emergency, the suitability of the documentation and administration of make-up exams is entirely at our discretion. You are required to contact us well in advance of such an event, or within 24 hours of an unforeseen event. You will not be eligible to take a make-up exam if you do not follow these directions.

The plus/minus letter grading system will be used for this course. **Your overall grade is NOT CURVED, although individual assignments or exams may be curved at the professors' discretion.** In the event that you have a borderline grade, your attendance, class participation,

and overall effort dedicated to the course will be used as a basis for assigning you a grade. The grading scale for the graded option is as follows:

B+ = 87-89	A = 93-100	A- = 90-92
C+ = 77-79	B = 83-86	B- = 80-82
D+ = 67-69	C = 73-76	C- = 70-72
F = < 60	D = 63-66	D- = 60-62

I do not give 'Incompletes' for grades. No exceptions.

MISSED CLASSES

We expect that you will attend every class unless you are seriously ill. Attendance is a factor in assessing your commitment to the course, and should your grade fall on a borderline between two letter grades, attendance may be used as a deciding factor. Class attendance will be judged in a variety of ways, including completion of in-class assignments and role.

If you choose to drop the course, it is your responsibility to formally drop the class; we will not administratively drop you from the course. Under normal circumstances, you cannot drop the course after the second week. Only with proof of a serious and compelling reason (see Schedule of Classes) will a student be allowed to drop after the second week. If you decide to drop, please let us know so that a student on the waiting list may take your spot instead.

CLASSROOM ETIQUETTE

Cell phones and pagers are an unwanted and rude distraction during the lecture. Either turn them off during class, or do not bring them to class.

Make every attempt to get to class on time. Lectures begin promptly at the start of class; if you are late, it is your responsibility to get notes from another student. If you must be late to class due to an unforeseen event, enter the room as quietly as possible so as to not disturb your fellow students. You are already familiar with the parking and traffic situations in the Los Angeles area; these are not valid excuses for being late.

ACADEMIC DISHONESTY

Official California State University policy states: "The maintenance of academic integrity and quality education is the responsibility of each student within this university and the California State University system. Cheating or plagiarism in connection with an academic program at a campus is listed in Section 41301, Title 5, California Code of Regulations, as an offense for which a student may be expelled, suspended, or given a less severe disciplinary sanction. Academic dishonesty is an especially serious offense and diminishes the quality of scholarship and defrauds those who depend upon the integrity of the campus programs. Such dishonesty includes but is not limited to: cheating, fabrication, facilitating academic dishonesty, and plagiarism."

We do not tolerate any form of academic dishonesty. We expect that you will uphold the integrity of the academic environment here at CSUN; however, if we find evidence of academic dishonesty, we will report such evidence to the Office of the Vice President for Student Affairs and recommend disciplinary action. If you are caught cheating in this class, you will be given a failing grade for the assignment and the course. This includes, but is not limited to: plagiarism, copying answers during an exam, facilitating cheating by another student, altering a test grading sheet after the exam, or lying about an excuse for missing the exam. Plagiarism includes the use of paragraphs or even long phrases and diagrams or parts of diagrams from peer or former student assignments.

SCHEDULE

The relevant reading assignments are listed next to the lecture dates throughout the semester; the reading is to be done BEFORE coming to class.

WEEK 1 Aug. 31	Miranda: Why We Study Earth and How We Study Earth (Chapters 1 and 2)
WEEK 2 Sept. 7	Miranda: Plate Tectonics (Chapter 3)
WEEK 3 Sept. 14	Miranda: Earth Materials (Chapter 4) Homework #1 DUE
WEEK 4 Sept. 21	Miranda: Igneous Processes and Volcanism (Chapter 5)
WEEK 5 Sept. 28	Miranda: Deformation & Metamorphism (Chapter 7) Homework #2 DUE
WEEK 6 Oct. 5	<i>Field Trip: San Andreas Fault</i>
WEEK 7 Oct. 12	Heermance: EXAM and Sedimentation (Chapter 6) MID-TERM EXAM Field Trip Report DUE in MOODLE prior to start of class on Oct. 12.
WEEK 8 Oct. 19	Heermance: Shaping Earth's Surface (Chapters 6 & 8)
WEEK 9 Oct. 26	Heermance: The Hydrologic Cycle and Groundwater (Chapter 11)
WEEK 10 Nov. 2	<i>Field Trip: Lakeview Terrace Recreation Center</i> Homework #3 DUE

WEEK 11 Heermance: Timing in the Geologic Record and Earth History (Ch 8-9)
Nov. 9 **Field Trip Report DUE in MOODLE prior to start of class.**

WEEK 12 Heermance: The Climate System and Glaciation (Chapter 10)
Nov. 16

WEEK 13 THANKSGIVING BREAK: NO CLASS
Nov. 23

WEEK 14 Heermance: Human impact on Earth's Environment (Chapter 14)
Nov. 30 **Homework #4 DUE**

WEEK 15 Miranda: Earthquakes and Earth Structure (Chapter 13)
Dec. 7

FINAL EXAM
Dec. 14 Friday, 10:15 a.m. – 12:15 a.m.