

# Geology of Planet Earth

Spring 2012 Syllabus - GEOL 101

Meet at 9:30-10:45 am, T/Th, Live Oak Hall, Room #1231

As in geology, so in social institutions, we may discover the causes of all past changes in the present invariable order of society...

—Henry David Thoreau



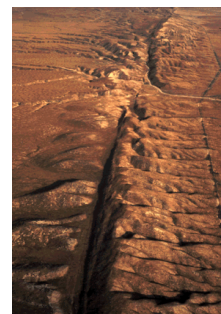
Professor: Dr. Dayanthie Weeraratne  
Email: [dsw@csun.edu](mailto:dsw@csun.edu)  
Office hours: Thursdays 3:00- 5:00 pm or by appointment  
Office: Live Oak Hall Rm# 1203  
Class webpage: <http://www.csun.edu/~dsw/geo101.htm>

**Required Text:** Physical Geology, (CSUN edition or older) by Plummer, McGeary, and Carlson  
*Library:* 2 copies will be made available on reserve in the Oviatt library

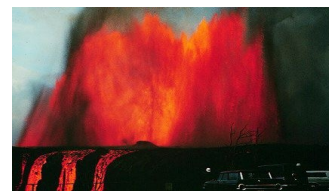
**Field Trip !!!** to the San Andreas Fault saturday, April. 28, 2012 Two trips starting at 8 am and 1pm)

**Course Objectives:** This course will introduce you to geology, the scientific study of the origin, history, and structure of the earth. Through the study of ordinary rocks, topographic features, and natural events, you will gain a deeper and more critical understanding of the active and dynamic world around you. When you have completed this course you will have gained a basic understanding of Earth processes such as its origin in the solar system, plate tectonic theory, and Earth materials. You will learn about hazards and resources in your environment including earthquakes, volcanoes, landslides, and energy and mineral resources and how they apply to you as a resident of southern California and the world.

Geology incorporates traditional concepts in chemistry, mathematics, and physics applied to the study of mineral compositions and physical tectonic processes. Material covered in this course is presented at a level appropriate for a college freshman who is not a science major.



San Andreas Fault



Kilauea Volcano Eruption



GPS receiver installation

Professional geologists in industry, education, and research are particularly active in the state of California. This course will give you an overview of some of these fields including environmental science, engineering geology, hydrogeology, atmosphere and oceanographic science, earthquake geology and geophysics

### Tentative Course Outline:

Week	Date	Topic	Chapter
1	01/24, 01/26	Intro to Geology, Geologic Resources, Plate Tectonics	1, 19, 21
2	01/31, 02/02	Plate Tectonics and the Seafloor	18, 19
3	02/07, 02/09	Atom and Minerals	2
4	02/14, 02/16	Rock cycle, Igneous rocks, and Volcanoes	3,4
5	02/21, 02/23	Weathering and Sedimentary rocks	5,6
6	02/28, 03/01	Metamorphic Rocks, Time and Geology	7,8
7	03/06,03/08	<b>MIDTERM #1</b> (03/06, Chapters 1-8, 18,19) Campus Geo-Walk (03/15, <i>Required</i> – 25 pts! Meet in class.)	
8	03/13, 03/15	Mass Wasting , Streams and Floods	9, 10
9	03/20, 03/22	Groundwater	11
10	03/27, 03/29	Climate Change, Glaciers Class Debate on Climate Change - <i>Required</i> (03/29)	12
11	04/03, 04/05	<b><i>Spring Break</i></b>	
12	04/10, 04/12	Beaches & Coasts, Desert & Wind Erosion	13,14
13	04/17, 04/19	Geologic Structures	15
14	04/24, 04/26	<b>MIDTERM #2</b> (04/26, Chapters 8-14) Earthquakes <i>Class Field Trip to San Andreas Fault! (Saturday, April 28, 2012)</i> <i>Project Topic Due</i> (04/24)	16
15	05/01, 05/03	Earthquakes <i>Project Outline Due</i> (05/01)	16
16	05/08, 05/10	Earth's Interior: Crust - Mantle - Core <i>Final Class Project Due and Presentation</i> (May 10, 2012)	17
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FINAL	12/13, Wednesday	<b>Final Exam, May 15, 2012</b> (08:00 am – 10:00) ! Room: LO #1231 (cumulative, Chapters 1-21)	

<b>Course Evaluation:</b>	<u>Points</u>
- Two midterms (100 pts each).	200
- Final Exam	100
- Paper (70 pts)	70
- 10 homework sets (~15 pts each)	150
- Campus GEO-Walk report	25
- Climate Change Debate	<u>10</u>
Total Points =	555

**Midterms:** You will be graded on two midterms and one final exam. Please bring Scantron Form #882-E and a #2 pencil to all midterms and final exam. *No make up exams* will be given without notice *prior* to that exam date.

**Homework:** Three homework assignments will be assigned previous to each Midterm exam. Please turn these in on time to receive grades and feedback before the exams.

**Term Paper:** A short project will be due on the last day of class (May 10, 2012). You can choose to use several media including a 2 page paper, re-write lyrics to a popular song, theatrical skit, poem, filmed student movie, survey, short experiment, etc. You may work in pairs or groups. All projects must include text (e.g. lyrics, poem, dialogue) which is 2 pages of text per student. You may choose any topic you like related to geology including topics discussed in class. References *must include 2* books or articles in the format examples given. Paper length must be 2 pages, double spaced with 12 point font. *All students are required to present (2-3 minutes) their work in class on May 10, 2012.*

**(Many) Opportunities for Extra Credit :**

Extra Credit Points

*Extra credit points count as 1/3 of a standard class point*

-Field Trip (optional) Saturday April 28, 2012	30
-Movie critique	10
-Daily review questions, (1 pt per question or answer)	0-30
-In class activities	3 each

**Planning to Drop ?** PLEASE let me know ASAP if you are planning to drop the class so others can join. A grade of incomplete (I) will not be used for this course. This class can fulfill a General Education (GE) requirement, but cannot be taken on a credit/no credit basis for this purpose.

**Academic Dishonesty:** I will follow the University's policy on **academic dishonesty** described in the Schedule of Classes. Cheating will result in a zero grade for an exam any assignment and notification to the Dean of Students which can result in disciplinary action. It also defeats your ability to learn and grow. Spend the time to figure it out. You might enjoy it!

**Please be respectful** to those around you in class. Inappropriate behavior will not be tolerated. Please **turn off all electronics** before coming to class (it's only an hour!).

**Some tips for how to succeed in this class:**

1. Ask, ask, ask questions, if you do not understand something or just to participate.
2. "Wherever you go, there you are..." - Be present in the moment. You can minimize study time if you **come to class** and give your **full attention**.
3. **Read** ahead and write down your questions. You'll enjoy it and be more engaged in the class.
4. Keep up with assignments and get them out of the way soon.
5. If you miss a lecture – **read** the material and get a copy of the notes.
6. If you don't do well on the first exam **ask for help** right away, don't put it off.
7. If you have questions or thoughts **come by during office hours**, we're here for **you**.
8. Check your final exam schedule for ALL your classes early – now for any conflicts.
9. If something interests you, explore it! Life is short!