Geology of Planet Earth
Spring 2010 Syllabus - GEOL 101
Meet at 12:30-1:45 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
Office hours: T 3:00–4:00 pm or by appointment
Office: Live Oak Hall Rm# 1203
Class webpage: http://www.csun.edu/~dsw/geo101.htm

Required Text: The Essential Earth by Jordan and Grotzinger
Cheaper options: You can purchase an electronic copy from the publisher for $54 at:
http://courses.bfwpub.com/essentialearth1e.php
Library: Two hard copies will be made available on reserve in the Oviatt library
Field Trip !!! to the San Andreas Fault saturday, April. 24 (8 am - 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.

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:

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>01/19, 01/21</td>
<td>Intro to Geology/Natural Resources</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>01/26, 01/28</td>
<td>How We Study Geology</td>
<td>2, 8</td>
</tr>
<tr>
<td>3</td>
<td>02/22, 02/4</td>
<td>Plate Tectonics</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>02/9, 02/11</td>
<td>Earth Materials: Minerals and Rocks</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>02/16, 02/18</td>
<td>Volcanoes and Igneous Processes</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>02/23, 02/25</td>
<td>Sedimentation: Rocks formed by surface processes</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>03/3, 03/5</td>
<td>Metamorphic Rocks and Deformation,</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>03/9, 03/11</td>
<td>Campus GEO-Walk required (03/11/2009: meet in class 25 pts!)</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>03/16, 03/18</td>
<td>Climate System</td>
<td>10</td>
</tr>
<tr>
<td>10</td>
<td>03/23, 03/25</td>
<td>Water and the Hydrologic Cycle</td>
<td>11</td>
</tr>
<tr>
<td>11</td>
<td>03/30, 04/1</td>
<td>Streams, Coastlines, Wind</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>04/5 - 04/10</td>
<td>SPRING BREAK</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>04/13, 04/15</td>
<td>Earthquakes</td>
<td>13</td>
</tr>
<tr>
<td>14</td>
<td>04/20, 04/22</td>
<td>Earth Structure/Interior</td>
<td>13</td>
</tr>
<tr>
<td>15</td>
<td>04/27, 04/29</td>
<td>History and Formation of the Earth/Human Impact</td>
<td>9</td>
</tr>
<tr>
<td>16</td>
<td>05/4, 05/6</td>
<td>Term Project Due (05/6), Presentations</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>05/10-05/15</td>
<td>Final Exam (Date TBA), Room: LO #1231</td>
<td></td>
</tr>
</tbody>
</table>

### Course Evaluation:

- Two midterms (100 pts each).  
- Final Exam  
- Paper (75 pts)  
- 3 homework sets (40 pts each)  
- Campus GEO-Walk report  

**Total = 520 Points**

**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 requiring extenuating circumstances.

- Midterm 1 covers Chap. 1-8  
- Midterm 2 covers Chap. 10-13  
- Final Exam is cumulative covers Chap. 1-13

**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 on May 6, 2010. Your project will state a *scientific hypothesis*, and do research to prove or disprove this statement. You can choose to use several media including a 2 page paper, re-write lyrics to a popular song, theatrical skit, poem, or filmed student movie. 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. Your topic is due April 13, 2010. A paper outline is due April 20, 2009. The final term paper is due, May 6, 2010. *Extra credit* points will be given to students who briefly present (3 minutes) their work in class on the last day.
(Many) Opportunities for Extra Credit:

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

- Personal interest sheet (must turn into my office in person) 5
- Field Trip (optional) Saturday Nov 15, 2008 30
- Earthquake Kit 10
- Movie critique 10
- Daily review questions (1 pt per question) -
- In class activities -

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. Explore methods of how to take notes with power point lectures
5. Keep up with assignments and get them out of the way soon.
6. If you miss a lecture – read the material and get a copy of the notes.
7. If you don't do well on the first exam ask for help right away, don't put it off.
8. If you have questions or thoughts come by during office hours, we're here for you.
9. Check your final exam schedule for ALL your classes early – now for any conflicts.
10. If something interests you, explore it! Life is short!