Geology 300
ENVIRONMENTAL GEOLOGY
Spring 2019

Instructor: Karen Savage
Phone: (818) 677-2511, 818-677-3541 (Dept of Geological Sciences office)
Office: Room 1214, Live Oak Hall
Office Hours: TuTh 9:00-9:30am, Tu 2:30-3:30pm, and by appointment
Email: karen.savage@csun.edu


Meeting time: 11:00a-12:15p, Rm LO1219

Course Objectives: Environmental geology is a multi-disciplinary science that includes the studies of geology, and other sciences as they relate to our environment. This course will familiarize you with the key concepts and terminology surrounding the Earth sciences and its association within the concept of the environment. This includes, but is not limited to, the chemistry, biology, and physics of the Earth sciences. We will examine many real-world examples of how geologic concepts are applied from governmental institutions to pure science that affect your everyday lives. By the end of the course, you should be familiar with the different geologic environment problems (such as mining waste) and what attempts have been made to mitigate these issues. Environmental geology is a multi-disciplinary science that encompasses a wide swath of societal and political issues mixed with the physical sciences of the Earth. This course fulfills the upper division general education science requirement and has an optional lab (Geology 301, only offered online).

Student learning outcomes:
• Comprehend, interpret and analyze written, oral and graphical information in applying the scientific method to problems in natural science.
• Identify geologic issues and societal impacts.
• Political and social attempts to mitigate issues with living on the Earth.
• Evaluate the logic, validity and relevance of information in assessing Environmental Geology and the evolution of the Earth.

Tentative Schedule:

<table>
<thead>
<tr>
<th>Week</th>
<th>Dates</th>
<th>Assignments and Additional Readings (on Canvas where available)</th>
<th>Tuesday</th>
<th>Thursday</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jan 22, 24</td>
<td>Sowell Insurance, In-Class Exercise</td>
<td>Introduction to the course, syllabus, Economics, Data, Decisions, Politics, etc.</td>
<td>Ch. 1 Planet and Population</td>
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<td>2</td>
<td>Jan 29, 31</td>
<td>Critical Thinking Paper Guidelines</td>
<td>Ch 2 Rocks and Minerals</td>
<td>Ch. 2 Rocks and Minerals</td>
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<tr>
<td>3</td>
<td>Feb 5, 7</td>
<td>Earthquake Preparedness Exercise issued</td>
<td>Ch. 3 Plate Tectonics</td>
<td>Ch. 3 Plate Tectonics</td>
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<tr>
<td>4</td>
<td><strong>Feb 12, 14</strong></td>
<td>Ch. 4 Earthquakes, Critical Thinking Project subject due Feb 12th</td>
<td>Ch. 4 Earthquakes</td>
<td>Ch. 4 Earthquakes</td>
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<tr>
<td>5</td>
<td>Feb 19, 21</td>
<td>In-Class Exercise</td>
<td>Ch. 5 Volcanoes</td>
<td>Ch. 6 Streams and Flooding</td>
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<tr>
<td>6</td>
<td>Feb 26, <strong>28</strong></td>
<td>Nature Unbound Chapters 1-4 by Exam 1</td>
<td>Ch. 6 Streams and Flooding</td>
<td>Exam 1 (ch 1-6, Nature Unbound: 1-4)</td>
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<td>7</td>
<td>Mar 5, 7</td>
<td></td>
<td>Ch. 7 Coastal Zones and Processes</td>
<td>Ch. 8 Mass Movements</td>
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<td>8</td>
<td>Mar 12, 14</td>
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<td>Ch. 8 Mass Movements</td>
<td>Ch. 9 Ice and Glaciers, Wind and Deserts</td>
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<tr>
<td><strong>Mar 19, 21</strong></td>
<td>Spring Break, no classes</td>
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Grade calculation:

Exam 1 100 points
Exam 2 100
Exam 3 (Final) 100
Critical Thinking Project 100
In-class exercises 100

500 points

Grading- Please do your best with each assignment, as I do not offer extra credit. If you wish to get an A in the course, please give your best all semester long; do not expect to be rescued near the end of the semester with extra credit or extensions on assignment deadlines. I use the plus/minus grading system. Grades will be assigned as follows:

100-93.5=A, 93.4-90=A-, 89.4-86.5=B+, 86.4-83.5=B, 83.4-80=B-, 79.4-76.5=C+, 76.4-73.5=C, 73.4-70=C-, 69.4-66.5=D+, 66.4-63.5=D, 63.4-60=D-, ≤59.4=F

The lecture exams will consist of all reading materials and lecture material to date including this syllabus. You will have two midterms and a final for a total of 3 lecture exams. The final will be accumulative.

Critical Thinking Project will consist of tackling a current or past issue related to environmental geology. This can be done through examining policies, regulations, economics, etc. as it associates with geological phenomena. However, the main sticking point will be to take a critical look at the information available and scrutinize the current state of knowledge and any implications associated with environmental geology.

In-Class Exercises will consist of a group exercise with 2 or 3 other members of the class. You will be provided a short answer question and a time frame to complete the answer. These questions will often have multiple parts that need addressed and will take careful studying to provide a solid answer. A time limit of 15 to 30 minutes will usually be allotted to answer the question depending on the difficulty. The Emergency Preparedness Exercise is considered one of your in-class assignments.

Electronic Devices have recently been scrutinized for optimal learning and fostering or improving learning retention. Unfortunately, electronic devices fail this scrutiny, and as such will not be allowed in the classroom². This means no cell phone, personal computer, or other electronic device may be used. If you have a documented reason to forgo this rule, come see me.
Additional Information-

**Academic Honesty and Integrity:** This class will strictly follow the California State University, Northridge policy and guidelines for dishonest work of any kind. Any cheating/plagiarizing will be immediately referred to the appropriate authority for further review and disciplinary action to be taken. You can view the following policy online at: http://catalog.csun.edu/policies/academic-dishonesty/

**Other Key Points—**

**Class Attendance** is mandatory based on the strong correlations between student grade and GPA in association with class attendance. This class will primarily be based off lecture and discussions during the semester. No make-up tests, or graded materials will be granted, nor will any late assignments be accepted. If you have an outstanding circumstance that you think is reasonable to forgo this rule that can be documented (e.g. valid doctor's note or jury summons), come see me.

**Grades are not negotiable.** Grades are earned by the student per the breakdown above and may be kept up with during the semester. I will be glad to meet with you if you have concerns about your grade during the semester, but by the last couple of weeks it is too late.

It is the responsibility of each student in this course to know and follow all written guidance given by the instructor in this class.

These policies and schedules are subject to change in the event of extenuating circumstances.

**References:**