Geology 301 – Physical Geology Lab

Course Syllabus
Spring 2019: January 23 – May 20
Monday, 7:30 – 8:50 p.m.
Wednesday, 7:30 – 8:50 p.m.

Instructor: Steve Sterling (M.S. Geology, MBA)
California State Licenses: Professional Geologist
Professional Geophysicist
Certified Hydrogeologist
Certified Engineering Geologist
Senior Engineering Geologist, State of California
Dept. of Toxic Substances Control

How I can be reached:
Office Hours: Mondays, 5:00-6:00 p.m., Room: Science 424
Wednesdays, 5:00-6:00 p.m., Room: Science 424

Cell Phone: (530) 906-9231
Home Phone: (530) 888-1081

E-mail: SterliS@arc.losrios.edu

Course description and Student Learning Outcomes:

This course encompasses the study and identification of common rocks and minerals, the interpretation and recognition of geologic structures and landforms, interpretation of maps, aerial photographs, remote sensing images, seismic information, analysis of geologic hazards, and field observations of the local geology.

Upon completion of this course, the student will be able to:

- Identify and classify minerals by their physical properties.
- Evaluate rock samples and differentiate between igneous, sedimentary, and metamorphic rocks.
- Appraise major types of aerial photographs, remote sensing imagery, and topographic and geologic maps and interpret geologic information from them.
- Interpret ancient geologic, geographic, and environmental settings by using sedimentary rocks.
- Formulate views of Earth’s interior based on analyzing seismic information.
- Explain major Earth features to demonstrate understanding of plate tectonic process.

Course / Instructor Website: http://physicalgeology301.weebly.com/

Grading Standards:  
100 – 90% = A  
89 – 80% = B  
79 – 70% = C  
69 – 60% = D  
59 – 0% = F  
There is no “curve.”

Final Grade: The final grade will be based on the following points:

Exam 1 – Mineral identification. (Feb. 6) 100 pts.
Exam 2 – Rock identification. (Feb. 25) 100 pts.
Exam 3 – Topographic maps. (March 25) 100 pts.
Exam 4 – Geologic maps. (April 10) 100 pts.
Exam 5 – Groundwater and volcanic hazards. (April 29) 100 pts.
Exam 6 – Earthquake Hazards. (May 20) 100 pts.

Attendance: Regular attendance is essential to succeed in this class.

Policy Regarding Academic Dishonesty Academic Dishonesty is not permitted and will result in an “F” grade (zero points) on the corresponding exam or homework assignment. Academic Dishonesty consists of phone use of any kind during an exam, copying from another student during exams, and plagiarism on homework.

Corequisite / Prerequisite Lecture Class: GEOL 300: Physical Geology Lecture.

Earth Science Degrees Offered at ARC: Geology (A.S. Degree)  
Geography (A.S. Degree)  
GIS (A.S. Degree)
<table>
<thead>
<tr>
<th>DATE</th>
<th>TOPICS DISCUSSED</th>
<th>READ CHAPTERS</th>
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</thead>
<tbody>
<tr>
<td>Mar. 25 (Mon.)</td>
<td>Exam 3 – Topographic maps and profiles</td>
<td>None</td>
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<tr>
<td>Mar. 27 (Wed.)</td>
<td>Introduction to Geologic Maps.</td>
<td>Chap. 13, p.246-252</td>
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<tr>
<td>April 1 (Mon.)</td>
<td>Geologic Maps.</td>
<td>Chap. 15, p.279-288</td>
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<tr>
<td>April 3 (Wed.)</td>
<td>Geologic Maps and Geologic Cross Sections.</td>
<td>None</td>
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<tr>
<td>April 8 (Mon.)</td>
<td>Geologic Maps and Geologic Cross Sections.</td>
<td>None</td>
</tr>
<tr>
<td>April 10 (Wed.)</td>
<td>Exam 4 – Geologic Maps.</td>
<td>None</td>
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<tr>
<td>April 15 - 19</td>
<td>No Class – Spring Break</td>
<td>None</td>
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<tr>
<td>April 22 (Mon.)</td>
<td>Groundwater.</td>
<td>Chap. 9, p. 167-172</td>
</tr>
<tr>
<td>April 24 (Wed.)</td>
<td>Groundwater (continued). Review for Exam.</td>
<td>None</td>
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<tr>
<td>April 29 (Mon.)</td>
<td>Exam 5 – Groundwater and Volcanic Hazards.</td>
<td>None</td>
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<tr>
<td>May 1 (Wed.)</td>
<td>Earthquake hazards.</td>
<td>Chap. 16, p.305-311</td>
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<tr>
<td>May 6 (Mon.)</td>
<td>Earthquake hazards.</td>
<td>None</td>
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<tr>
<td>May 8 (Wed.)</td>
<td>Earthquake hazards.</td>
<td>None</td>
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<tr>
<td>May 13 (Mon.)</td>
<td>Earthquake hazards.</td>
<td>None</td>
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<tr>
<td>May 15 (Wed.)</td>
<td>Earthquake hazards. Review for final exam.</td>
<td>None</td>
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<tr>
<td>May 20 (Mon.)</td>
<td>Final Exam – Earthquake Hazards.</td>
<td>None</td>
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*Exam Time: 8:00-10:00 p.m., Room 424.*