

# Geology 1: Physical Geology

## *Reedley College Fall 2012 Syllabus*

**Instructor:** Susan Bratcher

**Email:** susan.bratcher@reedleycollege.edu

**Alternate Email:** subratcher@csufresno.edu

**Office Hours:** By Arrangement

**Voice Mail:** 559-278-2975

**CRN:** 52555

**Class Meeting:** Wed. 11am – 11:50am, Phy 75

Fri. 11am – 3:50pm, PHY 75

**Required Textbook:** Earth, Tarbuck & Lutgens, 10<sup>th</sup> ed.

### **Requirements:**

This course requires the students to read the text chapters assignments.

### **Catalog Description:**

Introduction to the forces and processes shaping the surface of the earth. These include plate tectonics, igneous intrusion, volcanism, formation of sediment and sedimentary rock, metamorphism, earthquakes, and the formation of mountain belts. Other topics covered include faulting and folding of rock, time and its implications, formation of geologic resources (metals and petroleum), ocean basins and coasts, surface water/flooding and groundwater. Rock and mineral identification is taught in lab. May Include several field trips to emphasize class material.

### **Course Outcomes:**

Upon completion of this course, students will be able to:

- A. Differentiate common rocks and minerals
- B. Understand the theory of plate tectonics and formulate an hypothesis as to how it is responsible for shaping the surface of the earth
- C. Illustrate on topographic maps, aerial photographs, and earth satellite images the most common locations of earthquakes
- D. Compare and contrast how and where different types of rocks are formed (igneous, sedimentary and metamorphic rocks)
- E. Organize geologic hazards such as earthquakes, volcanism, flooding, and landslides into specific groups and compare their origins

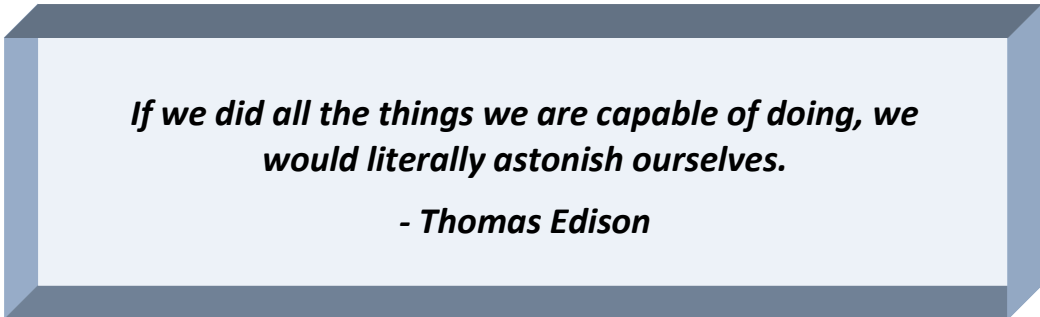
## Course Objectives:

In the process of completing this course, students will:

- A. Understand the theory of plate tectonics and know how the movement of the Earth's plates is responsible for shaping the surface of the earth
- B. Discuss how, where, and why different types of rocks form, specifically with regard to plate tectonics.
- C. Recognize how rocks deform
- D. Identify minerals and understand their chemistry
- E. Understand how, where, and why earthquakes occur
- F. Describe surficial geologic processes and understand how they shape the earth's surface
- G. Explain how geologic resources are formed and how they are extracted
- H. Discuss geologic time and its implications

## Class Notes

This class is a Web-Enhanced class. Web-Enhanced classes meet during regularly scheduled class times, and use Blackboard or other technology to deliver class materials.



*If we did all the things we are capable of doing, we  
would literally astonish ourselves.*

*- Thomas Edison*

## Attendance

It is important that you attend all of the class meetings. If you are absent from class, it is your responsibility to check on announcements made while you were away. Because we only meet twice a week, one absence is a great deal of material missed. Every student is responsible for all material covered in class, whether or not they attended class or not.

## Make-ups

I understand that sometimes things happen that cannot be avoided. Because of this lowest quiz score and the lowest lab score will be dropped. Lab and exam make-ups **are not permitted** unless, due to extenuating circumstances, prior arrangements are made. **Late work is not accepted and quizzes cannot be made up.**

## Grading

### **Class Participation:**

**5%**

Class participation includes punctuality, professional attitude, preparation for class, involvement in activities, consideration of instructor, classmates and class materials. I will not reward bad attitudes, tardiness, or absenteeism.

**Quizzes and Class Assignments:**

**20%**

Most class quizzes will be given on blackboard or in the first 15 minutes of class. Quizzes will most likely consist of multiple choice and true false questions. No make-ups for quizzes will be given.

**Exams**

**40%**

Four exams will be given throughout the semester. The final exam will be comprehensive consisting of multiple choice, true/false and several short essay questions taken from the first 3 exams. The dates for all exams may be found in the course schedule, each student is responsible for knowing those dates.

**Lab Grade:**

**20%**

The lab portion of the class is worth 20% of your grade. Labs are due at the end of the lab period unless prior arrangements are made with the instructor. Any lab not turned in by the start of the next lab period will be considered a missed lab and constitutes as a zero. Labs cannot be made up.

**Student Presentations:**

**15%**

The purpose of student presentations is to give students the opportunity to delve deeper into one specific topic in geology. All students are required to give a 13-15 minute presentation or lead the class in hands-on activity. Each presentation should be accompanied by a brief 2 page essay of the information covered in the presentation.

**Due Dates:**

Topic Signup: September 19<sup>th</sup>

Presentation Overview / Summary Due: October 24<sup>th</sup>

2 page Essay Due: at time of presentation

**Grade Scale**

<u>Grades</u>	<u>Percent</u>
A	89.5 – 100
B	79.5 – 89.4
C	69.5 – 79.4
D	59.5 – 69.4
F	<59.5

***Grade Breakdown***

*Participation 5%*

*Quizzes and Homework 20%*

*Lab Assignments 20%*

*Exams 40%*

*Presentation & Lesson plan 15%*

**How to do well in Class**

Most importantly – **show up** for class! Some other tips include:

- Read the associated textbook materials before class.
- Arrive on time and stay the full period.
- Follow the introductory lab lectures/discussions and take good notes.
- Stay focused and work attentively throughout the class period.
- DO YOUR OWN WORK (see cheating and plagiarism below).
- Write clear and specific answers to the assigned questions.
- Turn in homework assignments on time.
- Turn in your lab work at the end of the period (unless instructed otherwise)
- READ ASSIGNMENTS CAREFULLY.

## **Reedley College Policies**

Being disruptive in class, talking on cell phones, chewing tobacco, reading newspapers in class, using computers for any other reason than for course work or other distracting behavior, is unacceptable. Reedley College's Student Code of Conduct Policy (Board Policy 5520 and Educational Code 76032) authorizes an instructor to remove a disruptive student from his or her class for the day of the removal and the next class meeting. The instructor shall immediately report the removal to the Vice President of Student Services. During the period of removal, a student shall not be returned to the class from which he or she was removed without the concurrence of the instructor of the class.

## **Academic Honesty**

Students at Reedley College are entitled to the best education that the college can make available to them, and they, their instructors, and their fellow students share the responsibility to ensure that this education is honestly attained. Because cheating, plagiarism, and collusion in dishonest activities erode the integrity of the college, each student is expected to exert an entirely honest effort in all academic endeavors. Academic dishonesty in any form is a very serious offense and will incur serious consequences.

### **Cheating**

Cheating is the act or attempted act of taking an examination or performing an assigned, evaluated task in a fraudulent or deceptive manner, such as having improper access to answers, in an attempt to gain an unearned academic advantage. Cheating may include, but is not limited to, copying from another's work, supplying one's work to another, giving or receiving copies of examinations without an instructor's permission, using or displaying notes or devices inappropriate to the conditions of the examination, allowing someone other than the officially enrolled student to represent the student, or failing to disclose research results completely.

### **Plagiarism**

Plagiarism is a specific form of cheating: the use of another's words or ideas without identifying them as such or giving credit to the source. Plagiarism may include, but is not limited to, failing to provide complete citations and references for all work that draws on the ideas, words, or work of others, failing to identify the contributors to work done in collaboration, submitting duplicate work to be evaluated in different courses without the knowledge and consent of the instructors involved, or failing to observe computer security systems and software copyrights. Incidents of cheating and plagiarism may result in any of a variety of sanctions and penalties, which may range from a failing grade on the particular examination, paper, project, or assignment in question to a failing grade in the course, at the discretion of the instructor and depending on the severity and frequency of the incidents.

***Please note: This syllabus and schedule are subject to change. It is merely meant to be a guide for the student during the semester.***

**Reedley College Schedule Fall 2012**

Date	Wednesday	Date	Friday
8/15	Introduction Geology	8/17	Maps and Aerial Photos Lab 1: Maps and Aerial Photos
8/22	Ch. 10 - Crustal Deformation (pp. 279 – 294)	8/24	Ch. 11 – Earthquakes (pp. 303 – 332) Lab 2: Earthquakes & Structures
8/29	Ch. 2 - Continental Drift (pp. 39 – 50)	8/31	Ch. 2 - Plate Tectonics (pp. 51 – 72) Lab 3. Continental Drift & Plate Tectonics
9/5	Ch. 3 - Matter & Minerals (pp. 73 – 91)	9/7	Ch. 3 - Mineral Groups & Mineral Resources (pp. 91 – 106), Lab 4: Minerals
9/12	Exam 1 Review	9/14	<b>Exam 1 &amp; Mineral Id</b> , Ring of Fire
9/19	Ch. 5 – Volcanoes (pp. 137 – 172)	9/21	Ch. 4 - Igneous Rocks (pp. 107 – 136) Lab 5: Igneous Rocks & Volcanoes
9/26	Ch. 6 – Weathering (pp. 173 – 198)	9/28	Ch. 7 - Sedimentary Rocks (pp. 199 – 228) Lab 6: Weathering & Sedimentary Rocks
10/3	Ch. 8 - Metamorphic Rocks (pp. 229 – 254)	10/5	Lab 7: Metamorphic Rocks & Rock Cycle
10/10	Ch. 9 - Age Dating (pp. 255 – 270)	10/12	Ch. 9 - Geologic Time (pp. 271 – 278) Lab 8: Dating & Geologic Time
10/17	Exam 2 Review	10/19	<b>Exam 2 &amp; Rock Id</b> , Presentation Workshop
10/24	Ch. 15 - Mass Wasting (pp. 405 –428)	10/26	Lab 9. Mass Wasting , Water Cycle
10/31	Ch. 16 - Surface Water (pp. 429 – 460)	11/2	Ch. 17 – Groundwater (pp. 461 – 488) Lab 9: Water Cycle
11/7	Ch. 18 – Glaciers (pp. 489 – 518)	11/9	Ch. 20 - Coastal Processes (pp. 541 574) Lab 10. Glaciers and Coastal Processes
11/14	Ch. 24 - Planetary Geology (pp. 671 –695)	11/16	If We Had No Moon Lab 11: Solar System Lab
11/21	Exam 3 Review	11/23	☺ Thanksgiving Break ☺
11/28	<b>Exam 3</b>	11/30	Student Presentations
12/5	Student Presentations	12/7	Student Presentations & Final Exam Review
12/12	Final Exam: Wednesday December 12 <sup>th</sup> from 11:00am – 12:50pm.		

