

# Geology 1500: Introduction to Physical Geology

## Summer 2009 (Offline)



## Syllabus

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- COURSE DATES: **June 8 – July 30, 2009**
- COURSE MEETS: Offline – Assignments will be emailed or mailed to the student. Students should check in with the instructor via email during the first week of the course if the Week 1 assignment has not been received.

**Instructor:** Evie Einstein, Ph.D.

### Contact Me:

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- Direct Mail: Evie Einstein, Ph.D., Taft College, 29 Emmons Park Drive, Taft, CA 93268

### Course Goal:

Welcome to Geology 1500. My goal for you during this course is to get you to love rocks as much as I do. It is also my hope that students will gain an awareness and understanding of their natural surroundings and will be able to view their world in a whole new light!

Since not every learner taking physical geology will go on to be a geologist, this course is designed to be of use to everyone desiring a broad geological education. However, there are those of you who will go on to work as geologists or in related fields. Therefore, enough rigor has been incorporated to provide a firm basis for further study.

### Text & Lab Manual:

Tarback, Edward J., and Lutgens, Frederick K. Earth: An Introduction to Physical Geology. 8th ed. Upper Saddle River: Pearson Education, Inc., 2005.  
ISBN: 0131148656 - Available for rental from the Taft College Bookstore.

Ruhle, James L. Geology Laboratory Manual for Distance Education. Dubuque: Kendall/Hunt Publishing Company, 2000.  
ISBN: 0757504809 - Available for purchase from the Taft College Bookstore.

**Weekly Assignments:**

Each week students will be required to complete specific chapter concept review questions and lab lesson questions; all are open-book. I encourage you to work with as many resources as you like, i.e. your text and its appendices, other Geology books, the Internet, your friends, your instructor, etc. Please email me with any weekly assignment problems or questions you may have.

**Final Project:**

This is a chance to explore geological topics that interest you. Your project can be a research paper, poster, story, journal, photo journal, Internet discovery, Webquest, topographic map, etc. It is up to you to decide on a topic and plan your research. Please let me know what you are planning to explore and maybe I can offer other ideas for you to consider. Or if you do not have any ideas . . . I can help with that too!

NOTE: Your project outlines and project plans must be approved.

**Grades:**

Your job in this course is to have fun – or at least try to be engaged with Geology. I would love to give you all an "A" in this course. My hope is that everyone wants that "A." To do this, you must successfully complete the following:

- 22 Chapter Concept Review Quizzes – 33% of total grade (33 points maximum)
- 13 Lab Lesson Questions - 33% of total grade (33 points maximum)
- 1 Final Project - 33% of total grade (33 points maximum)

**Total Points:**

- A = 90-100
- B = 80-89
- C = 70-70
- D = 60-69
- F = 59 and below

If I see that you are falling behind on your commitment to get an A in this course, I will contact you. You are welcome to contact me as well.

# **SCHEDULE**

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## **WEEK 1 (June 8-14, 2009)**

TEXT: Read Chapter 1: An Introduction to Geology

HANDOUT: Read Chapter 1 Summary & Complete the Concept Review Questions

LAB MANUAL: Read Lab Lesson 1: Topographic Maps & Complete Lab Questions

TEXT: Read Chapter 2: Plate Tectonics: A Scientific Revolution Unfolds

HANDOUT: Read Chapter 2 Summary & Complete the Concept Review Questions

LAB MANUAL: Read Lab Lesson 2: Structural Geology & Complete Lab Questions

## **WEEK 2 (June 15-21, 2009)**

TEXT: Read Chapter 3: Matter and Minerals

HANDOUT: Read Chapter 3 Summary & Complete the Concept Review Questions

LAB MANUAL: Read Lab Lesson 4: Minerals & Complete Lab Questions

TEXT: Read Chapter 4: Igneous Rocks

HANDOUT: Read Chapter 4 Summary & Complete the Concept Review Questions

LAB MANUAL: Read Lab Lesson 6: Igneous Rocks & Complete Lab Questions

TEXT: Read Chapter 5: Volcanoes and Other Igneous Activity

HANDOUT: Read Chapter 5 Summary & Complete the Concept Review Questions

LAB MANUAL: Read Lab Lesson 5: Volcanoes & Complete Lab Questions

## **WEEK 3 (June 22-28, 2009)**

TEXT: Read Chapter 6: Weathering and Soil

HANDOUT: Read Chapter 6 Summary & Complete the Concept Review Questions

TEXT: Read Chapter 7: Sedimentary Rocks

HANDOUT: Read Chapter 7 Summary & Complete the Concept Review Questions

LAB MANUAL: Read Lab Lesson 7: Sedimentary Rocks & Complete Lab Questions

TEXT: Read Chapter 8: Metamorphism and Metamorphic Rocks

HANDOUT: Read Chapter 8 Summary & Complete the Concept Review Questions

LAB MANUAL: Read Lab Lesson 8: Metamorphic Rocks & Complete Lab Questions

#### **WEEK 4 (June 29 – July 5, 2009)**

TEXT: Read Chapter 9: Geologic Time

HANDOUT: Read Chapter 9 Summary & Complete the Concept Review Questions

TEXT: Read Chapter 10: Crustal Deformation

HANDOUT: Read Chapter 10 Summary & Complete the Concept Review Questions

TEXT: Chapter 11: Earthquakes

HANDOUT: Read Chapter 11 Summary & Complete the Concept Review Questions

LAB MANUAL: Read Lab Lesson 3: Earthquakes & Complete Lab Questions

#### **WEEK 5 (July 6-12, 2009)**

TEXT: Read Chapter 12: Earth's Interior

HANDOUT: Read Chapter 12 Summary & Complete the Concept Review Questions

TEXT: Read Chapter 13: Divergent Boundaries: Origin and Evolution of The Ocean Floor

HANDOUT: Read Chapter 13 Summary & Complete the Concept Review Questions

TEXT: Read Chapter 14: Convergent Boundaries; Mountain Building and the Evolution of Continents

HANDOUT: Read Chapter 14 Summary & Complete the Concept Review Questions

TEXT: Read Chapter 15: Mass Wasting: The Work of Gravity

HANDOUT: Read Chapter 15 Summary & Complete the Concept Review Questions

#### **WEEK 6 (July 13-19, 2009)**

TEXT: Read Chapter 16: Running Water

HANDOUT: Read Chapter 16 Summary & Complete the Concept Review Questions

LAB MANUAL: Read Lab Lesson 9: Surface Water & Complete Lab Questions

TEXT: Read Chapter 17: Groundwater

HANDOUT: Read Chapter 17 Summary & Complete the Concept Review Questions

LAB MANUAL: Read Lab Lesson 10: Groundwater & Complete Lab Questions

TEXT: Read Chapter 18: Glaciers and Glaciation

HANDOUT: Read Chapter 18 Summary & Complete the Concept Review Questions

### **WEEK 7 (July 20-26, 2009)**

TEXT: Read Chapter 19: Deserts and Winds

HANDOUT: Read Chapter 19 Summary & Complete the Concept Review Questions

TEXT: Read Chapter 20: Shorelines

HANDOUT: Read Chapter 20 Summary & Complete the Concept Review Questions

TEXT: Read Chapter 21: Energy and Mineral Resources

HANDOUT: Read Chapter 21 Summary & Complete the Concept Review Questions

LAB MANUAL: Read Lab Lesson 11: Surface Geology and Petroleum Fuels & Complete Lab Questions

LAB MANUAL: Read Lab Lesson 12: Alternative-Energy Systems & Complete Lab Questions

### **FINAL PROJECT OUTLINE DUE at the end of Week 7**

### **WEEK 8 (July 27-30, 2009)**

TEXT: Read Chapter 22: Planetary Geology

HANDOUT: Read Chapter 22 Summary & Complete the Concept Review Questions

LAB MANUAL: Read Lab Lesson 13: Waste Disposal and Pollution

ASSIGNMENT: Complete Lab Lesson 13 Multiple-Choice Questions

### **FINAL PROJECT DUE at the end of Week 8**