

Tentative Syllabus  
**Geology 300, Physical Geology Lecture**  
Spring 2018, TTH 5:30pm - 6:50pm, class number 15683  
**SYLLABUS**



**Instructor:** Arthur Reed  
**Classroom:** EGA 110, CRC Elk Grove Center  
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**Email:** [artreed@outlook.com](mailto:artreed@outlook.com)  
**Publisher's Class site:** <http://connect.mheducation.com/class/a-reed-spring-2018>  
**Instructor's Class Site:** [geology300.net](http://geology300.net)

**Office Hour:** Tuesday 4:25pm - 5:25pm in EGA 108  
**Required class materials** (see pg 3): [McGraw-Hill 'Connect'](#)

**Catalog Description:**

Physical geology is an introduction to the composition and dynamics of the earth from the atomic scale of minerals to the global scale of plate tectonics. The composition, structure, and dynamics of the layered earth include an introduction to minerals, rocks, weathering, erosion, earthquakes, volcanoes, landslides, faults, interior processes, plate tectonics, and earth resources. The student will study the processes forming surface landforms and be able to recognize landscapes characteristic of water, ice, and wind erosion. Successful completion of physical geology prepares a student to apply geologic principles to other sciences, avoid geologic hazards, and understand and appreciate geologic processes which continually change Earth.

**Units:**

This course is worth three units of physical science lecture credit. If you need a physical science lab credit, you should consider signing up for Geology 301. At the moment, there are two lab sections scheduled this semester at CRC. Lab section 14790 MW 12:00pm – 1:20pm, and section 14936 Tuesday 12:00pm – 2:50pm both in room SCI 109.

**Expected Learning Outcomes:**

After taking this course, you should have an understanding of:

- (1) The scientific method and how to apply it to geologic problems;
- (2) The general composition of the Earth – major mineral & rock groups and the setting in which they form;
- (3) Earth's internal layered structure and composition;
- (4) Plate tectonics-how continents move and change over time and the resulting geologic structures and features;
- (5) Earth's surface processes - how to recognize different processes of weathering and product movement;
- (6) The concept of geologic time;
- (7) Learn about fundamental physical geological processes.

**Class Time & Room:**

**Geol 300** Tuesdays and Thursdays, 5:30pm - 6:50pm in room EGA 110, CRC Elk Grove Center. The last day of regularly scheduled class is Tuesday, May 8, 2018. The final exam for this course is scheduled for Tuesday May 15, 2018 from 5:30pm – 7:30pm (*check the CRC website for any possible changes*)

**Required Material** (see pg 3):

**Geol 300** [McGraw-Hill 'Connect'](#), which is built on the text by Plummer, *Physical Geology* (15<sup>th</sup> Edition). Online text is available after purchasing this service. Text binder version is also available for a discounted price. Additional visual aids, links, and practice quizzes are available [from the publisher](#)

It is important that you read the assigned sections **before coming to class**, and **again** after class.

**Teaching style:**

Interactive lecture, that may include videos, overhead transparencies, slides, computer animations, and maps. Your questions are generally welcome throughout the lecture. I believe strongly that hard work is the single most important ingredient for doing well in college...it is one consideration for borderline grades!

**Instructor's Course Website** (for Geology 300 posting and resources as announced...not interactive):

Additional online material for this course, such as topics to be covered each lecture, lecture slides and other supplemental materials, will be available on the course website. You can view the site at: [www.geology300.net](http://www.geology300.net).

**Field Trip:** There is no formal or required field trip planned for this course at this time.

**Grades and Grading:**

Grading will be based approximately on the following scheme:

|             |     |
|-------------|-----|
| Assignments | 40% |
| Quizzes:    | 20% |

Midterms and Final: 40%

Grades will be calculated on the following scale (minor adjustment may become necessary):  
90-100% A, 80-89% B, 70-79% C, 60-69% D

Grades are a measure of your performance on assignments and tests in this class, and are not to be interpreted as any reflection of what I think of you as a person. We hope that this measure of performance shows how well you understand and master the class material. If you have comments or suggestions, please contact me.

### Homework Assignments (**publisher-based online**):

Online homework is assigned for every chapter. For every chapter there will be an introductory homework due midday before class, and a more complete homework due before the start of the next class. Also, there is a moon observation and a Google Earth assignment due the last day of class. You are expected to do all homework assignments even if you miss class. Late homework will be penalized 10% (of points possible) per day late.

**Instructions for accessing the publisher-based materials is included on the next page of this syllabus.**

### Exams:

There will be three midterm exams during the semester and occasional quizzes. The dates of these exams are shown on the class schedule. Any changes to these dates will be announced in class. Exams may consist of multiple choice and short answer questions and will cover material shown on the class schedule. Exams will include material from the book that may not have been included in the class lecture. **No make-up quizzes or exams will be given unless an absence is requested and approved before an exam.** The final exam will be a comprehensive exam covering material from the entire semester.

### Expectations:

You are expected to read at a level (college level) that will allow you to understand the concepts presented in your textbook. You are also expected to attend every class (unless you have an emergency situation), keep up with the reading assignments and materials in the textbook, **bring your textbook to class**, bring materials to take notes, and take appropriate measures to study in a way that allows you to understand the course concepts and perform well on the homework and tests.

You may expect that this class will require, on average, about 3 hours of outside study for each hour of class lecture for the average student to receive an average grade (C or B). Efficient, effective studying can reduce some of that study time. If you feel the need to improve your study skills, please consult your academic counselor.

### Makeup policy:

No makeup exams or quizzes will be given unless approval was requested and received before exam date. Extra credit opportunities may be announced in class and may be listed on the course website. These are subject to change.

### Grade Discrepancies:

If you feel that I have made a mistake in calculating your grade, please see me. Please save your tests and homework if you wish to bring a grade discrepancy to my attention.

### Dropping:

If you decide to drop the class, please remember to drop the class from your schedule before the published drop deadline so you don't end up with an "F".

### Cheating:

You are expected to turn in your own work. You are to take all exams based on what you remember from studying (**no** notes, textbooks, or anything else will be available). Anyone caught cheating may face one or more of the following penalties: a "zero" for the assignment, an "F" for the course, probation or suspension from the college.

### Attendance and Class Rules:

- In order to do well in this class, you should attend all lectures. Attendance may be taken in class and the record of attendance will be considered when resolving borderline grades. Occasionally extra credit may be earned on in-class work; this extra credit would therefore only be available to those attending that class session.
- Please try to arrive on time. If you are late, please enter quietly and take a seat near the door to minimize disruption to the class.
- If you need to leave class early (i.e. for an appointment), please let me know beforehand and take a seat near the door.
- **Please end all private conversations once class begins.**
- Please do not eat food during class.
- If you decide to drop the class, it is your responsibility to take necessary steps following the school's procedures.
- Please turn your cell phones **OFF** while in class. If you are expecting an important call that you must answer, please inform me before the beginning of class and leave your phone on silent mode.

## Required Materials for the Course:

**What you need:** You will be required to have materials from McGraw-Hill Education which include the CONNECT program needed to complete homework.

### Where and How to Get It:

#### *Student Options for Purchasing AND Registering Into the Course*

##### CHOICES:

1. **Bookstore:** Your bookstore has a package available that includes the print book AND the Connect Code at a deep discount. (The Connect code you will need to access the online homework).  
MAKE SURE YOU GET THE PACKAGE WITH THE CONNECT CODE- THEY ARE LIMITED.

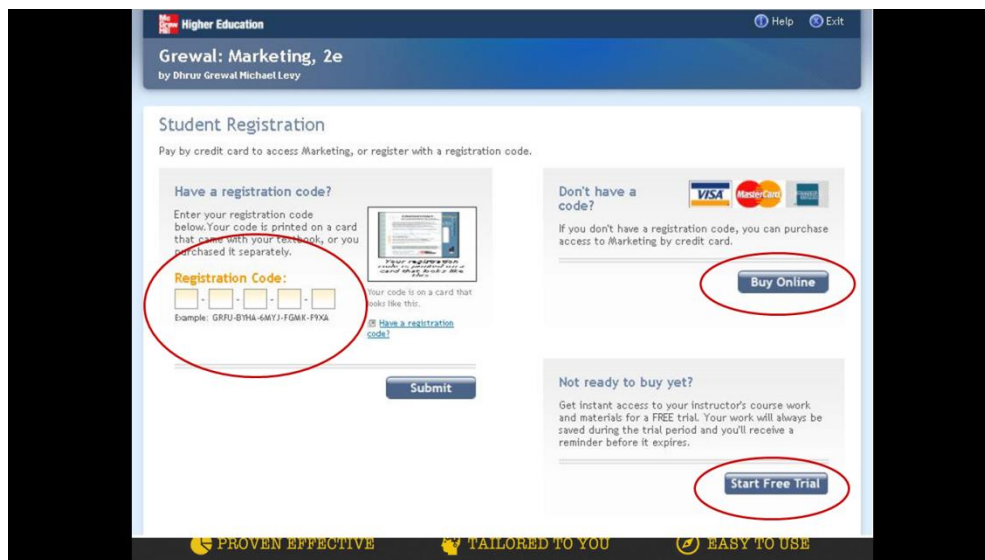
##### OR:

2. **Online:** All DIGITAL (no print book). You can purchase Connect separately which includes an ebook and access to the online homework.

#### To redeem your Connect access code (purchased in the bookstore) OR Purchase a Code:

- Go the section web address provided by your Instructor.  
( <http://connect.mheducation.com/class/a-reed-spring-2018> )
- Enter your email address.
- Click the "Register Now" Button
- Enter your access code if you bought the package from the bookstore, select "Buy Online", or you can "Start the Complimentary 2 week Trial"
- Complete the registration form, click "Submit"

#### EXAMPLE:



#### SUPPORT: SUPPORT:

*If you need any Technical Support (forgotten password, wrong code, etc) please contact McGraw-Hill Education Customer Experience Group at*

**(800) 331-5094**

(Please be sure to get your case number for future reference if you call the CXG line.)

## **Learning Outcomes and Objectives**

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

### **SLO (Student Learning Outcome) #1: Apply the Scientific Method to evaluating geologic processes.**

- Examine scientific inquiry as a platform for exploring our world objectively.
- Illustrate a historical instance in geology where scientific ideas were improved upon through inquiry using the scientific method.

### **SLO #2: Evaluate temporal and spatial dimensions in which Earth originated and exists.**

- Discuss the basic narrative of Earth origin and ocean and atmospheric development based on known scientific evidence.
- Use basic concepts and tools of geologic time -- uniformity, geometric principals of relative age dating, radiometric dating -- to solve problems of geologic timing.
- Analyze the standard geologic time scale as a means for organizing Earth history.

### **SLO #3: Examine how we can determine Earth's interior and surface compositions.**

- Synthesize data from geophysics, seismology, and petrology to produce a comprehensive view of Earth's interior layered structure.
- Recognize what minerals are and how to identify important rock forming varieties.
- Define and give examples of igneous, sedimentary, and metamorphic rocks.
- Identify environmental influences on rock formation based on textural, compositional, and structural features in the rock.
- Evaluate the importance, availability, and rate of usage of those natural resources which are geologic in nature.

### **SLO #4: Apply plate tectonic theory to formulate geologic settings for physical processes.**

- Discuss evidence that contributed to the development of plate tectonics.
- Evaluate divergent, convergent, and transform boundaries and describe the characteristics of each.
- Identify the main features of ocean floor topography.
- Evaluate how volcanic activity, mountain building, and earthquakes are related to each other.
- Contrast and assess evidence of orogenesis and explain how continents grow by accretion.

### **SLO #5: Assess the potential threats of geologically-related natural disasters.**

- Recognize and appraise the hazards associated with earthquakes.
- Evaluate the conditions that generate floods and landslides.
- Assess how good long and short term predictions are for major natural disasters.
- Explain some environmental disasters that humans can potentially create.

### **SLO #6: Evaluate the various depositional and erosional features associated with different agents of erosion -- wind, glaciers, rivers, gravity, and waves.**

- Critique how features of these environments can indicate climate change.

### **SLO #7: Communicate geologic concepts and information effectively in various forms (e.g., verbal, written, graphic).**

- Research credible sources of geologic information.