

## PHYSICAL GEOLOGY SYLLABUS

GLY 1010  
Physical Geology  
Fall - 2009

**Instructor's Name:** Marianne O'Neal Caldwell

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**Office Hours (Day, Time, Location):**

Mondays at Dale Mabry Campus in DSCS 128, 7:30-9:30am; 12:15pm-1pm

Tuesdays online 10:30am-1pm

Wednesdays at Dale Mabry Campus, DSCS 128; 7:30-9:30am; DSCS 137 12:15pm-12:30pm

Thursdays online 10:30am-1pm

Also available by appointment

**Class Schedule:** Monday/Wednesdays 11am-12:15pm

**Course Description:**

Covers basic geology and concepts and principles. Topics include origin and structure of the earth, processes involved in shaping the earth's crust, the nature and classification of earth materials, and the dynamic interactions of the lithosphere with the hydrosphere and the atmosphere that produce characteristic landforms.

Co-requisite: GLY 1010L

**Course Objectives:**

1. Describe the scientific method and discriminate between scientific and nonscientific information.
2. State the age of the Earth as determined by scientific means and divide geologic time into the established Eras, Periods, and Epochs of the Geologic Time Scale.
3. Describe the structure of an atom and discuss how atoms bond, relating this to the structure and properties of minerals.

4. Define what a mineral is and describe the relationship of minerals to rocks.
5. Describe the Rock Cycle, listing and relating its products and processes.
6. Describe how igneous rocks may be characterized by their texture, composition, and provenance.
7. Describe the origin of magma and the nature of intrusive and extrusive igneous processes and landforms.
8. Describe the Earth's differentiated structure and list the names and properties of the Earth's internal layers.
9. Describe and discuss the basic tenants of the theory of Plate Tectonics, including the origin of the theory, the types of plates, and the nature and consequences of their interactions.
10. Relate the theory of Plate Tectonics to the locations and occurrence of geologic hazards including earthquakes, tsunamis, and volcanic activity.
11. Describe the Hydrologic Cycle, both in general terms, and how it specifically relates to geologic processes.
12. Describe the formation, properties and classification of sedimentary rocks.
13. Describe the processes involved in metamorphism and discuss the textural and mineralogical changes that occur in metamorphic rocks.
14. List and describe the major types of crustal deformation and associated geologic structures.
15. Define and describe the processes of weathering, erosion, and mass movement (mass wasting).
16. Describe fluvial processes and landforms.
17. Describe the processes effecting shorelines and the resultant shoreline features.
18. Describe the distribution and movement of water in the earth's crust, relating this to Karst topography and other hydrogeological features such as springs, hot springs and geysers.
19. Describe the origin and nature of glacial landforms and the circumstances that have been hypothesized to explain the Pleistocene glaciations. Describe the role of wind as a geomorphic agent, listing the major types of aeolian erosional and depositional features, and the location of their occurrence.

**Text Book:****Required :**

Understanding Earth, 5<sup>th</sup> edition, by Goetzinger, Jordan, Press, and Siever  
Notes and Study Guide, by M. Caldwell

**Grading System:**

100-90	A
89-80	B
79-70	C
69-60	D
Less than 60	F

**Academic Dishonesty Policy:**

Students enrolled in online courses are expected to exhibit academic honesty. Copying or sharing of work is not allowed. Use of outside resources during tests is not permitted. All writing assignments must be written in your own words.

**Attendance Policy:**

Students are expected to attend each class meeting and attendance will be recorded. Please arrive prior to the start time of each class. During the class students are asked to refrain from using cell phones for calls or text messages. Any late work will be assessed a penalty.

**Instructional Methods:**

The grades of the course will be based on four test grades weighted at 20% each. Four tests will be given along with an optional cumulative final test. The grade on the cumulative exam may be used to replace your lowest test grade. There are no makeup tests given so if you miss a test, then you must take the final to replace the grade. The tests will be composed of multiple choice, fill-in-the-blank, short answer, or some combination of these question types. You will need a scantron for each test.

Additionally a Powerpoint Presentation on a geological feature and a field trip to Upper Tampa Bay Park will be required. The Powerpoint presentation consisting of 10-15 slides describing the geology of a specific geologic feature will make up 15% of the class grade. The Field Trip to Upper Tampa Bay Park will make up 5% of the class grade.

Grading for the class will be:

Test I	20%
Test II	20%
Test III	20%
Test IV	20%
Presentations	15%
Field Trip	5%

The optional final exam may replace the lowest lecture test. It will be weighted at 20%.

### **Gordon Rule:**

The Gordon Rule Requirement for this class will be fulfilled by writing a summary of the first set of review questions for the class. There are four sets of review questions (one for each test). The answers should be written in the student's own writing style and include a word count at the end. This word count should at least 1000 words in the paper. Points will be deducted if a report is missing the word count. The report must be typed and contain correct grammar and sentence structure. If the report is turned by the due date, up to 10 additional points may be added to your lowest test as extra credit. Note that only the first review can be turned in for extra credit. Late reports are not eligible for extra credit but must be submitted prior to the final class meeting.

### **Extra Credit:**

Review quizzes are available for each of the chapters on the [online@hcc](#) classroom webpage. Although participation in these quizzes is optional, extra credit is available for correctly completing the answers on the quizzes. To access these quizzes, go to the HCC home page. Then click on: [online@hcc](#) link (upper right of page). From that link follow the directions to log-on and click on: the first link (near the middle of the page). You will see a list of your classes so click on GLY 1010. From the homepage you should go to the Review Quiz link.

### **Request for Accommodations:**

If, to participate in this course, you require an accommodation due to a physical or learning impairment, you must contact the Office of Services to Students with Disabilities. The office is located in the Student Services Building, Room 208. You may also reach the office by telephone at (813) 253-7031 {voice line}; (813) 253-7035 {TTD}

### **Tentative Class Schedule M/W:**

Aug.	24	Introduction & Chapter 1
	26	Chapter 1
	31	Chapter 2
Sept.	2	Chapters 2 & 3
	7	Holiday
	9	Chapter 3
	14	Chapter 4; Test I Review Due

	16	Presentation work; Topic Due
	21	TEST I; Chapters 1, 2, 3, 4
	23	Chapter 5
	28	Chapter 6
	30	Chapters 7 & 8
Oct.	5	Chapter 8
	7	Chapter 12
	12	TEST II; Chapters 5, 6, 7, 8, 12
	14	Chapter 14
	19	Chapter 15
	21	Chapters 16
	26	Chapter 17
	28	TEST III; Chapters 13, 14, 16, 17
Nov.	2	Chapter 18
	4	Field Trip to Upper Tampa Bay Park
	9	Chapter 20
	11	Holiday
	16	Chapter 21
	18	Chapter 23
	23	TEST IV; Chapters 18.20.21.23
	25	Powerpoint Presentations
	30	Powerpoint Presentations
Dec	2	Powerpoint Presentations
	7	Review for Exam
	14	OPTIONAL CUMULATIVE FINAL EXAM 11am