# GLY 210L EARTH MATERIALS LAB SP-13

Lab Manual: Earth Materials Lab, Bonnett and Sanderson

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# Course Description

GLY 210L Earth Materials Laboratory

1 credit hour, Co-requisite course: GLY 110 or 200

An introduction to laboratory and materials as applied to the

identification, classification, recovery and uses of earth resources.

**Desired Learner Outcomes/Objectives**:

The goals are for each student to:

1) acquire hands‑on experience in the description and identification of minerals, rocks,

fossils (i.e. earth materials), and measurement of mineral and rock properties such as

hardness and density; also to become familiar with the economic uses of various

minerals and rocks as well as the value of fossils in understanding the rock record.

2) develop the ability to read topographic maps, recognize landforms, use coordinate

systems and map scales, determine area, slope, and construct cross-sections.

3) develop an understanding of the relationship between geologic processes and the

specific earth materials that they create.

**Lab Attendance/Participation**

Attendance and participation will each count 12.5% of your grade, 25% collectively.

Attendance will be taken at the beginning of each lab, unless there is a quiz that day. It is the responsibility of each student to inform the instructor of their presence should they arrive late. The attendance portion of att/part grade will be based on the number of unexcused absences (cuts). No cuts=100%. Attendance during quizzes is mandatory. Only university-excused absences will be accepted for missing lab. Arriving late or cutting portions of the lab, will adversely affect attendance grade for lab.

The lab participation grade will be based on active involvement in lab work and grades on lab exercises. Texting, sleeping, or other forms of inattentiveness, or forgetting your lab manual are examples of actions that will adversely impact your participation grade. In addition, copying the work of others will also negatively affect your participation grade and may be treated as academic dishonesty (see Grading). If you miss a lab, you must make up the work before coming to the next lab. Time extension for completion of exercises will only be allowed where university-excused absences are issued.

# Grading

The final average will be calculated as follows:

The lowest of quizzes 1-3 will be dropped; remaining quizzes = 25 % each.

Quiz # 4 = 25 %; Attendance/Participation = 25 %

Final letter grades will be assigned as follows based on final average: A (90-100), B (80-89), C (70-79), D (60-69), F (<60). If you miss a quiz, it automatically becomes the one that is dropped. **There will be no make-up quizzes.**

Any form of academic dishonesty that occurs will result in dismissal from the course and an automatic final grade of “F” . A letter outlining the offense will be forwarded to the academic dean for consideration of further action (see p. 67-71, Undergraduate Catalog: http://www.marshall.edu/catalog/undergraduate/UG\_12-13\_published.pdf).

# Course Outline (tentative)

Reading

Lab Number\_\_\_\_\_\_\_\_\_ Topic\_\_\_\_\_\_\_Assignment\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1‑3 Minerals Ch. II

Mineral/Rock Density (handout)

\_\_4\_\_QUIZ # 1: Minerals and Density\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5-7 Igneous Rocks Ch. III

Sedimentary Rocks Ch. IV

Metamorphic Rocks Ch. V

\_\_ 8\_\_QUIZ # 2: Rocks\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

9-11 Topographic Maps Ch. I

(bring calculator)

\_ 12\_\_ Quiz # 3: Topographic Maps\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

13-14 Fossils Ch. VI

\_ 15\_\_QUIZ # 4: Fossils\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_