

Syllabus for
PSC/GEO 201—Principles of Earth Science Laboratory
1 Credit Hour
Summer 2011

I. COURSE DESCRIPTION

Lab exercises to supplement PSC 201 Lecture

Corequisite: PSC 201 Lecture.

(Crosslisted with GEO 201 Lab.)

Lab fee: \$55.

II. COURSE GOALS

Exercises are designed to familiarize students with common tools and techniques of earth scientists, especially mapping skills. These skills enhance perception and understanding of surface materials, landscapes, and weather phenomena.

III. STUDENT LEARNING OUTCOMES FOR THIS COURSE

As a result of successfully completing this course, the student will be able to do the following:

- A. Identify common earth materials, using simple geological tests.
- B. Construct and interpret geologic, topographic, and weather maps.
- C. Use an atlas, stereo photographs, and a whirling psychrometer.
- D. Discuss and describe the cause of earth's seasons, the significance of key latitude and longitude lines, time differences, the township and range survey system, and relative humidity.
- E. Work as a team in problem-solving.

IV. TEXTBOOKS AND OTHER LEARNING RESOURCES

Required Materials

Lab Manual for Earth Science

V. POLICIES AND PROCEDURES

- A. University Policies and Procedures
 - 1. Attendance at each class or laboratory is mandatory at Oral Roberts University. Excessive absences can reduce a student's grade or deny credit for the course.
 - 2. Students taking a late exam because of an unauthorized absence are charged a late exam fee.
 - 3. Students and faculty at Oral Roberts University must adhere to all laws addressing the ethical use of others' materials, whether it is in the form of print, electronic, video, multimedia, or computer software. Plagiarism and other forms of cheating involve both lying and stealing and are violations of ORU's Honor Code: "I will not cheat or plagiarize; I will do my own academic work and will not inappropriately collaborate with other students on assignments." Plagiarism is usually defined as copying someone else's ideas, words, or sentence structure

and submitting them as one's own. Other forms of academic dishonesty include (but are not limited to) the following:

- a. Submitting another's work as one's own or colluding with someone else and submitting that work as though it were his or hers;
- b. Failing to meet group assignment or project requirements while claiming to have done so;
- c. Failing to cite sources used in a paper;
- d. Creating results for experiments, observations, interviews, or projects that were not done;
- e. Receiving or giving unauthorized help on assignments.

By submitting an assignment in any form, the student gives permission for the assignment to be checked for plagiarism, either by submitting the work for electronic verification or by other means. Penalties for any of the above infractions may result in disciplinary action including failing the assignment or failing the course or expulsion from the University, as determined by department and University guidelines.

4. Final exams cannot be given before their scheduled times. Students need to check the final exam schedule before planning return flights or other events at the end of the semester.
5. Students are to be in compliance with University, school, and departmental policies regarding the Whole Person Assessment (WPA) requirements. Students should consult the WPA handbooks for requirements regarding general education and the students' majors.
 - a. The penalty for not submitting electronically or for incorrectly submitting an ePortfolio artifact is a zero for that assignment.
 - b. By submitting an assignment, the student gives permission for the assignment to be assessed electronically.

B. Course Policies and Procedures

1. Evaluation Procedures
 - a. Point Schedule
There are 370 points possible, divided as follows:
125 Lab quizzes and graded exercises
55 Elsing Museum (15) and field trip (40)
200 Lab exams - 1 (Labs 2-4), 2 (Labs 6-11)
 - b. Up to 35 bonus points (10%) may be given to weak students who make a diligent effort to master the material. This bonus is contingent upon faithful attendance and completion of **all** lab assignments in a timely manner. **Penalty points will be charged for late arrival.**
 - c. Extra Credit
Up to 33 points of extra credit may be earned by doing the exercises cited in the course schedule. Additional options may be offered as they apply to specific exercises.
 - d. Minimum points required for a **guaranteed** grade are as follows:
A = 360 -- 90%, B = 320 -- 80%, C = 280 -- 70%, D = 240 -- 60%
2. Whole Person Assessment Requirements
None
3. Loss, Damage, and Breakage Fees. Each student is responsible for the University materials that he/she uses during the laboratory period and will be assessed an appropriate fee for any items that are lost, damaged, or broken.

4. Other Policies and/or Information
 - a. Office Hours
Monday – Friday. 1:00 to 2:00 p.m.
Location: LRC 111 (Elsing Museum area). Office No. **495-6933**
Instructor's e-mail: **nmeleen@oru.edu**
 - b. Makeup Policy
 - 1) All makeup work is to be done during regularly scheduled labs on a space available basis, with permission of instructor.
 - 2) All quizzes must be taken prior to the relevant lab exam.
 - 3) Excused Absence. Must be made up within two weeks of absence, unless special arrangements have been made with your instructor; attendance points will be averaged.
 - 4) Unexcused Absence. Lab quizzes may be made up for ½ credit. NOTE: If a student misses a lab they should review the materials in order to be prepared for the lab exam questions from that lab.
 - 5) All lab makeup work must be completed by the last class day. No automatic incompletes will be given.

VI. COURSE CALENDAR

Lab quizzes are worth 10 points and are given at the end of each lab session (except Lab 10). Late arrival will be penalized at 1 point per 10 minutes. Appendices are in the lecture textbook.

DATE

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| 5.02/6.13 | M | Lab 1: Orientation; Elsing Museum (15 points) |
| 5.03/6.14 | T | Lab 2: Introduction to Mineral Identification. Quiz 2 |
| 5.04/6.15 | W | Lab 3: Rock and Fossil Identification; (Appendix B). Quiz 3 |
| 5.05/6.16 | R | Lab 4: Relative Dating, Dip and Strike; Stereo Aerial Photography; Structure Sections and Geologic Maps. Quiz 4 |
| 5.06/6.17 | F | Lab 6: Latitude and Longitude; Globes; Atlases; Plate Tectonics
See Appendix C (textbook, p. 606). Quiz 6 |
| 5.09/6.20 | M | Lab 5: Lab Exam over Labs 2-4 (100 points) |
| 5.10/6.21 | T | Lab 7: Map Essentials (Appendix D). Quiz 7
Extra Credit: Map Construction exercise, 10 points |
| 5.11/6.22 | W | Lab 8: Contour Lines (Appendix D). Quiz 8 |
| 5.12/6.23 | R | Lab 9: Survey Systems; Stream Gradients. Quiz 9
Extra Credit: tax lot plotting, 3 points |
| 5.13/6.24 | F* | Lab 14: Field trip - 40 points. Day trip to the Flint Ridge Resort along the Illinois River near Kansas OK and nearby Natural Falls State Park on US 412. *This trip will be moved to Thursday or Monday if weather conditions are poor. |
| 5.16/6.27 | M | Lab 10: Relative Humidity. BRING CALCULATORS. 30 point e-portfolio report |
| 5.17/6.28 | T | Lab 12: Lab Exam over Labs 6-10 (100 points) |

5.18/6.29 W Lab 13: Weather Maps. Quiz 13 (15 points)

5.19/6.30 R Extra Credit: Grand Canyon videos (2), 10 points
Climate Types and Classifications (Appendix F), 10 points

Course Inventory for ORU's Student Learning Outcomes

PSC/GEO 201—Principles of Earth Science Laboratory Summer 2011

This course contributes to the ORU student learning outcomes as indicated below:

Significant Contribution – Addresses the outcome directly and includes targeted assessment.

Moderate Contribution – Addresses the outcome directly or indirectly and includes some assessment.

Minimal Contribution – Addresses the outcome indirectly and includes little or no assessment.

No Contribution – Does not address the outcome.

The Student Learning Glossary at <http://ir.oru.edu/doc/glossary.pdf> defines each outcome and each of the proficiencies/capacities.

OUTCOMES & Proficiencies/Capacities		Significant Contribution	Moderate Contribution	Minimal Contribution	No Contribution
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1	Outcome #1 – Spiritually Alive Proficiencies/Capacities				
1A	Biblical knowledge				√
1B	Sensitivity to the Holy Spirit				√
1C	Evangelistic capability				√
1D	Ethical behavior				√

2	Outcome #2 – Intellectually Alert Proficiencies/Capacities				
2A	Critical thinking		√		
2B	Information literacy		√		
2C	Global & historical perspectives			√	
2D	Aesthetic appreciation			√	
2E	Intellectual creativity			√	

3	Outcome #3 – Physically Disciplined Proficiencies/Capacities				
3A	Healthy lifestyle			√	
3B	Physically disciplined lifestyle			√	

4	Outcome #4 – Socially Adept Proficiencies/Capacities				
4A	Communication skills				
4B	Interpersonal skills			√	
4C	Appreciation of cultural & linguistic differences			√	
4D	Responsible citizenship			√	
4E	Leadership capacity			√	