

GLG 103 Introduction to Geology I: Physical Geology Lab

Credits/Periods: 1-credit/3 periods. When taken with GLG101, transfers to ASU, UA, and NAU and may be used toward satisfaction of the Natural Science requirement for AGECE-A & B blocks; AA, AB, some AS, and TG-XR degrees programs. With GLG101 satisfies ASU's SQ general education requirement.

Course Description: May accompany GLG 101. Study of common rock-forming minerals, rocks, and maps.

Prerequisites: None

Section/Time/Place: 14620 Tuesday, 7:10-9:40p; Room PS174

Text(s): Calderone and Johnson, Physical Geology Laboratory Manual, Fall 2009 edition.

GCC Office: PS162 **Phone:** 623.845.3217 w/voice mail (leave name & number)

Office Hours (GCC): Almost any time; or by appointment.

GeoAssist: Try calling me at any time, as I am here most every day, all day!

Electronic mail: wayne.johnson@gcmail.maricopa.edu

Home page: <http://www.gc.maricopa.edu/appliedscience/wmjweb/wmjhome.html>

Welcome to GLG103! GLG103, Physical Geology Laboratory is usually required in conjunction with GLG101 (Physical Geology Lecture) for full Natural Science credit in most of our degree programs. The lab is coordinated with the lecture classes and designed to give you "hands-on" experience with many of the lecture topics. The lab, however, may be taken independently of GLG101 and is also designed as an independent class. For the next 17 weeks, we will be learning how to identify rocks and minerals and interpret geologic maps- skills that may prove useful in deciding where to buy or build a house, or perhaps find gold or other precious commodities.

Course objectives- after completing this course, you should be able to:

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| <ul style="list-style-type: none"> • Identify common rocks and minerals in hand specimen. • Use topographic maps and aerial photographs in analyzing the geology of particular areas • Describe the geology of particular areas by using geologic maps | <ul style="list-style-type: none"> • Explain the geological processes associated with deserts • Identify basic geologic structures shown on geologic maps and cross-sections • Identify major tectonic settings on maps of North America and the sea floor |
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The outline for the course is given as the accompanying course schedule.

Resources and Study Strategies- How to get the most out of this class

Geology is a physical science course. Science courses, however, are generally not easy for most people and usually take a bit of work. In addition, we all learn differently. Some of us are very analytical, whereas others may prefer a more "hands-on" approach. Still others may prefer more discussion and visual aids. Handily, there are many resources and study strategies available to you. These resources include:

- **The Lab Lecture-** The lab lecture and the lab manual are your primary resources for this course. For most of the topics, I will be lecturing using a variety of formats- emphasizing demonstrations. Take notes well. Ask questions.
- **The Lab Manual-** Your Lab Manual has been designed to address the content of the course in the friendliest, most complete, and least expensive manner available. *READ IT!* Reading assignments for each course topic are listed in the accompanying course schedule (p. 3 & 4). I will expect that you will have read this material prior to coming to class. The lab manual also makes an excellent study guide for potential quiz material.
- **Web based tutorial on Geologic Time, Geologic Structures, and the Interpretation of Geologic Maps. Located at <http://www.gc.maricopa.edu/appliedscience/gjc-nsf/index.html>. This tutorial can help you make sense of the material we will cover in the latter half of the lab.**
- **Display Cases-** Numerous exhibits of minerals, rocks, fossils, maps, and other information are displayed throughout the central common area and outside the east wing of the Physical Science Building. These make excellent study devices by providing further examples of the materials you will be studying in lab.
- **Study Groups-** Get together- help each other! I strongly encourage you to form study groups. I do not grade "on a curve" so no one is competing with anyone else for grades. Study groups can be a very effective way of learning and can help reduce some of the stress we may feel when "going it alone".

Help on the way!

Many students enter this class with a bit of anxiety- "I'm not really a 'scientific' person" or "Science classes have always been difficult for me." Other students may have various disabilities including severe test anxiety, which may make traditional classroom environments very difficult. Fear not, almost all such students before you have actually passed this course- many with very high grades! The success of many of these students, though, was in part because they took advantage of the many programs offered to help! Whether you are a GCC student or an ASU West student taking GCC classes through the University College Center, there are a variety of special programs provided to address the various needs of our students. These programs include:

- **GeoAssist-** a program where you can get tutorial help on the course content directly from one of the geology instructors, in an informal, easy-going environment. GeoAssist is a composite of all geology instructors' office hours (posted on my website) and can either be held in the office or in the lab if available. Bring your questions, confusions, & problems- or just use it as time to practice under the supervision of an instructor.
- **GCC's Center for Learning (CL) -** Provide free support services for all students to assist in improving student learning. These services include: (1) Scheduled and "drop-in", group and one-on-one tutoring in most academic subjects- including geology; (2) Multimedia instructional materials in basic skill areas (English, Reading, Math); and (3) Study Skills Workshops. CL location and hours are given in your GCC Student Handbook.

- **GCC's Disabled Student Resources (DSR)** provides a wide variety of services to students with disabilities which otherwise might impair their ability to function in the typical classroom setting. Any student who has any recognizable disability that he/she feels may impair their ability to perform the course requirements, please contact me during the first week of class to see how we can facilitate your completion of this course. (623) 845-3080, GCCN office: (623) 845-4016 by Appt. Tuesday afternoons.
- **Counseling Centers**- The Counseling Centers at both campuses provide students with career counseling, one-on-one counseling, personal counseling, personal development counseling and acts as a "clearinghouse"- guiding students to the other services available on campus. Further information on the Counseling Centers is provided in your Student Handbook.
- **Child Care Resource**- According to campus policies, only those students enrolled in a class are permitted to attend that class. Consequently, children of students are not allowed in the classroom. For emergency childcare, call the Child Care Resource @ (602) 244-2678.
- **Extra Credit Field Trip**- We will be offering some Extra Credit Field Trips in the second half of the semester. Information can be found online at: <http://www.gc.maricopa.edu/appliedscience/geoweb/geofield.html>

Grading

Assessment for this course will be based on lab exercises, short quizzes, practical exams and a final exam. Letter grades will be assigned on a straight 10% basis: 90-100% = A; 80-89% = B; 70-79% = C; 60-69% = D; 0-59% = F. Total points may be changed during the semester. The lowest of your quiz scores will be dropped. A total of 26 extra credit points may be earned. Sixteen of those points will be offered in-class on quizzes and tests. The remaining 10 points may be earned by participating in one or more field activities to be specified by the instructor during the semester.

Point Distribution	
Labs: 80 pts (13@5pts + 1@15pts)	A ≥ 310.5 pts
Quizzes: 90 pts (Best 9 of 10@10pts)	276 ≤ B < 310.5 pts
Exams: 100 pts (2@50pts)	241.5 ≤ C < 276 pts
Final Exam: 75 pts	207 ≤ D < 241.5 pts
Total: 345 pts.	F < 207 pts
Extra credit: 16 pts + 10 pts field trip option.	

- **Exam and quiz formats:** Multiple choice, matching, listing, true/false, short answer and essay; hand specimen identification of rocks and minerals; practical cross-section drawings and map interpretations.

General Class Policies

- **Attendance:** Each student will be expected to attend all classes. After two unexcused absences, the instructor *may* initiate the withdrawal process. Work missed during officially excused absences (officially excused absences issued by the Office of Student Services-see Student Handbook for details) may be made up by *prior* arrangement with the instructor. The instructor may excuse absences for emergency situations unofficially. Instructor-excused absences must be obtained *prior to, or on the day of, the student's absence!* Make-ups for such absences will be at the option of the instructor. *There will be absolutely no make-ups for unexcused absences.*
- **Tardiness:** Although tardiness is generally discouraged, minor tardiness (less than 5 minutes) will be tolerated so long as the student does not disrupt the class. You will not, however, be allowed extra time to make-up for the time lost on timed quizzes or exams. Quizzes or exams missed by tardiness will be forfeited.
- **Withdrawals:** Withdrawals are not automatic. If you wish to drop the course, it is your responsibility to complete the appropriate paperwork as prescribed by the Admissions Office. Students who withdraw without completing a Drop/Add form may receive a grade of "F" or "Y". The last dates for student-initiated withdrawals are listed at the bottom of the course schedule.
- **Academic Misconduct and Academic Dishonesty** will not be tolerated. Students engaging in misconduct or dishonest practices on exams or quizzes will be dealt with according to the guidelines established in the Student Handbook.
- **Class Disruptions** are defined as activities that distract the instructor or other students from the course content. Such activities include talking or whispering about unrelated matters during content delivery; compounding the disruption created by a student's tardiness with comments; noisily preparing to leave the class prior to the end of the period; etc. As a residential faculty member, I am not required to tolerate such behavior. Disruptive students will be asked to leave the class. Repeat offenders may be withdrawn.
- **Audio/Visual Recording:** Neither audio nor video recording will be permitted except under special circumstances prescribed by the Disabled Students Resource Center.
- **Cell Phones:** Cell phones should be OFF. If you are expecting an emergency call, or if you are a physician or nurse "On Call", then set your phone to vibrate. **TEXT MESSAGING DURING CLASS WILL NOT BE TOLERATED** – if you text, I will collect your phone from you, and you may retrieve it from me after class.

GLG103, Tuesday Evening sections**Fall 2009**

Week	Dates	Topic	Quiz/Exam/Homework
1	8/25	Ex 1 Introduction - Plate Tectonics (5 pts)	
2	9/1	Ex 2 Mineral Physical Properties (5 pts)	Quiz (10 pts) over Plate Tectonics
3	9/8	Ex 2 Mineral Identification (5 pts)	Quiz (10 pts) over Physical Properties
4	9/15	Practical Exam #1: Minerals Ex 3 Rock Textures Part I (5 pts)	Exam (50 pts) 90 minutes
5	9/22	Ex 3 Rock Textures Part II (5 pts)	Quiz (10 pts) over Rock Textures Part I
6	9/29	Ex 4 Igneous Rocks (5 pts)	Quiz (10 pts) over Rock Textures Part II
7	10/6	Ex 5 Sedimentary Rocks (5 pts)	Quiz (10 pts) over Igneous Rocks
8	10/13	Ex 6 Metamorphic Rocks Ex 7 Rock Identification (5 pts)	Quiz (10 pts) over Sedimentary Rocks
9	10/20	Practical Exam #2: Rocks Ex 8 Relative & Absolute Dating (5 pts)	Exam (50 pts) 90 minutes
10	10/27	Ex 9 Geological Maps I (5 pts)	Quiz (10 pts) over Relative Dating
11	11/3	Ex 10 Topographic Maps I (5 pts)	Quiz (10 pts) over Geologic Maps
12	11/10	Ex 11 Topographic Maps II (5 pts)	Quiz (10 pts) over Topo Maps I
13	11/17	Ex 13 Geological Maps II (5 pts)	Quiz (10 pts) over Topo Maps II
14	11/24	Open Lab/Review	
15	12/1	To Be Announced (15 pts)	
16	12/8	Final Practical Exam: 66% Maps, 33% Rocks & Minerals	Exam (75 pts) full period

10/2 - Last day for student-initiated withdrawal, **without** instructor signature and with a grade of "W"

11/30 - Last day for student-initiated withdrawal, **with** instructor signature and with a grade of "W" or "Y"

Course content may vary from this outline to meet the needs of this particular group. The instructor reserves the right to alter the schedule via verbal announcements or instructions in class. The student is responsible for noting such changes and acting accordingly -- even if the student was absent on the day such announcements were made.