

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 and the Optional Science for the AGECE-S block; AA, AB, some AS, and TG-XR degrees programs. With GLG101 satisfies the SQ general education requirement.

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

Prerequisites: None

Section/Time/Place: Sect. 14540, F 12:00-2:30p; Room PS174

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

GCC Office: PS105 **Phone:** 623.845.3654 w/voice mail (leave name & number- *slowly & distinctly*)

Tentative Office Hours (GCC): TR 10 -10:50a; W 9 -9:50a; T 1:30-2:20p; F 11 – 11:50; or by appointment.

GeoAssist: During office hours

Electronic mail: gary.calderone@gcmail.maricopa.edu

Home page: <http://www.gc.maricopa.edu/appliedscience/gjcweb/gjchome.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 16 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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| • Identify common rocks and minerals in hand specimen. | • Explain the geological processes associated with deserts |
| • Use topographic maps and aerial photographs in analyzing the geology of particular areas | • Identify basic geologic structures shown on geologic maps and cross-sections |
| • Describe the geology of particular areas by using geologic maps | • Identify major tectonic settings on maps of North America and the sea floor |

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-** You will be provided with a lab manual on the second week of lab. 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. 4). The lab manual also makes an excellent study guide for potential quiz material. If you lose your lab manual, you may download the individual exercises in accordance with the instructions on page 3.
- **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 Disability Services & Resources (DSR)**- The DSR center at GCC provides a wide variety of services to students with disabilities which otherwise might impair their ability to function in the typical classroom setting. If you have a documented disability that may impair your ability to meet the course requirements and expectations, please contact me during the first week of class to see how we can facilitate your completion of this course.
- 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 child care, call the Child Care Resource @ (602) 244-2678.

GRADING

Assessment for this course will be based on lab exercises, quizzes, practical exams and a final exam as shown on the table below. Total points may be changed during the semester to accommodate unforeseen circumstances but the grade percent benchmarks will remain the same. The lowest of your quiz scores will be dropped. Extra credit may be offered at the discretion of the instructor.

Grade Calculation		
Labs: 80 pts (13@5pts + 1@15pts)	Grade by Points	Grade by Percent
Quizzes: 90 pts (Best 9 of 10@10pts)	A ≥ 310.5 pts	A ≥ 90%
Exams: 100 pts (2@50pts)	276 ≤ B < 310.5 pts	80% ≤ B < 90%
Final Exam: 75 pts	241.5 ≤ C < 276 pts	70% ≤ C < 80%
Total: 345 pts.	207 ≤ D < 241.5 pts	60% ≤ D < 70%
Extra credit: Up to 30 points (≤ 7.5%)	F < 207 pts	F < 60%

- 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. Absences for emergency situations may be excused unofficially by the instructor. 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 *OR* inform me so that I may do so. Students who withdraw without completing a Drop/Add form may receive a grade of "F", "W" 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 cell phone ringers, 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. The faculty is not required to tolerate such behavior. After two disruptive incidents the student may be withdrawn.
- Audio/Visual Recording:** Neither audio nor video recording will be permitted except under special circumstances prescribed by Disability Services & Resources.

If you lose your lab manual... How to Download Lab Exercises from the Web

You will be provided with a lab manual on the second week of the semester. If you lose your lab manual, you will have to download the exercises from our web site. This requires you to login using your eGCC (formerly Palette) username and password.

From an ON-CAMPUS (Mac or Windows) Computer

1. Open any Web Browser (e.g. Safari, Internet Explorer, Netscape, AOL, etc.) and go to the following site:
<http://www.gc.maricopa.edu/appliedscience/geoweb/gccgeolabman.html>
2. You will then get a Web page that lists each lab exercise for the semester. *Consult your syllabus to ensure that you download the correct exercise for each week!*
3. Click on a link to download the file (e.g. **Exercise 2**).
4. You may get a "Security Alert Error" indicating that you're trying to access a secured site. Go ahead and hit the "OK" button.
5. A "Security Error: Domain Name Mismatch" window (see right) may also pop-up during the first few weeks of the semester (while GCC resolves several server issues), but go ahead and hit the "OK" button.
6. Next, you will get a login window that looks like the following:



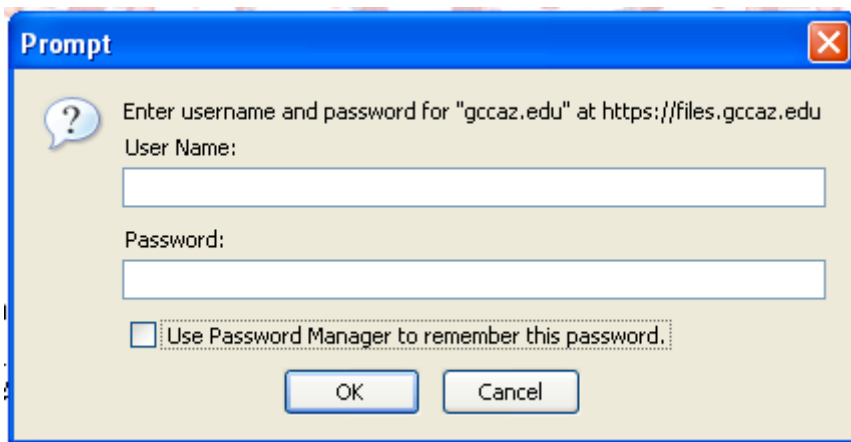
Use your eGCC username and password to login. If you do not know your eGCC username, take your GCC Student ID card to one of the High-Tech Centers and have it swiped at an Information desk to get your username and password.

7. Once you login, the PDF file should automatically open your PDF reader and be available to print.

Note: All of the GLG103 lab exercises and activities are in Adobe Acrobat PDF format, so PDF Reader is needed to open them. A PDF Reader is already installed on computers here at GCC.

FROM AN OFF-CAMPUS COMPUTER (Mac or Windows)

If you are downloading the exercises from off-campus, you need to install a PDF Reader on your computer to view and print these documents (see <http://www.adobe.com/products/reader/> to download a free PDF reader). Once you have a PDF Reader installed on your computer, follow the directions above for downloading from an on-campus computer.



Note: Some files may require using the "Print as Image" command from your PDF reader to print graphic images correctly.

GLG103, Friday sections**Fall 2009**

Week	Dates	Topic	Quiz/Exam/Homework
1	8/28	Ex 1 Introduction - Plate Tectonics (5 pts)	
2	9/4	Ex 2 Mineral Physical Properties (5 pts)	Quiz (10 pts) over Plate Tectonics
3	9/11	Ex 2 Mineral Identification (5 pts)	Quiz (10 pts) over Physical Properties
4	9/18	Practical Exam #1: Minerals Ex 3 Rock Textures Part I (5 pts)	Exam (50 pts) 90 minutes
5	9/25	Ex 3 Rock Textures Part II (5 pts)	Quiz (10 pts) over Rock Textures Part I
6	10/2	Ex 4 Igneous Rocks (5 pts)	Quiz (10 pts) over Rock Textures Part II
7	10/9	Ex 5 Sedimentary Rocks (5 pts)	Quiz (10 pts) over Igneous Rocks
8	10/16	Ex 6 Metamorphic Rocks Ex 7 Rock Identification (5 pts)	Quiz (10 pts) over Sedimentary Rocks
9	10/23	Practical Exam #2: Rocks Ex 8 Relative & Absolute Dating (5 pts)	Exam (50 pts) 90 minutes
10	10/30	Ex 9 Geological Maps I (5 pts)	Quiz (10 pts) over Relative Dating
11	11/6	Ex 10 Topographic Maps I (5 pts)	Quiz (10 pts) over Geologic Maps
12	11/13	Ex 11 Topographic Maps II Ex 12 Applications of Topo Maps (5 pts)	Quiz (10 pts) over Topo Maps I
13	11/20	Ex 13 Geological Maps II (5 pts)	Quiz (10 pts) over Topo Maps II
14	11/27	Thanksgiving - No class meeting	No class meeting
15	12/4	Ex 14 Field Trip (15 pts)	
16	12/11	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.

GLENDALE COMMUNITY COLLEGE- SYLLABUS & COURSE POLICY ACKNOWLEDGMENT

GLG 103: Introduction to Geology I: Physical Geology Lab

THIS FORM MUST BE PRESENTED TO THE INSTRUCTOR BY THE SECOND CLASS MEETING TO AVOID YOUR WITHDRAWAL FROM THE COURSE. YOU MAY BE REINSTATED AFTER SUCH A WITHDRAWAL BUT NOT UNTIL YOUR INSTRUCTOR HAS RECEIVED THIS FORM.

I _____ acknowledge that I have received a syllabus for the course described above. I have read it and understand the attendance, withdrawal, grading and other policies.

I recognize that it is my responsibility to master the competencies of this course and that a passing grade will be assigned only when I have adequately demonstrated this mastery using the assessment tools provided by the instructor (tests, quizzes, reports, or other assignments).

I recognize that to successfully complete this course, I may be required to spend 2 to 3 hours of study outside of class for every hour spent in class. This extra time may include comprehensive reading of the textbook, active study and/or completion of study guides, multimedia materials or other resources as described in this syllabus.

I am aware of the fact that make-up of exams, quizzes, and or other assignments is not a right but a privilege offered at the discretion of the instructor. Make-up work is intended to accommodate emergency situations and officially excused absences. I realize that it is my responsibility to inform the instructor of such absences as early as possible and that my failure to do so may result in my loss of make-up opportunity. I understand that make-up for unexcused absences may not be offered or accepted.

I understand that it is my responsibility to complete outside assignments by the date specified by the instructor. I understand the instructor is under no obligation to accept late submissions.

I realize that academic dishonesty will not be tolerated. I understand that the instructor will deal with academic dishonesty as described in the Student Handbook (available from the Office of Student Life). Penalties for academic dishonesty may range from a reduction of points to course withdrawal to full expulsion from the college.

I understand that the instructor is under no obligation to provide "extra credit". If extra credit is offered and I choose not to do it, the instructor is under no obligation to offer an alternate.

I further understand that during class time, it is my responsibility to make sure that my cell phone, pager, and/or any other electronic messaging devices are either turned off or placed in silent ringer or vibrate mode to avoid disrupting the class. I understand that my failure to do so may result in a loss of points from my grade, my dismissal from the class period, or my withdrawal from the course.

I also understand that while in class, I am expected to pay attention and participate. I realize disruption of the class with unwarranted talking, snoring, signaling, note-passing, or any other form of inappropriate behavior may result in a loss of points from my grade, my dismissal from the class period, or my withdrawal from the course.

Signature: _____

Date: _____

Printed Name: _____

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GLENDALE COMMUNITY COLLEGE- ENTRANCE SURVEY
GLG 103: Introduction to Geology I: Physical Geology Lab

Please list any courses (including labs) in Geology or Earth Science that you have taken prior to this one. For each course, please list the school, approximate year and instructor if possible).

How much Physics, Physical Science, Chemistry, and Math have you had?

Are you (choose answer that is closest to your situation):

- (A) a geology major?
- (B) exploring the possibility of majoring in geology?
- (C) unsure of what you're majoring in?
- (D) sure that you are majoring in something other than geology?
If so, what is your major?
- (E) Other (please explain)?

Did you consult, or have you consulted with an advisor in choosing your courses? [Yes] or [No]

If you answered the previous question "Yes", please rate your experience with your advisor.

[Positive] [Neutral] [Negative]

Any comments on the advising process?

Any comments on the registration process?

Are you aware of the Arizona General Education Curriculum (AGEC) and its impact on your transfer to a university?

Are you currently participating in any extracurricular activities or clubs on campus? If so, which ones? (e.g. athletics, speech, etc.)

What do you hope to get out of this course?

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