

GLG 104: Introduction to Geology II: Historical Geology (Lab) Fall 2009

Credits/Periods: 1 credit/3 periods. Transfers to ASU, UA, and NAU and may be used toward satisfaction of the Natural Science requirement for AA, AAS, and AGS degrees; or the Physical Science requirement of the TGECC degree program. May accompany GLG 102.

Course Description: May accompany GLG102. Study of geological structures and rocks, fossils, and geology maps. May require field trip.

Text: Nelson/Calderone/Johnson, *Historical Geology Laboratory Manual for GLG 104; Fall 2008 Ed.*

Time/Place: Thursdays, 11:30am-2:00pm; PS-173

Instructor: Pamela Nelson Office: GCC - PS106 GCC Phone: 623.845.3680 (voice mail)

Office Hours: M tp F 9:15-9:45am, M 2:30-4pm and F 1:30-3pm or

other arrangements made by appt

Electronic mail: pam.nelson@gcmail.maricopa.edu

Web page(GCC related):

<http://www.gc.maricopa.edu/appliedscience/pjnweb/PJNTeaching.html>

Welcome to Geology 104! GLG 104, Historical Geology Laboratory, is required in conjunction with GLG 102 (Historical 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 a "hands-on" / active learning experience. The lab, however, is an independent class and can be taken separately from the lecture. In this class, we will be studying the Earth on which we live on and how it has changed and evolved over time. To this end, we will be examining mineral, rock and fossil samples and using maps, photographs and field work to make observations leading to conclusions regarding the history of the Earth.

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

- Describe/Identify important Earth materials (e.g. minerals, rocks)
- Explain the concept of geologic time
- Describe sedimentary processes and their use in describing Earth history
- Utilize the World Wide Web to find information about the history of the Earth
- Describe/Identify fossil groups and their importance in describing Earth history
- Broadly classify fossils into the Eon/Era during which they lived

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

Geology is a physical science course. Science courses usually take a bit of work to complete. Because we all learn differently, some people will breeze through parts of the course, while others may stumble a bit. I try to teach this class using as many different educational techniques and teaching tools as possible; however, there are also other 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 and emphasizing demonstrations. Take notes well and always 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! I will expect that you have read this material prior to coming to class.** (Indeed, several students have told me that the lab exercises go much faster and more smoothly after they had read the lab manual.)
- **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".
- **Display Cases & Study Samples** - Numerous exhibits of minerals, rocks, fossils, maps, and other information are displayed throughout the Physical Science Building (on GCC Campus). **In particular, study samples will be made available prior to exams in PS-115 (across from the secretary's office in the common area.** These make excellent study devices by providing further examples of the materials you will be studying in lab.

Help on the way!

Many students enter this class with anxiety - "I'm not really a 'scientific' person" or "Science classes have always been difficult for me." Other students may have various disabilities including test anxiety, which may make traditional classroom environments very difficult. Fear not! Almost all such students preceding you have 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! Both Glendale Community College and the Physical Science department provide special programs to address the various needs of our students. These programs include:

- **GeoAssist** - This program, offered by the GCC Physical Science department's Geology Instructors, is a place where you can get tutorial help for any of the introductory geology courses directly from one of the geology instructors, in an informal, easy-going environment. GeoAssist utilizes the office hours of all geology faculty to bring you free tutoring. Hours for the current semester will be posted after the first week of classes). Bring your questions, confusions, & problems - or just use it as time to practice under the supervision of an instructor.
- **GCC Center for Learning** - The CFL (on GCC Campus) provides 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 skills areas (English, Reading, Math); and (3) Study Skills Workshops. CFL location and hours are given in your Student Handbook.

- **Disability Services and Resources (DSR)** - The DSR center 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 disability that may have some impact on your work in the class and for which you may require accommodations, you need to notify the Disability Service and Resources Office, located in TDS 100. Their phone number is 623-845-3080.**
- **Counseling Center** - The Counseling Center (on GCC Campus) provides 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 Center is provided in your Student Handbook.

General Class Policies

- **Attendance:** Each student will be expected to attend all classes. After two unexcused absences or warnings about disruption of class, the instructor may initiate the withdrawal process. Work missed during officially excused absences may be made up by ***prior arrangement*** with the instructor. It is the student's responsibility to inform the instructor of an officially excused absence as soon as possible! Absences for emergency situations may be excused unofficially by the instructor prior to or day-of the absence. There will be no make-ups for unexcused absences. **Please be aware: As this is a lab course, there are several labs for which make-up work is not possible due to extensive set-up.**
- **Tardiness:** Tardiness is generally discouraged; should you be late, be responsible and do not disrupt the class. You will NOT be allowed extra time to make up for the time lost on quizzes or exams. Quizzes or exams missed because of tardiness will be forfeited by the student.
- **Class Disruption:** If a student (or students) disrupts the class or disturbs the learning of the other students, he/she will be issued a warning. If the behavior continues, the instructor may move the student to a different seat in the classroom and may officially withdraw the student from the course if the disruption continues.
- **Withdrawals:** **Students who miss two consecutive weeks of class without notifying me will be withdrawn from the course with a "W".** If you need to drop the course, it is your responsibility to complete the appropriate paperwork as prescribed by the Admissions Office. The last dates for student-initiated withdrawals are:
 Last day for student-initiated withdrawal w/o instructor signature, with a grade of "W": 10/2/09
- **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. Discipline may include a warning, grade adjustment or failure of the assignment or even failure of the course.
- **Audio/Visual Recording:** Please request permission if you wish to record class lectures. No audio or video recording of the lectures will be permitted without the instructor's permission.

Grading

Assessment for this course will be based on completion of your lab exercises, a short quiz given each week over the preceding lab material, attendance at and a report about a class field trip and 4 lab exams. 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. Extra credit will be offered on quizzes and exam.

Point Distribution:

Labs (12 @ 5 pts. each) =	60 pts.
Quizzes (best 8 of 9 @ 10 pts each)=	80 pts.
Exams (3 @ 100 pts. each) =	300 pts.
Field Trip Data & Report =	<u>20 pts.</u> MORE INFO FORTHCOMING
GRAND TOTAL =	460 pts.

Exam and quiz formats: Exams and quizzes will have multiple choice and short answer questions.

Most quizzes and exams will consist of sample identification or geological analysis questions. Quizzes will cover the material covered in class since the last quiz or exam, including the information in the lab manual assigned for that section. Extra credit questions will be offered and may cover up-coming material. Quizzes and exams will be taken by each student individually during the assigned class time.

The course schedule is shown on the following page. Course content may vary slightly 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.

Course Schedule: GLG 104, Historical Geology Day Lab, Fall 2009
S#14542 (Thursdays)

DATE	TOPIC	QUIZ/EXAM
8/27	Exer. 1: Intro. & Plate Tectonics	
9/3	Exer. 2: Minerals & Mineral Properties	QUIZ #1
9/10	Exer. 3: Igneous & Metamorphic Rocks	QUIZ #2
9/17	Exer. 4: Sedimentary Rocks & Depositional Structures	QUIZ #3
9/24	-----	LAB EXAM #1
10/1	Exer. 5: Radioactive Dating Techniques	
10/8	Exer. 6: Relative Dating Techniques & Stratigraphic Correlations (Make sure to bring completed Exer 5, too)	QUIZ #4
10/15	Exer. 7: Dating Sequences, Observing Geologic Structures & Reading the Grand Canyon's Geologic Record	QUIZ #5
10/22	Exer. 8: Simulating the Process of Natural Selection (<i>Complete NS Paper for Extra Credit by 11/5</i>)	QUIZ#6
10/29	-----	LAB EXAM #2
11/5	Exer. 9: Geologic History of Arizona & Fossil Preservation ALSO Appendix 2 - Fossils	
11/12	Exer 10: Marine Invertebrate Organisms and/or Paleozoic Extinction Lab (Handout) ALSO Appendix 2 - Fossils	QUIZ #7
11/19	Exer. 11: Mesozoic Giants - The Dinosaurs	QUIZ #8
11/26	THANKSGIVING BREAK - NO CLASS	
12/3	Exer. 12: Cenozoic Mammals & Human Evolution (WWW)	Quiz #9
12/10	-----	LAB EXAM #3