

**GLENDALE COMM. COLLEGE: COURSE SYLLABUS SECTION: 14506**

**GLG 101 Introduction to Geology I: Physical Geology Lecture Fall 2009**

**Credits/Periods:** 3 credits/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.

**Course Description:** A study of the kind and arrangement of materials composing the earth's crust and the geological processes at work on and within the earth's surface.

**Time/Place:** MWF 10-10:50am; PS 175

**Text:** Tarbuck & Lutgens *Earth* 9<sup>th</sup> Ed. - - ISBN# 978-0-13-156684-2 \*\*or\*\*  
Custom Version (same content) ISBN # 978-0-536-5561-5

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

**Office Hours:** M thru 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](mailto:pam.nelson@gcmail.maricopa.edu)

**Web page(GCC related):**

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

**Welcome to GLG101!** During this semester, we will be studying the dynamic planet we call home. Physical Geology is the study of not only rocks and minerals, but also earthquakes, volcanoes, floods, landslides, glaciers, deserts, groundwater, oil and natural gas, and lots of other neat stuff - topics that may even influence how you think about buying a home or how you use energy. You might even gain a new perspective on the landscapes around town, those you may see on vacation - the Grand Canyon, for example - and even the surfaces of other planets!

### **Course objectives**

After completing this course, you should be able to:

- Explain and give an example of the scientific method in action.
- Recognize different types of rocks & minerals and understand how they form.
- Understand and describe the processes of weathering, erosion, deposition and lithification.
- Understand the basics of the Theory of Plate Tectonics.
- Understand basic geologic resources such as oil, metals and groundwater.
- Understand and describe desert, coastal and glacial processes and landforms.
- Recognize basic geologic hazards and how to protect yourself and your family from being affected by them.
- Describe how geology direction affects your life on a daily basis and what role your activities have in changing geologic and environmental processes.

## ***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 Lecture** - The lecture and textbook are your primary resources for this course. For most of the topics, I will be lecturing using a variety of formats - including straight lecture, games, question and answer, demonstrations, videos, etc. ***It is very important that you take notes well and ask questions*** (If you need help in learning how to take effective notes, please see me). Lecture notes are available to download from the Palette.)
- **The Textbook** - Your textbook has been chosen to address the content of the course in the friendliest, most complete, and least expensive manner available. Reading assignments for each course topic are listed in the accompanying course schedule. ***Reading this material will enhance your understanding of the course material; you may chose to read this material either before or after we have discussed the topic in class. Further, the figures in the text support a number of the topics we discuss in class - examine them carefully.*** The chapter summaries and review questions make excellent study guides for potential exam and quiz material as does the student study guide.
- **Review Materials** - Review manuals for your textbook are available from the bookstores and offer one good option available to help you study and review the material we cover in class. I will also be handing out a review sheet for each exam that lists major "topic questions" for each chapter.
- **The Lab - GLG103, Physical Geology Laboratory** is required in conjunction with GLG101 for full Natural Science credit in most of our degree programs. The lab is coordinated with the lecture classes as closely as possible, and it is designed to give you "hands-on" experience with many of the rocks, minerals and geologic processes we discuss in lecture.
- **Study Groups** - Get together - help each other! I strongly encourage you to form study groups. 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 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 Applied Science department provide special programs to address the various needs of our students. These programs include:

- **GeoAssist** - This program, offered by the GCC Applied Science department's Geology Instructors, is a place where you can get tutoring 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 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 Service 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 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! **Instructor-excused absences must be obtained prior to the student's absence to ensure ability to make up work missed.** There will be no make-ups for unexcused absences.
- **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. There will be no make-ups allowed for quizzes or exams missed because of tardiness.
- **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.** If you need to drop the course, it is your responsibility to complete the appropriate paperwork as prescribed by the Admissions Office.

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***

Grading for this course will be based on a weighted average of homework assignments, quizzes and exams as listed below. 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 slightly during the semester.

### **Point Distribution:**

Check-off Exercises (awarded as a percentage of total number of exercises by the end of the semester)	25 points
Homework Assignments (5 @ 10 points each) =	50 points
Quizzes (5 best of 6 @ 20 points each; drop your lowest quiz grade) =	100 points
One-hour exams (2 best of 3 @ 100 points each; drop your lowest regular one-hour exam grade) =	200 points
Final Exam (150 points total; 100 pts. new material & 50 pts. cumulative) =	<u>150 points</u>
GRAND TOTAL =	525 points

***Point Breaks for grades: A= 475 and above; B= 420-474; C=315-419; D=265-314; F=264 and below***

**Exam and quiz formats:** Exams and quizzes will have multiple choice, matching, true/false, and short answer questions. Quizzes will cover the material covered in class since the last quiz or exam, including the information in the textbook 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.

**Homework assignments:** The **due dates** for each of the Homework Assignments listed in the accompanying packet are listed below. Homework may be turned in at any time BEFORE the due date. However, **NO LATE ASSIGNMENTS WILL BE ACCEPTED.**

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 101, Phys. Geol. Lect. - MWF 10am - Fall 2009**

<b>Date(s)</b>	<b>Topic</b>	<b>Textbook Chapters</b>	<b>HOMEWORK (See sheet)</b>	<b>Quizzes/ Exams</b>
8/24, 26, 28	Introduction; Scientific Method Basic Concepts and Processes Plate Tectonics, Center of the Earth	T & L Ch. 1		
8/31, 9/3, 5	Minerals	T & L Ch. 3		<b>QUIZ #1 (9/3)</b>
<b>9/7</b> 9/9, 11	<b>NO CLASS - LABOR DAY</b> Igneous Rocks	T & L Ch. 4		
9/14, 16, 18	Volcanoes Catch-up & Review for Exam	T & L Ch. 5	<b>HW#1 TQ/RQ (9/14)</b>	<b>QUIZ #2 (9/14)</b>
<b>9/21</b> 9/23, 25	----- Weathering & Soils Sedimentary Rocks	----- T & L Ch. 6 T & L Ch. 7	-----	<b>EXAM #1 (9/21)</b>
9/28, 30 10/2	Sedimentary Rocks, cont. Metamorphic Rocks	T & L Ch. 7, cont T & L Ch. 8.		<b>QUIZ #3 (9/30)</b>
10/5, 7, 9	Metamorphic Rocks, cont. Geologic Resources	T & L Ch. 8 T & L Ch. 23	<b>HW #2 TQ/RQ (10/7)</b>	
10/12 <b>10/14</b> 10/16	Catch-up & Review for Exam ----- Geologic Time	----- T & L Ch. 9 (See Ch 22 for more)	-----	<b>EXAM #2 (10/14)</b>
10/19, 21, 23	Geologic Time, cont. Crustal Deformation - Geo Structures Earthquakes	T & L Ch. 9 T & L Ch. 10 T & L Ch. 11	[10/19 Extra Credit for MiniPaper HW with Peer Review]	
10/26, 28, 30	Earth's Interior	T & L Ch. 12 & Review pp. 19-22	<b>HW #3 TQ/RQ (10/28)</b>	<b>QUIZ #4 (10/26)</b>
11/2, 4, 6	Plate Tectonics	SEE HANDOUT: Ch. 2, 13, 14 +		<b>QUIZ #5 (11/2)</b>
<b>11/9</b> 11/11 11/13	----- <b>NO CLASS - VETERAN'S DAY</b> Mass Wasting	----- T & L Ch. 15	-----	<b>EXAM #3 (11/9)</b>
11/16, 18, 20	<A selection scheme may be used to determine the order of the following chapters.> Running Water & Streams Groundwater	T & L Ch. 16 T & L Ch. 17	<b>Mini Paper HW Due Date (11/18)</b>	
11/23, 25 <b>11/27</b>	Shorelines <b>NO CLASS - THANKSGIVING</b>	T & L Ch. 20		
11/30 12/2, 4	Glaciers Deserts	T & L Ch. 18 T & L Ch. 19	<b>HW #4 TQ/RQ (12/2)</b>	<b>QUIZ #6 (11/30)</b>
12/7, 9, 11	Global Climate Change Catch-up & Review for Exam	T & L Ch. 21		
<b>12/14 @ 10am</b>	<b>MON, DECEMBER 14 @ 10AM (PARTIALLY CUMULATIVE)</b>			<b>FINAL EXAM</b>