

GENERAL INFORMATION

GEOLOGY 303, FALL SEMESTER, 2010

Lectures are in Jackson Geology Building (JGB) 2.324 (the Boyd Auditorium)

Lecture section 1: MW noon → 1 p.m. (unique numbers 26560 - 26610)

Lecture section 2: TTh 11 a.m. → noon (unique numbers 26500 - 26555)

Each unique number corresponds to a unique combination of lecture and lab meeting times.

Professors: Leon E. Long, Geology Building 4.156

Office hours: MW 10→11, TTh 10→11, or by appointment

Office phone: 471-7562

Home phone: 459-7838

e-mail: leonlong@jsg.utexas.edu

Richard Ketcham, Geology Building 3.318

Office hours: MW 11→noon, TTh 9→10, or by appointment

Office phone: 471-6942

Home phone: 419-7438

e-mail: ketcham@jsg.utexas.edu

Drs. Long and Ketcham take turns lecturing to both lecture sections.

Textbook and lab manual (combined into a single volume): Long, L. E., 2009, *GEOLOGY*: 14th ed., Pearson Custom Publishing, 600 pages

Many items pertinent to GEO 303 (documents, announcements, condensed lecture notes, images, your test scores, and more) can be accessed via Blackboard (see page 5 for detailed instructions).

You are already registered to attend one 2-hour laboratory session per week in JGB 2.306. Participation in laboratory is required in order to pass the course. **Labs begin on Monday, August 30** but note that there will be no lecture or labs on Labor Day: Monday, September 6.

| | | |
|--------------------------------|----------------------|------------|
| Weights assigned to grades: | 1 st quiz | 19% |
| | 2 nd quiz | 16% |
| | Laboratory grade | 35% |
| | Lecture final exam | <u>30%</u> |
| | | 100% |

The grades will be curved, but the boundaries between letter grades are determined by the instructors' judgment and are different every semester. Recently the *A/B* boundary has been in the high 80s, the *B/C* boundary in the high 70s, the *C/D* boundary in the high 60s, and the *D/F* boundary in the high 50s. All of these estimates are approximations and may vary a point or so according to class performance. We are purposely vague about grade boundaries until the end of the course when we can examine in detail the distribution of final weighted averages.

Absences: Drs. Long and Ketcham take an understandably dim view of unexcused absences from quizzes. Unexcused absences generally will result in a grade of zero. Please contact one of the instructors as soon as possible if you have missed a quiz for a legitimate reason.

Upon request, UT provides appropriate academic accommodations for qualified students with disabilities. For more information, contact the Office of the Dean of Students at 471-1201, or open the web site: <http://deanofstudents.utexas.edu/>

Objectives of Geology 303

Geology 303 is a one-semester survey of the entire field of geological science. We recognize that you probably have had no formal instruction in geology. Polls show that nearly all of you have taken high school biology, 85% or more have had chemistry, and similarly for physics. We will draw upon certain elementary concepts in these other sciences, and they will be reviewed when they are discussed in GEO 303. Mathematics in this course will consist of simple arithmetic.

Geology draws heavily from these other disciplines. The earth is complex and not many aspects of it can be studied in isolation in a laboratory. This very complexity means also that geology includes a greater variety of subject material than many other sciences have. We may classify the subject of geology into three main areas: the *configuration* of the earth (the shapes, sizes, and compositions of its parts), the *processes* that constantly change the configuration, and the *origin* and actual *history* of the earth. GEO 303 treats all of these categories, emphasizing one or another of them differently along the way. The lectures present the more theoretical subjects, and in lab you will have opportunity to look at minerals, rocks, fossils, and maps, go into the field locally in Austin, and hold discussions as part of a small group.

In addition, you are invited to participate in two optional activities, both costing no money. They are a one-day field trip west of Austin to visit the Llano Uplift on October 9, and a brown-bag lunch discussion (time and place to be announced) of how geology fits into your larger philosophical or theological worldview.

Lecture Topics

Part I. *Introduction to the earth* (Chapters 1, 2, 3, 5, 7, 9, and 11)

- Origin of the solar system and earth
- Chemistry of the earth; crystals and minerals
- Igneous, sedimentary, and metamorphic rocks
- Measurement of geologic time, earliest earth history

Part II. *History and development of life* (Chapters 12, 13, and 15)

- Origin of life
- Stratigraphy, fossils
- Processes of organic evolution
- Geologic history of vertebrate animals

Part III: *Geophysics, plate tectonics* (Chapters 16, 21, and 22)

- Earthquakes, seismic waves
- Deep interior of the earth
- Continental and oceanic crust, and the mantle
- Gravity, isostasy, origin of mountains
- Earth magnetism
- Physiographic features of the ocean basins
- Continental drift, plate tectonics

Part IV: *Processes occurring at the earth's surface: geology and you* (Chapters 23, 24, and 25)

- Streams, deltas, coasts
- Glaciers
- Past and future climates
- Geology of petroleum and natural gas
- Population, natural resources, looking to the future

Chapters 4, 6, 8, 10, 14, 17, 18, 19, 20, 26, and 27 are covered in lab.

LECTURE, READING ASSIGNMENT, AND TESTING SCHEDULE

Textbook: Long, L. E., 2009, *GEOLOGY*: 14th ed., Pearson Custom Publishing, 600 pages

| <i>Material on</i> | <i>Dates of lectures</i> | <i>Reading assignment</i> |
|--------------------|---|---|
| <i>Quiz 1</i> | August 25 (or 26) through September 23 (or 27) 9 lectures | Chapters 1, 2, 3, 5, 7, 9, 11, and 12 through page 214 inclusive |

Monday, September 6. Labor Day holiday; no lecture or labs.

Friday, September 10. Last day to drop GEO 303 for a possible refund.

Monday, September 27, 7:30 p.m., JGB 2.324. **Review session** for Quiz 1; participation is voluntary.

September 28 (or 29). **Quiz 1** covering first 9 lectures and textbook chapters mentioned above.

Saturday, October 9. All-day field trip (approximately 10 hours) to the Llano Uplift west of Austin. Transportation by air-conditioned bus equipped with restroom is **free**; participation is voluntary and all are invited. Also invited at a modest expense are guests who are not students in GEO 303.

Wednesday, October 20. Last day to drop GEO 303 with a *Q* (= *Quit* with no academic penalty) except for urgent and substantiated, nonacademic reason approved by your dean. Last day to change registration in GEO 303 from a letter grade to pass/fail, or the opposite.

| <i>Material on</i> | <i>Dates of lectures</i> | <i>Reading assignment</i> |
|--------------------|---|---|
| <i>Quiz 2</i> | September 30 (or October 4) through October 26 (or 27) 8 lectures | Chapters 12 (following page 214), 13, 15, and 21 through page 431 inclusive |

Monday, November 1, 7:30 p.m., JGB 2.324. **Review session** for Quiz 2; participation is voluntary.

November 2 (or 3). **Quiz 2** covering lecture material *since* Quiz 1 (i.e., second group of 8 lectures) and corresponding chapters of the textbook.

| <i>Material emphasized on</i> | <i>Dates of lectures</i> | <i>Reading assignment</i> |
|-------------------------------|---|---|
| <i>final exam</i> | October 28 (or November 1) through December 1 (or 2) 9 lectures | Chapters 21 (following page 431), 22, 23, 24, and 25 |

Thursday and Friday, November 25 and 26: Thanksgiving holidays; no lecture. Labs on Monday, November 22 but no labs on November 23 through 26.

FINAL EXAMINATION FOR LECTURE PART OF THE COURSE

Monday, December 6, 10 a.m., JGB 2.324. “**Extended office hours**” review for the final exam; participation is voluntary.

A **special time and date** will be arranged for the lecture final exam with **both lecture sections together**. This unified examination will **not** occur during a period designated in the *Fall 2010 Course Schedule* for classes that meet MW at noon or TTh at 11 a.m. We anticipate Thursday, December 9, 7-10 p.m. in a large auditorium, the date, hour, and locality to be confirmed by the Registrar’s Office.

GEOLOGY 303 LABORATORY

Grade in laboratory

Laboratory sessions are conducted by Teaching Assistants (TAs), who are graduate students pursuing masters or Ph.D. degrees in geological science. Performance in the laboratory accounts for 35 percent of your total grade in GEO 303. Grades from the lecture examinations and laboratory will be averaged and *one* combined grade will be calculated for the course. Thus you will either pass or fail the entire course, *not* the lecture or laboratory separately.

The 35 possible points in the laboratory will be distributed approximately as follows:

- 33% on a mid-semester examination to be given in your scheduled laboratory period during the week of Tuesday, October 12 through Monday, October 18.
- 32% on a laboratory final examination to be given in your scheduled laboratory period during the week of Monday, November 29 through Friday, December 3.
- 35% on attendance, participation in discussions, and performance on exercises and short quizzes. Thus, this component of your performance in lab is an important 12% of the overall course grade.

Quizzes and homework assignments

Your TA has the option to conduct unannounced quizzes. There will also be homework assignments and discussion topics to prepare.

Make-up laboratories, late papers

If for any reason you must miss a laboratory session, there will be no make-up laboratory as such. Your laboratory TA teaches more than one section, and if she or he is willing, you may make arrangements with your TA to attend another section in which the same material is being taught.

Homework assignments will not be accepted late. Their solution will be discussed when they are turned in, and therefore students who submit late papers would have an unfair advantage.

Office hours, problems

Each TA will maintain office hours this semester, and will notify you of office hours and location. If you should have problems in laboratory that cannot be handled by your Teaching Assistant, you should contact:

Prof. Leon Long
Office phone: 471-7562
e-mail: leonlong@jsg.utexas.edu

or

Prof. Richard Ketcham
Office phone: 471-6942
Email: ketcham@jsg.utexas.edu

GEO 303 on the web: Blackboard, web site, and eGradebook

Note: the discussion below is full of computer jargon. Please ask Dr. Ketcham or Dr. Long to explain any unfamiliar terms.

UT Direct to access: <https://utdirect.utexas.edu/>

To access eGradebook, you must first access UT Direct via your UT-EID. You must have:

- a web browser: freely available from Beovaware or from producers' web sites for Macintosh or Windows
- your UT-EID (*Electronic Identification*)—what you use to access UT Direct

Blackboard We shall post abundant material to Blackboard, a UT-supported, computer-based course management system that is accessible *only* to those enrolled in GEO 303 (or other UT courses).

How to access Blackboard:

- Use a web browser to access: <https://courses.utexas.edu/webapps/login>
- You will be asked to provide your UT-EID and password.
- There will be a link for each course in which you are enrolled, including “10F INTRODUCTION TO GEOLOGY.” (For each lecture section, all of its unique numbers will be listed as a single unique number.) For more information on how to access and use Blackboard, see this web site: <http://www.utexas.edu/cc/blackboard/tutorials/student/index.html>
- You will need the ability to open, close, and save files and attachments, and in particular you will need a PDF reader (Adobe Acrobat Reader, which is free software)
- We also highly recommend that you have an e-mail account.

Uses of Blackboard in GEO 303:

Below are definitions and uses of the major subunits in the Blackboard facility.

- *Announcements* regarding logistics of GEO 303 (example: schedule of review sessions)
- *Syllabus* an electronic copy of this document
- *Faculty Information* how to contact the professors
- *Course Documents* the most important domain in Blackboard where we post PowerPoint files from lecture, handouts, etc. We will also post condensed lecture notes immediately before each quiz and before the lecture final exam.
- *Discussion Board* where to raise questions related to GEO 303 (see discussion rules, next page)
- *eGradebook* link to eGradebook

How to post to a discussion board:

- Click the discussion board button.
- You may read or add to an existing discussion by clicking on an existing “forum,” and add a new “thread” to the discussion. You may post a message to the existing thread (this is difficult to explain in detail, but rather self explanatory if you try it).

Electronic Posting of Grades Exam, quiz, and laboratory midterm and final grades will be posted on eGradebook, which is part of the “Class Information Pages” or CLIPS, accessible from UT Direct. You can also access eGradebook from Blackboard. eGradebook is password-protected with your UT-EID and password such that your grades are available only to you and your instructors at: <https://utdirect.utexas.edu/diia/egb>

Rules for Use of GEO 303 Blackboard Discussion Boards

Blackboard discussion boards are available to all GEO 303 students, TAs, and professors. Everyone can read anything that you post to a discussion board, and your identity, although encrypted in your

username, ultimately cannot be concealed. In a sense you are a "public figure" to be held accountable for your words and actions. Thus, normal courtesy and civility are expected of everyone. Your peers will also think better of you if you think carefully about constructing good phraseology, spelling, and grammar before you send forth a message. Before posting a message, it would be a good idea to run it through a spelling checker.

The following uses of the GEO 303 Blackboard discussions are FORBIDDEN:

- Dirty, obscene, or inappropriate jokes
- Anything that insults a person's race, gender, religious faith, or sexual orientation
- Reference to athletic teams or events
- Negotiation to buy or sell something
- Reference to social events (unless you would like to throw a party just for GEO 303 students)
- Appeals on behalf of any private or public do-good organization (religious, charity, fight against disease, etc.), no matter how worthy

The guiding principle here is that GEO 303 Blackboard discussion boards are meant *only* for the business at hand. ITS (Information Technology Services) endorses (and will enforce) the "no-no" list above. If you wish to indulge in something on that list, send a personal e-mail message.

With adherence to these minimal requests, we hope that the GEO 303 Blackboard discussion boards will become an excellent forum by which you may seek help from your peers, TAs, and professors, or mentor others. You are welcome to ask questions, make comments, form study groups, whatever.

Address your message to the discussion board *only* if you intend for a large audience to read it. If your message is intended just for an individual, use e-mail instead.

Geology has important religious implications (origins, creation, organic evolution, etc.) and political implications (utilization of natural resources, minimizing pollution, global warming, etc.), and sometimes the GEO 303 discussion boards carry some highly opinionated exchanges. We welcome this! However, just as the United States Senate has learned through experience that it must have rules to limit debate, so must we. If someone violates the rules above, the message may be deleted and her/his privilege to post future messages on the board may be revoked at the discretion of Drs. Long and Ketcham.

Access to Computers at UT

You do not have to own a computer to access the computer-based GEO 303 resources. All libraries and the SMF (Student Microcomputer Facility) have public computers for student use, but many require you to set up an IF (Individually Funded) account. To use the computers via the IF account is **free**, but other services such as printing will be charged to your IF account.

You can set up an IF account Subscribe online (using UT-EID) at this site:

https://utdirect.utexas.edu/its/account/user_agreement.WBX

Consult this site for more information: <http://www.utexas.edu/its/account/index.html>

Procedure to Obtain E-mail (if you do not already have an e-mail account)

Information may be found at this web site: <http://www.utexas.edu/computer/email/>

Your ITAC fees support **free** access e-mail for all students through the UMBS (University Mailbox Service). Consult: <http://www.utexas.edu/its/umbs>