

GEO 401 – PHYSICAL GEOLOGY – Course Information

Summer 2012 (First Session) – Unique Numbers 80815 and 80820

INSTRUCTORS: J. Richard Kyle JGB3.316D 471-4351 email: rkyle@jsg.utexas.edu
Office Hours: 1:00–2:00 Mon. and Thurs, other hours by appointment, or when door is open
Teaching Assistant: Lindsey Sydow email: lasydow@gmail.com
TA Office Hours: Tues, Weds 1:30–2:30 (JGB2.306), others by appointment

TEXTBOOKS – BOTH REQUIRED:

Lecture: Grotzinger and Jordan, 2010, *Understanding Earth*, 6th edn, Freeman

Laboratory: Busch, R. M., ed., 2011, *Laboratory Manual in Physical Geology*, 9th edn., Pearson

OVERVIEW:

This course is an introduction to basic concepts of physical geology; there are no prerequisites for this class. There are 7.5 hours of lectures each week (JGB3.222 M – F 10:00-11:30), and two laboratory sessions (JGB2.306 2:30 – 5:00 MW, or TT) (lab time is specific to the unique #).

COURSE GRADING (Final grades will involve the plus/minus system):

Intrasemester Exams:	30%	Laboratory Exercises	15%
Final Exam	30%	Laboratory Midterm	10%
Unscheduled Quizzes	5%	Laboratory Final	10%

LECTURE:

The lecture schedule gives the order of lectures and indicates the chapters that will be covered in lectures. Anything presented in lecture or lab is fair game on examinations. The lectures, labs, and readings are designed to complement and reinforce each other, so please take advantage of your textbooks – they are well written and contain excellent graphics.

Date	Chapter (UE 6th edn) - Lecture Topics	Lab	Lab Topics (Lab Manual Chapter, 9th edn)
May 31	Ch. 1 -- Introduction & The Earth System		
June 1	Ch. 2 -- Plate Tectonics		
June 4	Ch. 3 -- Earth Materials	1	Plate Tectonics (2) / Minerals (3)
June 5	Ch. 3 -- Earth Materials	1	Plate Tectonics (2) / Minerals (3)
June 6	Ch. 4 -- Igneous Rocks: Solids from melts	2	Minerals (3) / Igneous Rocks (5)
June 7	Ch. 5 -- Sedimentation	2	Minerals (3) / Igneous Rocks (5)
June 8	Ch. 6 -- Metamorphism		
June 11	Lecture Exam #1	3	Sedimentary & Metamorphic Rocks (6, 7)
June 12	Ch. 7 -- Rock Deformation	3	Sedimentary & Metamorphic Rocks (6, 7)
June 13	Ch. 8 -- Geological Time	4	Geologic Time (8) / Topographic maps (9)
June 14	Ch. 9/10 -- Origin Earth/Evolution of Continents	4	Geologic Time (8) / Topographic maps (9)
June 15	Ch. 11 -- Geobiology		
June 18	Ch. 12 -- Volcanism	5	Lab Midterm / Geologic maps (10)
June 19	Ch. 13 -- Earthquakes	5	Lab Midterm / Geologic maps (10)
June 20	Ch. 14 -- Exploring Earth's Interior	6	Geologic structures & maps (10)
June 21	Ch. 15 -- Climate System	6	Geologic structures & maps (10)
June 22	Ch. 16 -- Weathering and Erosion		
June 25	Lecture Exam #2	7	Surface and groundwater (11, 12)
June 26	Ch. 17 -- Hydrological cycle and groundwater	7	Surface and groundwater (11, 12)
June 27	Ch. 18 -- Stream transport	8	Coastal processes (15) / Earthquakes (16)
June 28	Ch. 19/21 -- Winds, deserts and glaciers	8	Coastal processes (15) / Earthquakes (16)
June 29	Ch. 20 -- Coastlines and ocean basins		
July 2	Ch. 3/23 -- Energy & mineral resources	9	Lab Final
July 3	Ch. 23 -- Human impacts on Earth's environment	9	Lab Final
July 4	HOLIDAY	10	HOLIDAY
July 5	Texas Geology/Review	10	No Lab
July 6	Final Exam (Friday 9:00 – 12:00)		Location to be announced by Registrar

EXAMS OVER LECTURE PORTION OF CLASS:

QUIZZES: There will be 6 unannounced short quizzes or exercises during the lecture period. Missed quizzes cannot be made up, but a copy can be provided for the intended study purposes.

Your top 5 scores will be counted (i.e. you may miss one with no adverse effect on your grade).

INTRASEMESTER EXAMS: There will be two intrasemester exams, given during the regular lecture period. Nonprogrammable calculators may be allowed. These two exams will cover material presented up to that point in the course with emphasis on material that you have not yet been tested on. The final exam will be comprehensive, covering the entire semester, with emphasis on the new materials (material not covered on the intrasemester exams).

FINAL EXAM: The comprehensive final exam will be on Friday July 6, 9:00 – 12:00 a.m., as dictated by the registrar. The location of the final exam will be announced later.

MAKE-UP EXAMS: There are no plans to provide the opportunity to take any exam other than at the time at which it is scheduled; a make-up exam will be provided only to those students documenting their absence as legitimate. In all cases, this will require consent of the instructor; for medical reasons, a doctor's statement will be required.

REVIEW OPPORTUNITIES: The instructor and TA are available to meet with you outside of class during office hours or by appointment at other times to discuss any material. In addition we will host review sessions before each major exam. These will be question-driven sessions, and the material discussed will be limited to that brought up by students.

WEB-BASED AND MULTIMEDIA INFORMATION: The course lecture materials will be posted on the course Blackboard site (accessible with your UT-EID). Grades will be posted there as available, but the official gradebook will be maintained offline.

Lecture Protocol: Use of laptops, PDAs, etc. is allowed only to take notes (need approval of instructor).

LABORATORY:

Lab attendance is mandatory; you must attend the lab for which you enrolled. Working diligently for the entire lab period will ensure minimizing the time required to complete labs and maximizing your grade. Remember that the lab component is worth more than your final exam!

Lab exercises are due at the beginning of lab session following the assignment (unless otherwise instructed). For all labs, plan on bringing standard supplies: laboratory textbook, mechanical pencil, eraser, pen, ruler, protractor, and calculator. Attendance is mandatory, and credit will not be given for work turned in without attending the lab session. Group discussion about laboratory projects is encouraged, but all work submitted for grading must be an individual's sole effort.

Lab exams will be administered during the regular lab times. Although the laboratory final exam is not designed to be comprehensive, the final group of labs builds on the material covered prior to the lab midterm exam and, thus, you will need to retain knowledge of material from the first lab exercises for optimal performance on the lab final exam.

Special Needs: The University of Texas at Austin provides upon request appropriate academic accommodations for qualified students with disabilities. To determine if you qualify, please contact the Division of Diversity and Community Engagement, Services for Students with Disabilities, 471-6259, <http://www.utexas.edu/diversity/ddce/ssd/>. After your needs are certified, the instructors will work with you to make appropriate arrangements. Special needs requests must be submitted in writing at least a week prior to the affected event, e.g. a test or assignment.

University Honor Code <http://registrar.utexas.edu/catalogs/gi09-10/ch01/index.html>: "The core values of The University of Texas at Austin are learning, discovery, freedom, leadership, individual opportunity, and responsibility. Each member of the university is expected to uphold these values through integrity, honesty, trust, fairness, and respect toward peers and community."

GEO 401 "Homework" – Due at the start of class Friday (tomorrow)

To encourage everyone to start to feel comfortable with asking questions and otherwise actively participating in the course, for Friday, please write and be able to present to the class a paragraph identifying some specific aspect about geology (= study of the Earth) that you feel could be relevant to your long-term interests, i.e. personally, professionally, etc.