

GEO 335 (Geology and Mineral Resources of Texas) -- Spring, 2012

COURSE FORMAT: 3 lecture hours per week (9:30-11:00 TT; JGB3.116); **AND**

2 lab/discussion hours per week (JGB3.204) (9-11 F) (Unique #27615), **OR** (2-4 Th) (Unique #27620)

Instructor: Dr. Richard Kyle (JGB3.316D; phone 471-4351; rkyle@mail.utexas.edu);

TA: Adam Goldsmith atom.goldsmith@utexas.edu

OFFICE HOURS: **Kyle** (JGB3.316D) M 10–11:00, W 2–3:30 (other times by appointment or if door is open)

Goldsmith (JGB3.204) Th 1-2, F 8-9 (other times by appointment)

Grading: (1) 2 Intr semester Exams (2/23, 4/10)	40 %
(2) Unscheduled Lecture Quizzes	5 %
(3) Research Paper (due 4/24)	15 %
(4) Lab Exercises and Quizzes	20 %
(5) Final Exam (5/10, 2:00-5:00 p.m.)	20 %

***Missed quizzes cannot be made up.**

****There are no plans for make-ups of exams; Lab attendance is mandatory**

***** Final grades will involve the plus/minus system**

COURSE DESCRIPTION: Geology 335 is a survey course that focuses on the diverse aspects of the geology and mineral resources of Texas. The surface and subsurface geology and mineral resources of selected regions of the state will be reviewed, as well as the relation of resources to society and the importance of mineral resources to the state and local economies. The geologic nature and origin of energy resources and selected industrial minerals will be discussed. Lab sessions provide additional time for discussion and illustration of topics, as well as providing "hands-on" experience with selected maps and samples. Topics covered in lab may be included on intrasemester and final exams.

TEXTBOOK: Spearing, D., 1991, Roadside Geology of Texas: Mountain Press, 416 p. (optional)

SCHEDULE:

<u>Week</u>	<u>Lecture Topic</u>	<u>Lab Topic</u>
1/17-1/20	Introduction/General Geology Review	Mineralogy Review
1/23-1/27	General Texas Geography & Geology	Magmatic & Meta Processes
1/30-2/3	Central Texas Geology/West Texas Geology	Sedimentary Processes
2/6-2/10	Marathon Region/Permian Basin	Fossils / Geologic Time
2/13-2/17	East Texas Basin/Salt Domes	Mineral & Rock Quiz
2/20-2/24	Central Gulf Coast Geology/ First Exam	Topographic & Geol Maps
2/27-3/2	Trans-Pecos Texas; Cenozoic Geology	T-P TX Tertiary Igneous Geol
3/5-3/9	Earth Resources Review/Resources and Society	No lab
SPRING BREAK		
3/19-3/23	Overview of Texas Mineral Resources	Mineral Resource Valuation
3/26-3/30	Principles of Petroleum Geology	Subsurface Geology
4/2-4/6	Petroleum Geology of Texas	Texas Petroleum Geology
4/9-4/13	Second Exam /Unconventional Petroleum	Fluids in the Subsurface
4/16-4/20	Other Energy Resources: Coal/Uranium/Alternative	Texas Water Resources
4/23-4/27	Water Resources	Industrial Minerals
4/30-5/4	Industrial Mineral Resources/Review	Final Lab Quiz

Lecture Protocol: The use of laptops, PDAs, etc. is allowed only to take notes (requires approval of instructor).

University Honor Code: "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."

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 (link above). 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.