

SYLLABUS

GEO 341 (Mineral Resources, Society, & the Environment) (UNIQUE NO. 27535) -- Fall, 2012 (most communication will be via Blackboard – check often)

LECTURE: 12:30-2:00 TTh, JGB 3.116
LAB/DISCUSSION: 1:00-3:00 F, EPS 2.136

Instructor: Dr. J. Richard Kyle (JGB 3.316D); Office Hours: M 10:00–11:30, Th 2:00–3:30
(other hours by appointment or when door is open) Phone: 471-4351; rkyle@jsg.utexas.edu
TA: Stefanie Frelinger sfreling11@gmail.com; Office hours M 1–3; W 3–4 JGB 3.114

Grading: (1) Writing Assignments 40%
(2) Lab assignments & quizzes 20%
(3) Intrsemester Exams (10/23, 12/6) 40%

COURSE DESCRIPTION: Geologic, economic, societal, and environmental issues related to the production and consumption of mineral resources. The geologic and economic nature of commercial concentrations of energy, metals, and industrial minerals will be the focus of the course. Probable topics include natural controls on mineral resource localization, modern resource-forming systems, economic evaluation, resource extraction, environmental issues, mineral exploration, etc. Lab exercises typically involve studies of major mineral deposit types, including representative sample suites and economic evaluation. **GEO 341 is a FLAG writing component course; writing assignments can be directed toward individual student interests within this broad topic, as long as the basic requirements of FLAG courses are maintained.**

TEXTBOOK: Pohl, W.L., 2011, *Economic Geology: Principles and Practice*: Wiley-Blackwell, 663 p.; other readings to be assigned.

SCHEDULE (tentative):

<u>Week</u>	<u>Lecture Topic</u>	<u>Readings</u> (p. in Pohl)	<u>Laboratory</u>
8/30	Introduction/Earth Resources	1-5	Mineralogy Review
9/4 – 9/6	Types & Extraction of Mineral Resources	132-148	Mineralogy Review
9/11–9/13	Ore Studies/Geochemistry	35-54	Ore Studies
9/18 –9/20	Ore-forming Systems/Writing Workshop	18-23, 35-38	*Mineral Processing
9/25–9/27	Writing Workshop		*Resource Value
10/2–10/4	Magmatic & Magmatic Hydrothermal Ores	*7-18, 38-62	Porphyry/Skarn Ores
10/9–10/11	Ores in Continental Volcanics	*74-76	Lab Quiz / min expl
10/16–10/18	Ores in Marine Volcanics; Metamorphism	*68-74, 122-132	Vein & Prec Metal Ores
10/23–10/25	EXAM 1 / Sedimentary Basins		Ores in Marine Volcanics
10/30–11/1	Sed Ores; Energy Resources	*100-120	Ores in Sed Basins
11/6–11/8	Energy Resources	465-582	Volumetric Evaluation
11/13–11/15	Mineral Exploration	411-464	Resources & Weathering
11/20–11/22	Resources & Weathering/ HOLIDAY	77-100	No lab
11/27 –11/29	Weathering; Industrial Minerals	285-410	Lab Quiz / Ind Minerals
12/4–12/6	Industrial Minerals; EXAM 2		No lab

*plus appropriate sections p. 149-284

Prerequisites: satisfactory completion of GEO 416K (Earth Materials) or its equivalent.

Lecture Protocol: The use of laptops, tablets, PDAs, phones, etc. is allowed only to take notes (requires approval of instructor). Attendance will be taken.

Grading: Your course grade will be based on the combined results of the lecture and laboratory portions of your class in the percentages shown above. Final grades will involve the plus/minus system.

Class exams: There will be two full-period class examinations (closed book and notes) during the course, as listed on the class schedule. Attendance at these exams is required, and a missed exam will be counted as a zero, unless a written doctor's or other acceptable excuse is provided.

Laboratory Score: This portion of your grade is based on your laboratory exercises and quizzes. *The laboratory is an integral part of the course, and completion is required to pass the course.*

Writing Exercises Score: This portion of your grade is based on your writing exercises. *As a FLAG writing component course, satisfactory completion of all writing exercises is required to pass the course.*

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.

Academic Integrity: No form of academic dishonesty will be tolerated. Information on this issue can be found at: [UT Academic Integrity](#). Of particular importance for a Substantial Writing Component course is the issue of plagiarism. Read the information provided by the Dean of Students concerning [Plagiarism](#) (ask questions if you are unsure of any issues).

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."

Writing Center: I strongly encourage you to use the Undergraduate Writing Center, FAC 211, 471-6222: <http://www.uwc.utexas.edu/>). The Undergraduate Writing Center offers free, individualized, expert help with writing for any UT undergraduate, by appointment or on a drop-in basis. UWC services are not just for writing that has "problems": Getting feedback from an informed audience is a normal part of a successful writing project. The UWC's trained consultants work with students from every department on both academic and non-academic writing. Using methods that preserve the integrity of your work, they help you develop strategies to improve your writing and become a more independent writer. Whether you are writing a lab report, a resume, a term paper, a statement for an application, or your own poetry, UWC consultants will be happy to work with you.