

GEOLOGY 4311/5304 ORE DEPOSITS

Fall 2014, Sul Ross State University

Instructor: Robert Ward (928-965-2807)

Office Hours: T-Th 12.5-1.5 or by appointment

Class Objective: This course will be an **applied economic geology class** that examines the localization and genesis of metallic ores and their associated gangue mineralogy.

Prerequisites: General chemistry, mineralogy, petrology, and structural geology

Textbook: *Introduction to Ore-Forming Processes* by Laurence Robb

Attendance Policy: Attendance is expected for lectures and fieldtrips. Exams and exercises missed cannot be made up at a later date unless **prior arrangements** are made with the instructor.

Methods of instruction: The course will consist of 2.5 hours of lecture per week and several field trips. Some ore suites will be examined during class time. A research project will be required for students taking the class for graduate credit.

Grading: The course grade will be a product of 2 exams (50%), quizzes (15%), homework (15%), and field projects (20%).

Sul Ross State University is committed to equal access in compliance with the Americans with Disabilities Act of 1973. Disabilities Service is in FH112 (837-8203).

SEMESTER SCHEDULE

WEEK	TOPIC	READINGS
1	Intro/Guest Speaker	Robb, p 1-15
2	Commodities/Igneous Rocks	Robb, p 1-15
3	Magmatic Processes	Robb, p 19-74
4	Magmatic Processes	Robb, p 19-74
5	Leach Capping/Sampling	Robb, p 219-245, TBA
6	Sampling/Shafter Mining District/Field-trip	TBA
7	Sample (QA/QC)/Magmatic-Hydrothermal Processes	Robb, p.75-125, TBA
8	Magmatic-Hydrothermal Processes/Exam 1	Robb, p.75-125
9	Southwest North America Porphyry Cu-Mo-Au Province	TBA
10	Arizona Copper Mines Field-trip	
11	Hydrothermal Processes	Robb, p.129-214
12	Hydrothermal Processes	Robb, p.129-214, TBA
13	Sedimentary Processes/Texas Ore Field-trip	Robb, p.246-307
14	Sedimentary Processes	Robb, p.246-307
15	Tectonics and Global Metallogeny	Robb, p.311-343
16	Finals Week	

FIELD TRIP DATES

October 2 (Th) Core logging and outcrop sampling exercise

October 26-29 (M-Th) Porphyry Copper Deposits of Arizona

November 20 (Th) Texas Ore Deposits

