

**GSCI 320: Petrology
Spring 2011**

COURSE SYLLABUS

Instructor: Ron Schott

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Office Hours: MWF 2:30pm-3:30pm and TuTh 3:00pm-4:00pm, or by appointment (please schedule appointments by e-mail)



Meeting Times:

Lecture: MWF, 1:30-2:20pm in 217 Tomanek Hall

Text Books: Petrology: Igneous, Sedimentary, and Metamorphic, 3rd ed. by Blatt, Tracy, & Owens (2006)
Freeman, New York, NY, 530 p. ISBN: 0-7167-3743-4

Course Website: <http://hays.outcrop.org/GSCI320/> Also via Blackboard.

Course Schedule: A schedule for this course, which includes lecture topics, reading assignments and examinations, is posted on the Blackboard website. Examination dates will be confirmed, during class, one week in advance.

Course Description: Petrology is the study of the origin, occurrence, and classification of rocks. This class will examine all three major classes of rocks: Igneous, Sedimentary, and Metamorphic. The igneous section will focus on topics including the origin and geochemical evolution of magmas, crystallization processes, intrusive and extrusive bodies, and igneous rock classification and associations. The sedimentary section will focus on topics weathering and the origin and mineralogical evolution of sediments, depositional environments, diagenesis, and sedimentary rock classification and associations. The metamorphic section will focus on types of metamorphic change (textural, mineralogical), conditions and agents of metamorphism, the metamorphic facies concept, metamorphic mineral assemblages, and metamorphic rock classification and associations.

Student Objectives: Given a group of rocks, a student will be able to:

- Interpret their geologic origin and tectonic/environmental setting
- Evaluate whether one or more of the rocks do not belong with the others in the group
- Predict other rocks that might be found in association with these
- Evaluate the resource potential of rocks in the region
- Design an analytical plan using geochemical and petrographic tools to further describe these rocks

Student Workload: In order to receive an average grade at FHSU, students are advised to expect to spend about two hours of studying and preparation for each hour spent in class. That amounts to about six hours of studying *per week* in order to get a B-/B this class. The time you need to spend may vary, depending on your study skills and your academic goals.

Disability Accommodations: In compliance with Fort Hays State University policy and equal access laws, disability-related accommodations or services are available. Students who desire such services are to meet with the professor in a timely manner, preferably the first week of class, to discuss their disability-related needs. For more information on university policies see the FHSU catalog beginning on page 30.

Course Grade: Credit for GSCI 320 is only awarded upon the successful completion of the course. We all want you to succeed in this course. Any student experiencing difficulty with course material should arrange for an immediate conference. Please do not hesitate to do so because many times performance problems can be overcome if they are brought to the attention of the instructor. A tutor may also be available for this course.

The breakdown for your final grade is as follows:

Lecture Exams (4 @15% each)	60%
Quizzes	15%
Homework Assignments	15%
Attendance and Participation	10%
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Final Course Grade	100%

Nominally and at a minimum, final grades will be assigned according to the following grading scale:

A = 100% - 90% B =90% - 80% C =80% -70% D =70% - 60% U = 60% - 0%

In general, the class average is expected to fall in the B-/B range (~ 2.7 to 3.0 on a 0 to 4.0 point GPA scale - excluding drops). Because I prefer to give more challenging quizzes and exams, I reserve the right to modify this curve slightly (only adjusting grades upward), if necessary. This modification will occur at the end of the semester when all scores are compiled. In order to gauge your progress during the semester the best barometer will be grade distribution curves which I will publish on the class website after each exam. Any student who is concerned about their grade is encouraged to discuss their progress during office hours.

Exams: There will be four lecture exams. Exams constitute the largest subtotal of your final grade. You are advised to be well prepared for each. Each lecture exam will cover approximately three to four weeks of lecture material. Exams will generally be made up of short answers or short essay questions. Study guides will be posted to the class website approximately one week in advance of each exam. All exam make-ups must be completed promptly. E-mail me ASAP to arrange them, if necessary.

Quizzes: About twenty Blackboard-based quizzes will be given throughout the semester (five per exam). The best 15 of these will constitute 15% of your final grade. Quizzes may cover reading assignments, recent lectures, field observations, mineral identification, etc. These are meant to give you ongoing feedback on your progress and to prepare you for exam-type questions.

Homework Exercises: Homework assignments are intended to give you practice at the practical application of the skills learned in this class. Five graded homework assignments will constitute 15% of your final grade. Take the time required to do a quality job on these.

Attendance and Participation: Ten percent of your final grade will be based on attendance and participation.

Attendance in class and lab is required. Any exam and lab make-ups must be completed promptly. E-mail me ASAP to arrange them.

To receive full credit in this category you are expected to attend class regularly (<5 absences for the entire semester) *and* demonstrate your active involvement in the class by asking questions, paying attention, and answering intelligently when called upon. Additional absences, unpreparedness, and general malaise will result in a lower grade.

As another measure of participation, I expect you to check the class website frequently and keep abreast of geology in the news. Finally, I expect you to e-mail me whenever you run into questions about the material, need to schedule make-ups or extra help, or just want to share something that you found interesting about the class.

"The quality of a person's life is in direct proportion to their commitment to excellence, regardless of their chosen field of endeavor."

-- Vince Lombardi