ROCKS & MINERALS (GEOL 302)
Fall Semester 2014
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Course Objectives & Content
The primary objective of this course is to convey an introductory level understanding of the nature and origins of minerals, how they are studied and why they are important to our understanding of the modern earth and earth history. All of the major earth systems where minerals play a significant role are covered in the course, including an introduction to rock-forming processes in igneous, sedimentary and metamorphic environments. The third page of this syllabus is a detailed schedule of topics that will be covered in this course.

Who Should Take This Course?
This course is for science, engineering and science education students seeking an introduction rocks and minerals. The course is designed mostly with geology and geophysics majors in mind, but it is also appropriate for students majoring in marine science, environmental science, chemistry, engineering, anthropology, geography, and middle education.

Meeting Times & Places
Lectures are on Tuesdays and Thursdays from 10:05 to 11:20 in PSC205. Laboratory meetings are on Mondays from 10:50 to 1:50 (section 1) and Wednesdays from 2:20 to 5:20 (section 2). All laboratory meetings are in EWS208.

Lecture Attendance
Attendance to lectures will be monitored through the administration of frequent in-class quizzes, which will constitute 20% of your course grade. Scoring of the quizzes is designed to reward participation. No opportunities are provided to make-up missed quizzes.

Laboratory Attendance
Attendance to laboratory section meetings is mandatory and essential to the successful completion of this class. If you know in advance that you cannot attend a particular lab, you should arrange to attend the other lab section meeting that week. If you miss a lab meeting due to an emergency, you must contact the lab instructor to arrange a makeup immediately.

Learning Outcomes
Students completing this class will learn the following:
- to identify common rock and mineral specimens by sight and based on their macroscopic physical characteristics
- to identify common rocks and minerals in thin section using a petrographic microscope
- to interpret x-ray diffraction data to identify mineral specimens.
- how minerals are constructed from atoms at the atomic / molecular level
- how minerals are produced and broken down in solid-earth, near-surface and marine systems
- what processes control the growth and decomposition of minerals in the major, rock-forming environments (igneous, sedimentary, metamorphic)
PowerPoint & Blackboard
I try to make my lectures as interactive as possible, usually by asking you questions about the subject matter as we move along. You should also feel free to ask questions. In particular, if you don’t understand something, speak-up! It’s likely that another student has the same question as you. Lecture material will be in PowerPoint files, which will be posted to Blackboard. Also – be sure that email sent to you via Blackboard is forwarded to whatever email address you check frequently. If you don’t do this, you run the risk of missing important course information.

Books

Grades
Final grades will be based on a curve, which typically results in an average course grade in the area of a low ‘B’. Note however, that this is an observation and not a policy, and that I would be happy to assign all students in the course grades of ‘A’ if they were to earn that grade. The overall weighting of course work is listed below.

- Lecture Exams (3) ___________ 30%
- Labs & Lab Quizzes ___________ 30%
- Lecture Quizzes ___________ 20%
- Lab Final ___________ 20%

Exam Dates
Lecture Exam One – September 27, 2016
Lecture Exam Two – October 27, 2016
Lecture Exam Three – December 01, 2016
Lab Final - November 14 & 16

Missed Exams
If you are ill or have an emergency and cannot take an exam, you must notify me by email or by phone in advance of the exam meeting time or as soon thereafter as is possible. If you do not provide prompt notification, you will receive a zero for the exam.

Office Hours / Communicating With Me
Office hours are immediately following each Tues-Thurs class meeting, or any time by appointment or on a drop-in basis. Email is an easy and effective way for us to communicate. I check my email frequently and will try to respond to your inquiries promptly.