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Class Website:  

Lectures:  Mon and Wed, 10-10:50 AM, School of Business Admin 20 (tentatively)  

Labs: Tues and Thurs, 10-11:50 AM, Heller Hall 120/118  

Office Hours:  Mon and Wed, 11-12AM and by appointment  

Course Objectives: In this class, you will come to understand the chemical and crystallographic make-up of minerals and be able to identify common rock-forming minerals in hand sample and under the microscope.  

Textbooks:  
Mineral Science by C. Klein (22nd Edition) w/ CD – for lecture and lab  
Minerals in Thin Section by D. Perkins and K. Henke (2nd Edition) – for lab  
(See Lecture and Lab Schedules for reading assignments)  

Equipment: Mineral testing equipment and other supplies need for lab exercises will be provided. However, you are strongly encouraged to purchase the following items, especially if you are planning to continue in the geological sciences:  
• 10x Handlens ($12 - $35; at bookstore or www.minerox.com)  
• Pen Magnet ($5; at bookstore)  
• Field Notebook ($4 -$8; at bookstore)
Attendance: Strongly encouraged - although the lectures will largely follow the textbook, it will be important to routinely attend lectures as you will be tested on information emphasized in the lectures. It is even more important that you attend all the lab sessions, as these will involve lots of hands-on work. To become adept at mineral identification, you should also expect to spend additional time in the lab outside the scheduled time.

Field Trips: You will be required to attend two field trips for full credit.

1) Saturday & Sunday, Sept. 23-24, Intro to the Geology of Northeastern Minnesota
   - Departure: 8 AM (Sept. 23)  Return: 6 PM (Sept. 24)
   - Overnight camping at Jay Cooke State Park
   - Meals will be provided; Grub and Camping Fee - ~ $25
   - Transportation will be by school bus.
   - Field notebooks (to be provided) are to be turned in after the trip for grading.
   - The trip will be run in collaboration with the GEOL 1045 (Fresh. Seminar: Minnesota’s Geologic History)

2) Thursday, Oct. 5, Visit to United Taconite Mine, Eveleth, MN
   - Departure: 8 AM    Return: Noon

Lecture Outline and Illustrations: PDF versions of each day’s lecture outline will be posted on the class website. Many of the illustrations used in the lectures that do not appear in the textbook will also be posted on the website.

Lab Exercises: Approximately 15 lab exercises will require you to turn in your results for grading. You will be notified of the due dates for the exercise when it is assigned. Exercises turned in up to two weeks after the due date will receive a 15% reduction in grade. Exercises will not be accepted beyond two weeks after the due date.

Computer Lab: Some lab exercises will require access to computers in the Geology Computer lab (Room 108). User Name: geol; Password: Fumarole! (case sensitive). You may also use these computers for other classwork this semester.

After-hours Lab Access: We will be the only class using this lab this semester and you are encouraged to use the lab any time, day or night. If this lab (or the computer lab) is locked, you can get a lab key from the Kirby Information Center desk.

Oral Mineral Tray Reports (Optional for Extra Credit): Must identify and report on related information on 9 unknown mineral samples (5 from List of 59) in one-on-one prescheduled meetings with instructor. Must correctly identify and report on 7 of the 9 minerals to get extra credit score of 14 (7 correct) to 18 (9 correct) points. A subsequent tray of 9 minerals will be created after the successful completion of each tray. Additional points will be given for up to 4 additional tray reports successfully completed as follows (#2 – 5 extra pts; #3 – 10 pts; #4 – 15 pts; #5 – 20 pts).

9/7/2006
Exams:

**Lecture:** Two 1-hour-long mid-term exams and one 2-hour-long final (see Lecture Schedule for dates)

**Lab:** Two hand sample mineral identification quizzes and one optical mineralogy quiz (see Lab Schedule for dates). Theses samples will come from the 59 minerals you will be expected to know for this class (See 59 Minerals in 59 Days handout). May use self-created Mineral Index Files during quizzes.

**Make-up Exams:** If a legitimate schedule conflict arises with a lecture or lab exam, please inform me at least 3 days in advance and arrangements will be made to reschedule the exam. If an emergency (e.g., sickness, death in the family) prevents you from notifying me within 3 days of your inability to take a lecture or lab, I will expect to receive some proof of this emergency before rescheduling the exam.

Grading: Scores for the various components of the class will be weighted as follows:

- Lecture Exam 1 (10/4) 14%
- Lecture Exam 2 (11/8) 14%
- Lecture Final Exam (12/19) 20%
- Mineral Quiz 1 (9/28) 6%
- Mineral Quiz 2 (11/2) 6%
- 15 Lab Exercises 35%
- Field Trip Notebook 5%
- Mineral Tray Reports 14% maximum extra credit

Letter grades will be based on the following range of total class percentage scores:

- A (Outstanding) 100-95%
- A- (Outstanding) 95-90%
- B+ (Above Average) 90-85%
- B (Above Average) 85-80%
- B- (Above Average) 80-75%
- C+ (Average) 75-70%
- C (Average) 70-65%
- C- (Average) 65-60%
- D+ (Below Average) 60-55%
- D (Below Average) 55-50%
- F (Failing) <50%
- I (Incomplete) An incomplete grade will be assigned if a failing grade is due to lecture tests not taken or more than 4 lab exercises/quizes not turned in.

Students with Disabilities: Individuals who have any disability, either permanent or temporary, which might affect their ability to perform in this class are encouraged to inform the instructor at the beginning of the semester. Adaptions of methods, materials, or evaluations may be made as required to provide equitable participation.

This syllabus is subject to change.

9/7/2006