Spring 2013
Lecture: Tuesday-Thursday 11:00am -12:15 pm, Plant Sciences Building Rm. 1146
Lab: Tuesday 2:00 - 5:00 pm or Monday 1:00 – 4:00 pm Geology Building Rm. 2117

Instructor: Dr. Sarah Penniston-Dorland
Office hours: Tuesdays, 1:00-2:00 pm, or by appointment, Chemistry Building 1221B
email: sarahpd@umd.edu, tel: (301) 405-6239

Teaching assistant: Caitlin Brown
Office hours: Wednesday, 10:00-11:00 am, or by appt., Computer and Space Sciences Building (CSS 3104) email: cbrown88@umd.edu

Required textbook: Introduction to Mineralogy, 2nd ed. by William D. Nesse**,**
ISBN**:** 0-19-982738-1**, comes with a CD for Optical Mineralogy.** ***Bring text to lab and class!***

Course Description: Basic mineralogy for geology majors and materials scientists. The principles of morphologic crystallography, crystal chemistry, and determinative mineralogy.

Elms: http://ng.elms.umd.edu

Grading:

Lab Exercises	25%	*For each of the midterms and wiki assignments the percentage grades are averaged to obtain a final percentage grade for the category. For the lab and other assignments, since the length of these is more variable, the total points for each assignment are added together and the percentage is calculated out of the total points for the category.*
2 Midterm Exams	20%	
Comprehensive Final	15%	
2 Lab Exams	20%	
Mineral Pages	5%	
Participation and Quizzes	15%	

Note: If you think there has been an error in grading an assignment or exam, you will have one week after it is returned to petition to have a grade changed. After one week, there will not be any grade changes on any assignment.

There will be no extra credit opportunities offered.

DETAILS OF THIS CLASS
Exams: There will be two midterm exams and a comprehensive final. Exams will consist of multiple choice, definition, sketches, short answer and/or essay questions. You may not use notes or any other study aids on exams or quizzes. There are no specially scheduled or makeup exams. Exceptions will be made for students with disabilities or extenuating circumstances that have been officially recognized by the university. Arrangements must be made at least one week in advance of the examination.

Mineral Pages: There will be a Mineral Pages (aka wiki) assignment due most weeks (except at the very beginning of the semester). Click on pages on the course menu at http://ng.elms.umd.edu/. Each class member has a section on the mineral of the week page. For most weeks, this will consist of an assignment investigating a mineral from the mineral group of the week. Students will be required to look up information about each mineral and add images, links and information about the mineral to the page by the end of each week. See the handout for more information.

Labs: The labs may require more than the three-hour lab period to complete. The key to the microscope cabinets is accessible to registered students in this course. You may retrieve the key from Ms. Dorothy Brown in the office on the first floor of the Geology Building, Geol 1120.

Reading: The student is expected to read the reading assignment ***before*** the class or lab time for which it is assigned.

Participation and attendance: Your participation grade is based on general classroom participation (attendance, responses to questions, questions asked) and on specific participation exercises and quizzes offered throughout the semester. Exams will be based largely on material presented in the class/lab as well as the reading assignments. If you miss a lecture or lab, it is your responsibility to obtain notes from a colleague. Students who miss a single class or lab for a university-approved absence must make a reasonable effort to contact the instructor in advance. If this is not possible, a self-signed note or email may be sent to the instructor upon return to class documenting the reason for the absence. If there are multiple absences, additional medical documentation is required. Upon receipt of proper documentation you will be permitted to make up missed work.

Late penalty: 10% of the grade will be deducted for ***each day*** that an assignment (lab, homework, etc.) is handed in after the due date. Exceptions will be made for absences due to ***documented*** university-approved absences.

Class communications: I will use the email addresses that you have registered with the university for communication regarding any class matters. Please make sure you check that email address regularly.

University closures: If the University is closed for an extended period of time, I will deliver course material and assignments using the Elms system and communicate with you through email.

GENERAL POLICIES

Academic Accommodations: If you have a documented disability, contact Disability Support Services, 0126 Shoemaker Hall. Each semester students with documented disabilities should apply to DSS for accommodation request forms and provide them to your professors as proof of your eligibility for accommodations. The rules for eligibility and accommodations a student may request are on the DSS web site at http://www.counseling.umd.edu/DSS/receiving_serv.html.

Religious Observances: The University System of Maryland policy provides that students should not be penalized because of observances of their religious beliefs, students shall be given an opportunity, whenever feasible, to make up within a reasonable time any academic assignment that is missed due to individual participation in religious observances. It is the responsibility of the student to inform the instructor of any intended absences for religious observances in advance.

Notice should be provided as soon as possible but no later than the end of the scheduled adjustment period. Prior notification is especially important in connection with final exams, since failure to reschedule a final exam before the conclusion of the final examination period may result in loss of credits during the semester.

Academic Integrity: The University of Maryland, College Park has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards for academic integrity at Maryland for all undergraduate and graduate students. As a student you are responsible for upholding these standards for this course. It is very important for you to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism. For more information on the Code of Academic Integrity or the Student Honor Council, please visit http://www.studenthonorcouncil.umd.edu/whatis.html.

Course materials: I own copyright in course materials that I develop and in my lectures under both federal copyright law and common law. You have a right to take notes in class for your personal use. You do not have any right to record my lectures, copy my course materials and/or copy notes you take in my class to distribute to any one else or to make any commercial use of without express prior permission from me.

Course Evaluations*:* CourseEvalUM will be open for students to complete their evaluations for Spring 2013 courses between April 22 and May 10. Students can go directly to http://www.courseevalum.umd.edu to complete their evaluations. You will be alerted about these dates and provided more information closer to that time, and students will be alerted via their official University e-mail account. Students who complete evaluations for all of their courses in the previous semester (excluding summer), can access the posted results via Testudo's CourseEvalUM Reporting link for any course on campus that has at least a 70% response rate. The expectation is that all students will complete these evaluations. This is YOUR chance to anonymously evaluate this class: please use this opportunity!

The schedule on the next page is tentative and may be modified at any point during the semester.

Lecture and Lab Schedule

Date	Lecture topic	Reading	Lab Exercise
1/24	Introduction, Mineral physical properties	p. 3-10, 119-125, 129-135	***No Lab***
1/29 1/31	Chemistry Chemistry 2	p. 48-66	***Mineral Identification***
2/5 2/7	Crystal structure Crystallography and symmetry	p. 67-84 p. 11- 47	***Mineral Chemistry***
2/12 2/14	Analytical methods Analytical methods 2	p. 184-193 p. 194-207	***Crystal structures***
2/19 2/21	Core and mantle minerals: metal alloys and oxides Mantle minerals: olivine, garnet	p. 390-405 p. 211-214, 338-344	***Symmetry***
2/26 2/28	Mantle minerals: pyroxenes Minerals in ocean crust, ore deposits: Sulfides	p. 294-310 p. 414-433	***Oxides and hydroxides***
3/5 3/7	***MIDTERM I*** Native elements	 p. 434-441	***Sulfides, sulfates, and native elements***
3/12 3/14	Minerals in ocean crust: plagioclase, phase diagrams, feldspathoids Minerals in arc-related igneous rocks: amphiboles	p. 239-259 p. 310-322	***LAB MIDTERM***
	SPRING BREAK – week of 3/18		
3/26 3/28	Minerals in felsic igneous rocks: alkali feldspars, quartz Minerals in metamorphic rocks: metapelitic minerals, micas	p. 231-244 p. 266-283	***Island silicates***
4/2 4/4	Minerals in metapelic rocks 2 Sedimentary rocks: clays	p. 345-354 p. 284-293	***Chain silicates***
4/9 4/11	Sedimentary rocks: carbonates, sulfates, biogenic minerals Sedimentary rocks: halides, phosphates, hydroxides	p. 359-381 p. 381-389, 405-413	***Sheet silicates***
4/16 4/18	Minerals in metamorphic rocks: metabasalts, metacarbonates ***MIDTERM II***	p. 323-337	***Carbonates, phosphates, halides***
4/23 4/25	Other minerals Other minerals 2	p. 259-265 p. 354-358	***Framework silicates***
4/29 5/1	Mineral growth Minerals and petrology	p. 85-115 p. 214-230	***Bowtie silicates*** + ***Ring silicates***
5/7 5/9	Minerals and geochronology Color in minerals	 p. 125-129	***LAB FINAL***
5/11	***Final exam 8-10 am***		