

GEOL 3445: Mineralogy Laboratory

Fall 2015

Section Information: 011-LAB Regular, 012-LAB Regular, 013-LAB Regular

Time and Place of Laboratory: GEOL 207, Section 011: Mon 12:00pm -2:50pm, Section 012: Wed 12:00pm -2:50pm, Section 013: Tues 12:30pm -3:30pm

Instructor:

1. Nilotpal Ghosh (nilotpal.ghosh@uta.edu)
Office Hours: Monday (4:30-6:00pm), GS 140

Graduate Teaching Assistants:

1. Puloma Chakrabarty (puloma.chakrabarty@mavs.uta.edu)
Office Hours: Friday (11:00-12:00), GS 144
2. Upasana Dhar (upasana.dhar@mavs.uta.edu)
Office Hours: Thursday (14:00-15:00), GS 144

Your Mineralogy Lab grade will be based on the following:

1. Mid-term Lab Exam	100 points
2. Final Lab Exam	125 points
3. Lab reports/homework	220 points
4. Five in-class surprise quizzes	50 points
5. Attendance	5 points

Total	500 points

Laboratory attendance is **mandatory!!!**

NOTE:

1. Laboratory handouts for each lab exercise will be provided at the beginning of each meeting.
2. Laboratory write ups are due at the beginning of the class the following week, unless specified. There will be surprise quizzes at the beginning of some laboratory meetings.
3. Students with difficulty in color differentiation, please inform your TA's early for any special requirements.

4. Books for reference:

1. Minerals in Thin Section – Perkins and Henke
2. The textbook by Nesse has both physical and optical properties of all the minerals to be studied.
3. Simon and Schuster's guide to rocks and minerals

Lab #	Date	Laboratory Exercise
1	Sep 8 – 9	Crystallography: Introduction to symmetry, Identification of symmetry elements
2	Sep 14 – 16	Crystallography: Crystal systems and classes; Identification of symmetry elements in wooden models; Hermann-Mauguin notations and stereograms
3	Sep 21 – 23	Crystallography: Continuation of crystal systems/classes/HM notations; Stereographic projections
4	Sep 28 – 30	Optical Mineralogy: Introduction to Petrographic Microscope, Mineral properties observed under plane polarized light and crossed polars, shape, color, pleochroism, Isotropy/Anisotropy, cleavage, fracture, relief, types of extinction, extinction angle and Becke Line
5	October 5 – 7	Optical Mineralogy: Continuation of Becke Line test, Birefringence, Interference colors, Uniaxial/Biaxial Interference figures, 2V angle and optic sign
6	Oct 12 – 14	Optical Mineralogy: Continuation of Interference figures, Identification of Minerals in thin sections, Feldspar identification lab
7	Oct 19 – 21	Optical Mineralogy: Mineral identification using optical properties in thin section; review for Mid-term, Identifying a mineral by its X-ray diffraction pattern
8	Oct 26 – 28	Mid-term: Crystallography and Optical Mineralogy
9	Nov 2 – 4	Minerals: Native elements, Sulfides, Oxides, Hydroxides <i>Practice: Optical Mineralogy</i>
10	Nov 9 – 11	Minerals: Halides, Carbonates, Phosphates, Vanadates, Borates <i>Practice: Optical Mineralogy</i>
11	Nov 16 – 18	Minerals: Silicate Minerals (Nesosilicates, Inosilicates, Phyllosilicates, Tectosilicates) and Mineraloids <i>Practice: Optical Mineralogy</i>
12	Nov 23 – 24	Minerals: Continuation of Silicate Minerals <i>Practice: Optical Mineralogy</i>
13	Nov 30 – Dec 2	Review of mineral identification in hand sample and in thin sections
14	Dec 7 – 9	Mineralogy Final Test: Mineral identification in thin sections and hand samples (i.e Optical mineralogy + physical descriptions of minerals)

“As the instructor for this course, I reserve the right to adjust this schedule in any way that serves the educational needs of the students enrolled in this course”. – Nilotpal Ghosh

Drop Policy: Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. **Students will not be automatically dropped for non-attendance.** Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (<http://wweb.uta.edu/aao/fao/>).

Disability Accommodations: UT Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including *The Americans with Disabilities Act (ADA)*, *The Americans with Disabilities Amendments Act (ADAAA)*, and *Section 504 of the Rehabilitation Act*. All instructors at UT Arlington are required by law to provide “reasonable accommodations” to students with disabilities, so as not to discriminate on the basis of disability. Students are responsible for providing the instructor with official notification in the form of a letter certified by the **Office for Students with Disabilities (OSD)**. Students experiencing a range of conditions (Physical, Learning, Chronic Health, Mental Health, and Sensory) that may cause diminished academic performance or other barriers to learning may seek services and/or accommodations by contacting:

The Office for Students with Disabilities, (OSD) www.uta.edu/disability or calling 817-272-3364.

Counseling and Psychological Services, (CAPS) www.uta.edu/caps/ or calling 817-272-3671.

Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability or by calling the Office for Students with Disabilities at (817) 272-3364.

Title IX: *The University of Texas at Arlington does not discriminate on the basis of race, color, national origin, religion, age, gender, sexual orientation, disabilities, genetic information, and/or veteran status in its educational programs or activities it operates. For more information, visit uta.edu/eos. For information regarding Title IX, visit www.uta.edu/titleIX.*

Academic Integrity: Students enrolled all UT Arlington courses are expected to adhere to the UT Arlington Honor Code:

I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.

I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.

UT Arlington faculty members may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System *Regents' Rule* 50101, §2.2, suspected violations of university's standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student's suspension or expulsion from the University. **Any violation to the academic integrity policy will be dealt with in accordance with the university rules.**

Lab Safety Training:

Students registered for this course must complete all required lab safety training prior to entering the lab and undertaking any activities. Once completed, Lab Safety Training is valid for the remainder of the same academic year (i.e., through the following August) and must be completed anew in subsequent years. There are no exceptions to this University policy. Failure to complete the required training will preclude participation in any lab activities, including those for which a grade is assigned.

Electronic Communication: UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at <http://www.uta.edu/oit/cs/email/mavmail.php>.

Student Feedback Survey: At the end of each term, students enrolled in classes categorized as “lecture,” “seminar,” or “laboratory” shall be directed to complete an online Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student's

feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit <http://www.uta.edu/sfs>.

Final Review Week: A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week *unless specified in the class syllabus*. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

Emergency Exit Procedures:

Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist individuals with disabilities.

Student Support Services: UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to resources@uta.edu, or view the information at <http://www.uta.edu/universitycollege/resources/index.php>

<p>Emergency Phone Numbers: In case of an on-campus emergency, call the UT Arlington Police Department at 817-272-3003 (non-campus phone), 2-3003 (campus phone). You may also dial 911. Non-emergency number 817-272-3381</p>

