

GEL 60 SYLLABUS - FALL 2018

INTRO TO EARTH MATERIALS

Instructor: Prof. Gordon Moore (gomo@ucdavis.edu)
Office hrs: T, F, 11-12pm (EPS 1348)
W, 11-12pm, or by appt (EPS 1107)

Lecture: MWF, 10-10:50 am

Lecture TA: Tyler Schleider; Office hrs (EPS 1348): 9-10 am

Lab Sections and TA's: Supratim Dey (A01): T, 1:10 - 4:00 pm
Kevin Schrecengost (A02): M, 4:10 - 7:00 pm
Elizabeth Grant (A03): W, 1:10 - 4:00 pm

Lab TA's Office hrs (EPS 1314): Dey: Th, 11-12 pm
Grant: Th, 10-11 am
Schrecengost: F, 11-12 pm

Course Description: Physical and chemical properties of rocks, minerals and other earth materials; structure and composition of rock-forming minerals; formation of minerals by precipitation from silicate liquids and aqueous fluids and by solid state transformations.

Lecture – 3 hrs/wk; Lab – 3 hrs/wk

CRN's: 24773 (A01), 24774 (A02), 24775 (A03)

GE credit: Science & Engineering

Prerequisites: GEL 001 or 050, 050L; CHE 002A; MAT 016A or 021A

Course Summary: This course introduces the physical and chemical properties of minerals within their context as the fundamental building blocks of rocks. Particular emphasis will be given to learning the association of minerals with the rock types they typically occur in, as well as a basic introduction to the petrologic processes that form them. Skills to be learned include mineral observation and identification techniques in hand samples and thin section, as well as an introduction to quantitative analytical techniques such as SEM and XRD, and how to use the data each technique produces.

Website: Class Canvas site

Required Text:

Earth Materials: Introduction to Mineralogy and Petrology, Klein & Philpotts, 1st Edition, Cambridge University Press, 2013.

Optional Texts/References:

An Introduction to the Rock-forming Minerals, 3rd Edition, Deere, Howie, and Zussman, Mineralogical Society, London, 2013.

Introduction to Optical Mineralogy, Nesse, W.D., Oxford University Press, 2004.

Atlas of Rock-forming Minerals in Thin Section, Mackenzie and Guilford, Wiley & Sons, 1980

Schedule for Lectures/Labs/Exams/Problem Sets/Project/Reading/Field Trip

Schedule (see accompanying table): We will try to adhere closely to the attached schedule, but it is up to the students to get updates in class. It is your responsibility to keep up with the reading assignments. Do not get behind in this class! Due to the comprehensive nature of the class, the material in both lecture and lab will be coming at you at a very fast pace!

Lecture Quizzes: There will be a short quiz at the beginning of every lecture, usually on the material presented in the previous lectures.

Problems Sets: You are responsible for completing and submitting solutions to topical problem sets that will be handed out in class. They are due at the start of lecture on the date indicated in the class schedule. You are welcome to turn in your problem set early; **however, no credit will be given for problem sets turned in late.** Solutions keys will not be posted, though every effort will be made to grade and hand them back before the next set is assigned. I highly recommend you take advantage of office hours to review the sets after they have been graded.

Laboratory Exercises: The laboratory sessions meet once a week. **Attendance is mandatory.** These sessions are an integral part of this course and you are required to attend. The previous lab exercise is due at the beginning of the first session of a new lab exercise. You are welcome to use the laboratory whenever lectures or other labs are not in progress. As with problem sets, **no credit will be given for labs turned in late.** Late labs, however, will be corrected by your TA.

Hand Lens: A 10x hand lens is required for this course. If you are a geology major and do not own one, now is the time to buy one. The bookstore should carry them or check out Amazon.com.

Field Trip (mandatory): Oct 27 (tentative) – Garnet Hill: We will leave from the loading dock at 8 am, sharp and be back in Davis by dinnertime.

Grading

Your total grade will be calculated according to the following breakdown:

Midterm Exam	15%
Final Exam	15%
Problem Sets/Field Trip/Quizzes	20%
Labs	35%
Lab Exams	15%

Lecture Exams:

Midterm I – Wednesday, Oct 31st

Final Exam – Wednesday, Dec 12th, 10:30 am, EPS 1348

Lab Exams:

Lab Midterm: Week of 11/5

Lab Final: Week of 12/3

Holidays: Mon, Nov 12th, Veteran's Day
Th-Fr, Nov 22nd – 23rd, Thanksgiving

YOU MUST REVIEW the UC Davis CODE OF ACADEMIC CONDUCT An updated version is available by following this link (<http://sja.ucdavis.edu/files/cac.pdf>). It is your responsibility to comply with this code in all matters related to this course. You must also acknowledge your participation in this course by following this link: participate.ucdavis.edu

The University of California, Davis CODE OF ACADEMIC CONDUCT Honesty, Fairness, Integrity ☐

This Code of Academic Conduct exists to support high standards of behavior and to ensure fair evaluation of student learning. Student conduct is taken seriously at UC Davis. Students who violate the Code of Academic Conduct are subject to disciplinary sanctions that include Censure, Probation, Suspension, Deferred Separation or Dismissal from the University of California. Unless specifically authorized by the instructor in writing, misconduct includes, but is not limited to the following: ☐

- ▶ Cheating on exams or other coursework ☐
 - Copying or attempting to copy from another student, or allowing another student to copy.
 - Displaying or using any unauthorized material such as notes, cheat-sheets, or electronic devices.
 - Looking at another student's exam.
 - Talking, texting or communicating during an exam.

- Looking around during an exam.
 - Altering assignments or exams for re-grading purposes.
 - Bringing pre-written answers to an exam.
 - Having another person take an exam for you, or taking an exam for another student.
 - Continuing to work on an exam after the instructor has announced that all students must stop working.
 - Stealing another student's work.
- Plagiarism
- Taking credit for any work created by another person. Work includes, but is not limited to books, articles, experimental methodology or results, compositions, images, lectures, computer programs, internet postings.
 - Copying any work belonging to another person without indicating that the information is copied and properly citing the source of the work.
 - If not directly copied, using another person's presentation of ideas without putting it in your own words or form and not giving proper citation.
 - Creating false citations that do not correspond to the information you have used.
- Unauthorized collaboration (working on your own is expected unless you are informed that working together is allowed)
- Working together on graded coursework without permission of the instructor.
 - Working with another student beyond the limits set by the instructor.
- Misuse of an instructor's course materials or the materials of others, including but not limited to:
- Posting or sharing any course materials of an instructor without the explicit written permission of that instructor.
 - Purchasing or copying assignments or solutions, to complete any portion of graded work, without the instructor's permission.
- Lying or fraud
- Giving false excuses to obtain exceptions, such as the postponement of an exam or assignment due date, assignment of incomplete grades, or late drops.
 - Forging signatures or submitting documents containing false information.
- Submitting the same work in two or more different classes without the permission of the instructors.
- Intimidation or disruption includes, but is not limited to the following:
- Pressuring an instructor or teaching assistant to regrade work, change a final grade, or obtain an exception such as changing the date of an exam, extending a deadline, or granting an incomplete grade.
 - Refusing to leave an office when directed to do so.
 - Physically or verbally intimidating or threatening an instructor, teaching assistant or staff person, including yelling at them, invading personal space, or engaging in any form of harassment.
 - Repeatedly contacting or following an instructor, teaching assistant, or staff person when directed not to do so.
 - Misusing a classroom electronic forum by posting material unrelated to the course.
 - Interfering with an instructor's or teaching assistant's ability to teach a class, or interfering with other students' participation in a class by interrupting, physically causing a disruption, or excessive talking.

Upholding the UC Davis Code of Academic Conduct

Students, faculty, and the administration all have a role in maintaining an honest and secure learning environment at UC Davis.

➤ Students

The success of our Code of Academic Conduct depends largely on the degree that it is willingly supported by students. Students:

- Are responsible to know what constitutes cheating. Ignorance is not an excuse.

- Are required to do their own work unless otherwise allowed by the instructor.
- Are expected to help prevent cheating by reminding others about this Code and not helping other students gain an unfair advantage.
- Are strongly encouraged to hold each other accountable by reporting any form of suspected cheating to the University.
- Must respect the copyright privileges of works produced by faculty, the University, and other copyright holders.
- Shall not threaten, intimidate or pressure instructors or teaching assistants, or interfere with grading any coursework.
- Shall not disrupt classes or interfere with the teaching or learning environment.

► Faculty

Faculty members and instructors are responsible for teaching courses and evaluating student work, and are governed by University of California and UC Davis policies and regulations. Regulation 550 of the Davis Division of the Academic Senate addresses academic dishonesty. Faculty and instructors are encouraged to:

- Inform students of course and grading requirements, and of standards of scholarship and conduct to be observed on all coursework, in writing if possible, such as in the course syllabus.
- Monitor examinations to help prevent cheating. Report all suspected cases of cheating and other misconduct to the Office of Student Support and Judicial Affairs (<http://ossja.ucdavis.edu/>).

► University Administration □

- Maintains the Office of Student Support and Judicial Affairs to administer the student disciplinary process and retain central records.
- Helps to educate faculty and students about the Code of Academic Conduct.
- Helps to provide physical settings such as classrooms and labs for examinations that minimize opportunities for cheating.
- Provides assistance and training to faculty and teaching assistants about how to prevent and address cheating.

► Submitting Reports and Judicial Procedures □

- Instructors should submit all reports to the Office of Student Support and Judicial Affairs (<http://ossja.ucdavis.edu/>). If an instructor has submitted a report of suspected cheating, a course grade of “Y” should be assigned until the report is resolved.
- Grades are an evaluation of academic performance, and their assignment resides solely with the faculty as granted to the Academic Senate by the Regents. If cheating is admitted or established, instructors may assign a grade of “0” or “F” to the work in question.
- If the student contests a report of cheating or other misconduct, the matter must be resolved by a hearing before an appointed faculty/student committee.
- Instructors and teaching assistants may direct a student to leave a class immediately if the student’s behavior is disruptive.
- Instructors, teaching assistants and staff persons should contact police (752-1230 or 911) if they feel physically threatened.
- The policy and procedures to resolve cases of suspected cheating, disruption, threats, or intimidation exist under the UC Davis Administration of Student Discipline. Procedural fairness is basic to the proper enforcement of University policies and campus regulations. The confidence of students and instructors in these procedures must be maintained.