CoSM Class Syllabus / Policy
2017 / Fall
GOL 241.001
Mineralogy

Name: Dr. Kevin W. Stafford
Department: Geology
Email: staffordk@sfasu.edu
Phone: 936-468-2429
Office: E.L. Miller Science 309
Office Hours: MW 9:00–12:00; TH 11:00-13:00
Class meeting time and place: TH 9:30 – 10:45 : TBA

Text and Materials:
- 3 scantrons (Form 882)

Course Description:
Mineralogy (GOL 241) - Four semester hours, three hours lecture, three hours laboratory per week. Discussion of mineralogy includes the processes of mineral origin and formation, classification of minerals, their geographical distribution, as well as their utilization. Required lab fee.

Program Learning Outcomes:
1. Demonstrate knowledge of the fundamental core geologic concepts (Mineralogy, Petrology, Structural Geology, Stratigraphy, Geophysics and Geochemistry). (Concepts)
2. Execute geologic procedures and methods accurately, appropriately and efficiently. (Skills)
3. Apply principles of logic and reasoning to develop and analyze geologic problems. (Logical - Reasoning)
4. Demonstrate competence in using various geologic tools, including technology, to formulate, represent, and solve problems. (Critical thinking - Problem Solving)
5. Demonstrate proficiency in communicating geologic information in an appropriate form to the expected audience. (Communication)

General Education Core Curriculum Objectives/Outcomes:
The objective of GOL 241 is to gain an understanding of the chemical composition, crystal structure, genesis and physical properties of minerals, the inorganic materials that make up the earth. The course is divided into a lecture section and a lab section. See section on Grading Policy below.

Student Learning Outcomes:
The student is expected to understand and apply the following concepts to the environment:
1. Learn and identify the major crystal classes, mineral crystallography and symmetry.
2. Examine and identify minerals and their physical properties.
3. Identify crystal growth and recrystallization processes.
4. Study crystal chemistry and its relationship to mineral physical properties.
5. Understand the processes that produce ore forming minerals and their geographic distribution.

Course Requirements:
Mineralogy (GOL 241) is designed to provide an overview of the field of mineralogy, including the processes of mineral origin and formation, classification of minerals, their geographical distribution, as well as their utilization. The course is divided into a lecture section and a lab section. Students will also be expected to complete a “Mineral Project” for this course. See section on Grading Policy below.
Student learning in the lecture section will be evaluated through three lecture examinations, comprehensive final lecture exam, laboratory exercises, two laboratory examinations, and student project. Tentative schedule:
• **Exam #1** (Tuesday, 3 October 17) – Exam focuses on physical and chemical characteristics of minerals, including all lecture material covered in class between 29 Aug 17 and 28 Sept 17.
• **Exam #2** (Thursday, 07 November 17) – Exam focuses on crystallography and crystal growth, including all lecture material covered in class between 05 October 17 and 07 November 17.
• **Final Exam** (University Scheduled) – Comprehensive final exam, including all lecture material covered throughout the semester.
• **Laboratory Exam #1** (Wednesday, 11 Oct 17) – Lab-based exam including non-silicate minerals and all material covered in lab between 6 Sept 17 and 4 Oct 17.
• **Laboratory Exam #2** (Wednesday, 29 Nov 17) – Lab-based exam including silicate minerals and all material covered in lab between 18 Oct 17 and 15 Nov 17.
• **Student Project** (9 – 14 November 17) – Classroom presentation on mineralogy, occurrence and economic use of student selected mineral; presentations will be given during lecture.

**Lecture Course Calendar:**

Tentative schedule of topics to be covered in GOL 241 lecture include:

*Note: associated reading for each lecture is in parentheses*

- 29 Aug 17 – Introduction and overview of course (Ch. n/a)
- 31 Aug 17 – Mineral Definition
- 05 Sept 17 – Physical Properties 1
- 07 Sept 17 – Physical Properties 2
- 12 Sept 17 – Atoms and Atomic Bonding
- 14 Sept 17 – Atomic Packing
- 19 Sept 17 – Paulings Rules
- 21 Sept 17 – Mineral Classification
- 26 Sept 17 – Earth Composition
- 28 Sept 17 – Graphical Representation
- 03 Oct 17 – Exam #1
- 05 Oct 17 – Internal Crystal Structure
- 10 Oct 17 – Crystallographic Axes
- 12 Oct 17 – Crystal Forms
- 17 Oct 17 – Crystal Projections
- 19 Oct 17 – Crystal Growth
- 24 Oct 17 – Mineral Stability
- 26 Oct 17 – Twinning
- 31 Oct 17 – Crystal Defects
- 02 Nov 17 – Post Crystallization
- 07 Nov 17 – Exam #2
- 09 Nov 17 – Student Presentations 1
- 14 Nov 17 – Student Presentations 2
- 16 Nov 17 – Optical Microscopy
- 21 Nov 17 – Thanksgiving – NO CLASS
- 23 Nov 17 – Thanksgiving – NO CLASS
- 28 Nov 17 – Instrumental Techniques
- 30 Nov 17 – Ore Minerals
- 05 Dec 17 – Gemology
- 07 Dec 17 – Make-Up Exams (if needed)
- University Scheduled – Final Exam
Grading Policy:

- Lecture counts 50% of the course grade. Lecture grades will consist of 2 exams (15% each of total grade) and a comprehensive final exam (15% of your total grade). Mineral Presentation will count 5% of the course grade.
- Lab counts 50% of the course grade. Two lab exams (15% each of total grade), 10 lab assignments (2% each of total grade), which will include development of a mineral identification / characterization notebook.
- Total points: 50% (Lecture) + 50% (Lab) = 100%
- Grade Scale: >90% = A ; 80-89.9% = B ; 70-79.9% = C ; 60-69.9% = D ; <60% = F

All exams will include a multiple-choice section; therefore, ALWAYS bring a scantron (Form 882) and a #2 pencil for exams. Additional sections will vary between exams but may include any or all of the following sections: 1) true / false questions; 2) fill in the blank questions; 3) short answer questions; 4) figure illustration; 5) short essay questions. All exams will take place in room 335 unless otherwise stated in class.

Cell phones, calculators, and other electronic devices are NOT permitted during exams. If you are using them in an exam, it will be assumed that you are cheating and you will receive a grade of “0” on that exam.

Exam scheduling conflicts for officially sanctioned university reason will be accommodated at a different time or date. In the event of such conflicts, you must inform me at least one week prior to the exam to reschedule your exam.

Make-up exams are only given in documented cases of official university activities, illnesses or deaths in the family. If the final is missed for a legitimate excuse, an “Incomplete” will be given at the final and a make-up exam can be taken at the beginning of the next semester. All make-up exams will be administered on Thursday, 7 December 2017 and may be entirely essay format.

Attendance Policy:

- Daily attendance will be taken for university accounting purposes. Success in this course will reflect the level effort you put into the course.
- Be prepared for lectures by reading the material to be covered in lecture prior to attending class. Questions are encouraged and welcome – do not hesitate to ask questions in class.
- No electronic devices are needed during lectures for this class, including cell phones and calculators. Please turn them off and do not use them in class. Ringing phones and beeping electronics disturb others in the class and interrupt lectures. If you interrupt class with your personal electronic devices, you will be asked to leave for the day.
- If you are late to class, please seat yourself quietly. Try not to be late because it interrupts others in the class. If you need to use the restroom or become ill, please excuse yourself from the lecture quietly.
- If you need to study for another class, do it elsewhere. The classroom is not the place to sleep either. Basically, refrain from activities in lectures that will distract or disturb the other students in the room, because you are all paying for the class and most people want to get what they are paying for.

Academic Integrity (A-9.I)

Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism.

Definition of Academic Dishonesty

Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one's paper without giving the author due credit.

Please read the complete policy at http://www.sfasu.edu/policies/academic_integrity.asp
Withheld Grades Semester Grades Policy (A-54)
Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average.

The circumstances precipitating the request must have occurred after the last day in which a student could withdraw from a course. Students requesting a WH must be passing the course with a minimum projected grade of C.

Students with Disabilities
To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to http://www.sfasu.edu/disabilityservices/.