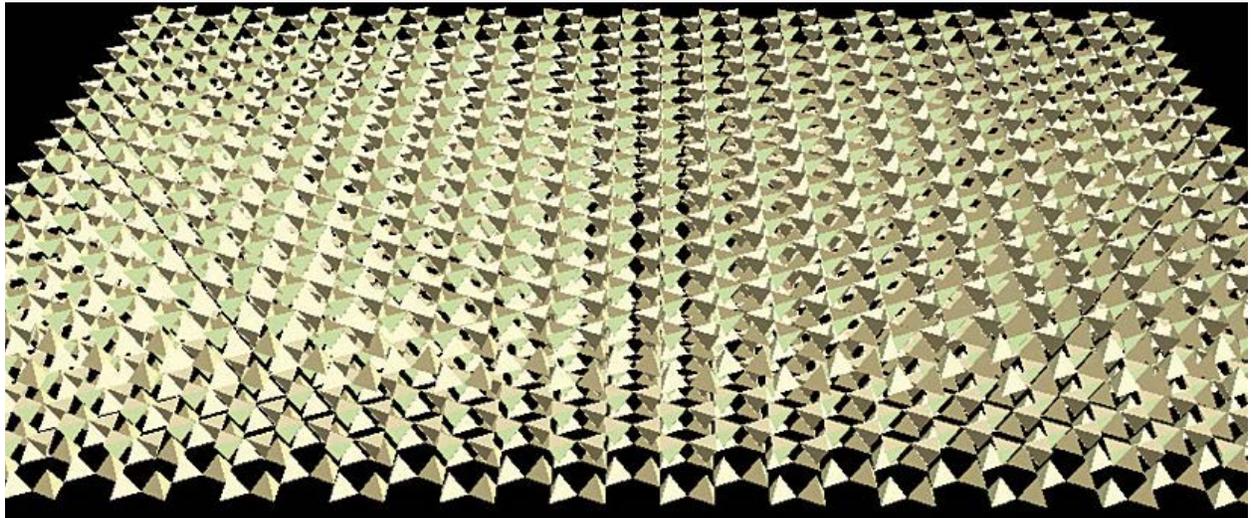


**COURSE SYLLABUS**  
**GEOL 3404**  
**MINERALOGY**  
**4 SEMESTER CREDIT HOURS**  
**Fall 2017**

**Professor: Dr. Brian Cooper**  
**(SHSU Tel: 41566)**  
**(e-mail: [bjcooper@shsu.edu](mailto:bjcooper@shsu.edu))**



## COURSE SYLLABUS

# GEL 3404 Mineralogy

### 4 Semester Credit Hours

Fall 2017

**Room:** LDB 207/315  
**Classes meet:** MWF 8-8:50 (lecture) TuTh 8-11 (Labs)  
**Professor:** Brian Cooper  
**Office:** LDB 332G  
**Tel:** 41566  
**e-mail:** bjcooper@shsu.edu  
**Office Hours:** 11-11.50 T-days or by appointment

### Course Description

1. Course emphasis = the principles, methods, and systematics of mineralogy = the recognition of minerals and knowing how to use your textbooks.
2. Three main themes will be covered in this course, each having a lecture and a lab component. Therefore, it is recommended that you either have six notebooks, or a loose-leaf binder that can be divided into six sections:  
Crystallography and Crystal Chemistry: Lecture and Lab  
Physical Mineralogy: Lecture and Lab  
Optical Mineralogy: Lecture and Lab
3. As can be seen in the point distribution the major emphasis in this course is the lab. The lectures are generally to prepare for the lab, and the lab is where you will learn the concepts. There are two labs each week, and each one concentrates on specific aspects of Mineralogy.
4. Tuesday labs generally concentrate on crystallographic and crystal chemical aspects of mineralogy. Note that there are two exams covering the material presented in the Tuesday labs.
5. Thursday labs generally concentrate on determinative mineralogy using physical and optical techniques used in the field and lab. You must have a hand lens, and should not show up in lab on Thursdays without access to a hand lens starting next week. Your recognition of minerals should be checked prior to leaving lab. Make an identification chart for use on mini-practicals and the final exam. Memorize assigned formulas of minerals.

**Prerequisites:** GEOL 1403 or 1405, plus 1404; CHEM 1411,1412; MATH 1316 or 1410

**Methods:** Lectures and Labs

**Grading:** See policy page.

**Grading Scale:** See policy page.

### Objectives:

- Scientific thinking and analysis
- The recognition of over 100 minerals.
- The ability to identify unknown minerals.
- The ability to determine crystal symmetry.

- The ability to interpret X-ray powder diffraction patterns.
- The ability to quantitatively determine certain properties.
- The ability to determine a mineral's optical properties (more on this in Petrology).

**Course text:** Klein, C., Manual of Mineralogy, 23rd ed. (or older edition if you have one)  
Nesse, W.D., Introduction to Optical Mineralogy, 3rd ed.

**Attendance:** Attendance is required. There are NO excused absences. No visitors  
Each absence in excess of 3 absences costs 10 points off the final grade.  
Three tardies count as one absence. If you miss a lecture, it is your  
responsibility to obtain the material presented in the lecture from a fellow  
student.

**Make-up Exams:** None. Other exams will be “re-weighted” at Dr. Cooper’s discretion.

**Grading:** 850 - 1000 points = A (a “curve” is already built into this distribution  
750 - 849 points = B so do not count on any more points)  
650 - 749 points = C  
550 - 649 points = D  
less than 550 points = F

Total: 1000 points

## Academic Conduct

University statement: *All students are expected to engage in all academic pursuits in a manner that is above reproach. Students are expected to maintain complete honesty and integrity in academic experiences both in and out of the classroom. Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action. The University and its official representatives may initiate disciplinary proceedings against a student accused of academic dishonesty including, but not limited to, cheating on examinations or other academic work which is to be submitted, plagiarism, collusion and the abuse of resource materials.*

I assume that a basic honor system applies to this course and that you must take care to respect your fellow students. Cheaters will automatically fail. Please keep your eyes on your own exam. You get one warning, then you get a zero on the exam. See *Student Guidelines*

## VISITORS IN THE CLASSROOM:

University statement: *Unannounced visitors to the classroom must present a current, official SHSU identification card to be permitted in the classroom. They must not present a disruption to the class by their attendance. If the visitor is not a registered student, it is at the instructor's discretion whether or not the visitor will be allowed to remain in the classroom. This policy is not intended to discourage occasional visiting of classes by responsible persons.*

## Classroom Rules and Conduct

University statement: *Students are expected assist in maintaining a classroom environment that is conducive to learning. Students will refrain from behavior in the classroom that intentionally or unintentionally disrupts the learning process and, thus, impedes the mission of the university. Cellular telephones and pagers must be turned off before class begins. Students are prohibited from eating or drinking in class, using tobacco products, making offensive remarks, reading newspapers, sleeping, talking at inappropriate times, wearing inappropriate clothing, or engaging in any other form of distraction. Inappropriate behavior in the classroom shall result in a directive to*

*leave class. Students who are especially disruptive also may be reported to the Dean of Students for disciplinary action in accordance with university policy.*

1. Class starts on time. Sleeping/reading in class = an absence.
2. Class ends when I say it ends. Leaving early without permission = a tardy.
3. Keep quiet when I am lecturing.
4. Raise your hand if you have a question or need to leave the room for any
5. During lectures and tests, cell phones and any other equipment capable of receiving, recording and/or transmitting information, must be put away in a book bag or purse. (In short, it must not be readily accessible or accessed during an exam.)
6. Assignments received after the due date receive the lowest grade obtained on that assignment thus far, minus one for each day late, minus whatever is missed on the assignment...which means a negative score is a very real possibility.  
No assignment = a zero for that grade.

### **Americans with Disabilities Act:**

#### **STUDENTS WITH DISABILITIES POLICY:**

It is the policy of Sam Houston State University that individuals otherwise qualified shall not be excluded, solely by reason of their disability, from participation in any academic program of the university. Further, they shall not be denied the benefits of these programs nor shall they be subjected to discrimination. Students with disabilities that might affect their academic performance should register with the Office of Services for Students with Disabilities located in the Lee Drain Annex (telephone 936-294-3512, TDD 936-294-3786, and e-mail [disability@shsu.edu](mailto:disability@shsu.edu)). They should then make arrangements with their individual instructors so that appropriate strategies can be considered and helpful procedures can be developed to ensure that participation and achievement opportunities are not impaired.

SHSU adheres to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations for students with disabilities. If you have a disability that may affect adversely your work in this class, then I encourage you to register with the SHSU Services for Students with Disabilities and to talk with me about how I can best help you. All disclosures of disabilities will be kept strictly confidential. NOTE: No accommodation can be made until you register with the Services for Students with Disabilities. For a complete listing of the university policy, see:

<http://www.shsu.edu/dept/academic-affairs/documents/aps/students/811006.pdf>

### **Religious Holidays:**

*Students who are absent from class for the observance of a religious holy day are allowed to take an examination or complete an assignment scheduled for that day within reasonable time after the absence. The period of time during which assignments and exams will be excused includes travel time associated with the observance of the religious holy day. A student who wishes to be excused for a religious holy day must present the instructor of each scheduled class that he/she will be absent from class for religious reasons with a written statement concerning the holy day(s) and the travel involved. The instructor should provide the student with a written description of the deadline for the completion of missed exams or assignments. In such cases, the student will be required to take the test or submit the assignment early—unless there are good reasons for not being able to do so and the instructor has agreed to those reasons.*

**MINERALOGY**  
FALL, 2017

**INSTRUCTOR:** Brian Cooper  
**OFFICE:** 332G Lee Drain Building  
**OFFICE HOURS:** 11-11:50 T-Days, or by appointment.  
**OFFICE PHONE:** 294-1566 email = bjcooper@shsu.edu

**TEXTS:** Klein, C., Manual of Mineralogy, 23rd ed. (or older edition if you have one)  
Nesse, W.D., Introduction to Optical Mineralogy, 4th ed. (or older edition)

**ATTENDANCE:** Attendance is required. No excuses. If you miss a lecture, it is your responsibility to obtain the material presented in the lecture from a fellow student. Each absence in excess of 3 absences will cost 10 points.

**MAKE-UP EXAMS:** None. Other exams will be "re-weighted" at Dr. Cooper's discretion.

**CLASSROOM RULES:**

1. Class starts on time. Three tardies count as one absence.
2. Class ends when I say it ends.
3. Keep quiet when I am lecturing, otherwise you will be asked to leave the classroom.
4. Raise your hand if you have a question or need to leave the room for any reason.
5. Assignments received after the due date receive the lowest grade obtained on that assignment thus far, minus one for each day late, minus whatever is missed on the assignment...which means a negative score is a very real possibility. No assignment = a zero for that grade.

**CHEATING:** Cheaters will automatically fail. Keep your eyes on your own exam at all times. You will only be warned once...after that you receive a zero on the exam.

**GRADING SCALE:**

850 - 1000 points = A	(a "curve" is already built into this distribution so do not count on any more points)
750 - 849 points = B	
650 - 749 points = C	
550 - 649 points = D	
less than 550 points = F	

**POINT DISTRIBUTION:** Lecture Exams: 4 x 100 points 400 points

Lab:	Block Exam	50 points
	Mini-practicals	100 points (2 of 'em x 50 each)
	Final practical	100 points
	Exercises	350 points
Total:		1000 points

