

GEY118-601 CRN 20690 ROCK AND MINERAL IDENTIFICATION

Fall 2018 Syllabus

CONTACT INFORMATION

Instructor: Dr. Libby Prueher

Office: none

Office Hours: I am available before and after class, by appointment, and by email. I am available to meet in room 2571, the room next door to the classroom.

Phone: 720-260-0350 (for emergencies only)

Email: libby.prueher@rrcc.edu (Please send from your RRCC account and please do not use the email link on D2L.)

COURSE INFORMATION:

Class times: Saturday 8:00 am - 12:40 pm

Class dates: Saturday September 8, 15, 22, 2018

Class location: West Building 2573

REQUIRED TEXTBOOK/COURSE MATERIALS

Textbook: Simon and Schuster's Guide to Rocks and Minerals

Other Course Materials: In addition to the required text above, a recent edition of any Physical Geology textbook or lab manual would also be useful as a reference. Some handouts of written materials will be provided for your use during class, and other references will be available on D2L. You will need a pencil, eraser, and notepaper.

COURSE DESCRIPTION:

Introduces basic information on the definition, formation, identification, and uses of rocks and minerals.

Credit hours: 1

COURSE PREREQUISITE/CO-REQUISITES

None

COURSE LEARNING OUTCOMES

1. Identify minerals using physical and some optical properties. (I, II)
2. Recognize the most abundant rocks of each major rock type. (V, VI, VII)
3. List the modes of occurrence of each major rock type including localities in Colorado. (IV, V, VI, VII)

TOPICAL OUTLINE

- I. Definition of mineral
- II. Physical properties of minerals
 - A. Crystal form
 - B. Fracture and cleavage
 - C. Hardness
 - D. Color, luster, streak
 - E. Fluorescence
 - F. Density

- G. Magnetism
- H. Other properties, including radioactivity, taste, etc.
- III. Definition of rock
 - A. Structure and composition of Earth
 - B. Dynamics of the crust-Plate Tectonics and Continental Drift
 - C. Rock cycle
- IV. Formation, classification, and identification of rocks
- V. Igneous
 - A. Intrusive-plutonic rocks
 - B. Extrusive-volcanic rocks
 - C. Hydrothermal deposits
- VI. Sedimentary
 - A. Weathering
 - B. Clastic rocks
 - C. Chemical rocks
 - D. Biochemical rocks
- VII. Metamorphic rocks
 - A. Regional metamorphic rocks, foliated
 - B. Contact metamorphic rocks, non-foliated

COURSE REQUIREMENTS / EXPECTATIONS

A lot of class time will involve hands-on practice with mineral and rock identification. On **Saturday, September 8**, we will take a 30 minute field trip to look at rocks on the Red Rocks campus. We will also have a two - hour field trip on **Saturday, September 15** to see examples of the various rock types in the local area. All students must sign a waiver prior to the field trip, and carpooling is strongly encouraged. Further details will be given on **Saturday, September 8**.

Class Assignments/Quizzes: Unless explicitly told otherwise, all of your assignments and quizzes will be completed INDIVIDUALLY (no collaboration with classmates or anyone else) but will be “open book” for any PRINT notes/references you care to use.

Take-home assignment: the Take-Home Assignment will be given to you at the end of the day on **Saturday, September 8**, and you will need to submit your work as a .doc, .docx, .pdf, or .rtf document using the DropBox on D2L no later than **9:00 PM on Tuesday, September 25**. No late work will be accepted, so be sure to start early and get any technical help you need with D2L well in advance of the deadline. I will have your final grades posted no later than 11:59 pm **Thursday, September 27**.

GRADING POLICY

METHODS OF EVALUATION

Attendance & Participation: 20 points

Assignments and Quizzes: 40 points

Field Trip Notes: 10 points

Take-Home Assignment (Part 1 and 2): 30 points

Total = 100 points

Your total out of the maximum of 100 points will be converted to a percentage and a letter grade will be assigned according to the grading scale shown below. Incompletes will not be given. You will receive **ZERO**

points for any missed work, and will fail the class if you are absent for more than 5 hours of class time, or be dropped if those hours are the first day.

ATTENDANCE POLICY

Attendance for all parts of this class is mandatory. Missing 5 hours or more will result in your receiving an “F” for your final class grade, regardless of your performance on graded material. Attendance and participation also count directly as 20% of your grade when calculating your average. In addition, there will be graded activities throughout class time, and there is no make-up for any of these for which you are not present. Missing one part of class also usually makes understanding of the next part difficult or impossible, since most of what we will be doing builds upon previous activities. Furthermore, you need to arrive on time each day and after breaks. Tardiness will result in a reduction of your attendance/participation grade, up to the maximum number of points. Likewise, sleeping during class, not pulling your weight in group activities, and any other type of “checking out” will also result in loss of these points.

GRADING SCALE

90 - 100 % A

80 - 89 % B

70 - 79% C

60 - 69 % D

59% and below F

IMPORTANT DATES

STUDENTS: PLEASE VERIFY THE SPECIFIC DROP AND WITHDRAW DATES FOR THIS COURSE IN YOUR “[Detailed Student Schedule \(with Drop-Withdrawal Dates\)](#)” LINKIN THE ROCK, UNDER THE STUDENT TAB(https://erpdnssb.cccs.edu/PRODRRCC/wt_student_sched.P_DisplayStudentSched)

DROP/CENSUS DATE (LAST DAY TO DROP WITH A REFUND)

This is the last day you can remove yourself from this class without having to pay for the class and without the class showing on your permanent student record. If you are considering dropping the class, please talk to your instructor first. If you are on financial aid, you should also consult a financial aid advisor before dropping a class. All students are encouraged to see an academic advisor about how dropping may affect their goals.

WITHDRAW DATE (LAST DAY TO WITHDRAW WITH A “W”)

This is the last day you can remove yourself from this class and receive a “W” for the class instead of a grade. You are responsible for payment. If you are considering withdrawing from the class, please talk to your instructor first. If you are on financial aid, you should consult a financial aid advisor before withdrawing from a class. All students are encouraged to see an academic advisor about how withdrawing may affect their goals.

Per school policy, students who do not attend the first day of class will also be dropped from the class.

MAKE-UP / LATE WORK POLICIES / EXTRA CREDIT

Late work will NOT be accepted and is due at the START of class!! Extra credit is not offered in this class.

ACADEMIC INTEGRITY STATEMENT / ACADEMIC DISHONESTY

Please refer to the Academic Misconduct paragraph from the student handbook listed in the RRCC SYLLABUS INSERT.

CLASSROOM CONDUCT

Please refer to the Academic Misconduct paragraph from the student handbook listed in the RRCC SYLLABUS INSERT.

CLASS CANCELLATION POLICY

If a class is cancelled, I will send a message to the class via D2L and notify the college. You will also receive a notification from the College when a class is cancelled. In the case of a class cancellation, an assignment covering the class material will be posted on D2L.

RRCC SYLLABUS INSERT – REQUIRED AND ADDITIONAL INFORMATION

All students are required to be familiar with the information contained in the RRCC Syllabus Insert document. In addition to your instructor reviewing the required content in class, the RRCC SYLLABUS INSERT can be found as an announcement on all D2L landing pages (where you have access to all of your courses) and in the “Student Resources” pull-down menu.

TENTATIVE COURSE SCHEDULE

On **Saturday, September 8**, we will take a 30 minute field trip to look at some rocks and geologic processes on the Red Rocks Campus. On **Saturday, September 15** we will take a 2 - hour field trip visiting local points of geologic interest. Be sure to wear clothing that is appropriate for changeable weather and footwear suitable for a little hiking. Water and sunscreen should also be brought with you.

WEEK 1 – SATURDAY, SEPTEMBER 8

- Introductions and Course Overview
- Minerals
- Rocks, the rock cycle, basic plate tectonics
- On-campus field trip
- Handout and Instructions for the Take-Home Assignment (**due 9:00 PM on Tuesday, September 25**)

WEEK 2 - SATURDAY, SEPTEMBER 15

- Igneous Rocks
- Minerals and Igneous Rocks Quiz
- Sedimentary Rocks
- Off - campus Field Trip

WEEK 3 – SATURDAY, SEPTEMBER 22

- Metamorphic Rocks
- Uses of rocks and minerals
- Sedimentary and Metamorphic Rocks Quiz
- Course Evaluations