

COLORADO MINES AND ORES

(GEY 206, Section 601, CRN #10564)

Summer 2015 Weekend College

Friday 7/17 & 7/24 5pm – 10pm, Saturday 7/18 & 7/25 8am – 5:30pm, Rm 2573

Instructor: Rebecca Port

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(I will only respond to emails sent from your RRCC account, please do NOT use the e-mail link on D2L)

Office Hours: By appointment

Prerequisites: None

Required Classroom/Field Trip Materials: Bring a notebook, and writing utensils to every class meeting and on all field trips.

Optional Field Trip Materials: A hardbound notebook is ideal for taking notes in the field, but is not required. Clipboards will be provided so that you will be able to take notes on field trips. There will be an opportunity to collect minerals at almost every stop on the field trips. Should you wish to collect samples, bags and a permanent marker for labeling your samples will come in handy. You may bring a rock hammer (instructor will inform you when it is permissible to use on field trips).

Course Description: This course presents the geology of the mines and ores of Colorado in the context of the mines, mills, and smelters of the historic mining camps and districts of Colorado. Emphasis is on the geology of the Colorado Mineral Belt, identification of rocks and ore minerals from these districts, and introduction to the processes which create ore deposits. (2 credit hours)

Course Objectives (standards for the Colorado Community College Common Course):

Upon completion of Colorado Mines and Ores, students will be able to:

- Identify the common ore minerals of Colorado and the rock types associated with them.
- Describe and discuss the hydrothermal theory of ore deposit formation.
- Locate and describe the major mining districts of Colorado.
- Discuss the history of Colorado mining camps as related to the nature of their ore deposits.
- Describe historic and modern techniques of mining, milling, and smelting.
- Discuss the environmental legacy of Colorado's historic and current mining industry.

Attendance: Attendance for the duration of all classroom meetings and the field trips is mandatory in order to receive a passing grade in this course. In the event of an emergency please contact the instructor as soon as possible. In extreme cases, make-up work may be allowed to fulfill the requirements for the classroom activities. An unexcused absence during either of the classroom meetings will automatically result in a failing grade for the course. No make-up credit will be offered for the field trips or exam. An absence during either of the field trips will automatically result in a failing grade for the course.


Grading:

Activity	Points each	Total Points Possible
4 classroom activities*	20 points each	80 points
4 field exercises	25 points each	100 points
1 research project*	40 points	40 points
1 exam	80 points	80 points
	Total	300 points

**No late assignments will be accepted for any credit. All activities will be completed and submitted during class time.*

Your total out of the maximum of 300 points will be converted to a percentage and a letter grade will be assigned according to the following scale: 90-100% = A; 80-89% = B; 70-79% = C; 60-69% = D; 59% and below = F. Incompletes will not be given. You will receive **ZERO** points for missed activities.

Class Schedule and Important Dates

Date	Agenda	Important Information
7/17	<p>Classroom lectures and activities</p> <ol style="list-style-type: none"> 1. Introduction to geology <ol style="list-style-type: none"> i. Rock cycle ii. Mineral identification 2. Geologic framework of Colorado 3. Colorado Mineral Belt <ol style="list-style-type: none"> i. Types of ore deposits ii. Formation of ore deposits 4. Colorado Mineral Belt mining districts <ol style="list-style-type: none"> i. Laramide sulfide ores Silverplume-type deposits Leadville-type deposits ii. Mid-Cenozoic ores Climax-type deposits 	<p>Class time: 5pm – 10pm</p> <p>Last day to drop*</p>
7/18	<p>Field Trip 1 – Mines and ores of the Idaho Springs-Central City and Caribou-Grand Island mining districts, including a tour of the historic Coeur d'Alene mine shaft house</p>	<p>Class time: 8am – 5:30pm (meet on campus)</p>
7/23		<p>Last day to withdraw*</p>
7/24	<p>Research project presentations & Classroom lectures and activities</p> <ol style="list-style-type: none"> 1. Deposits not within the Colorado Mineral Belt <ol style="list-style-type: none"> i. Cripple Creek gold ii. Uranium 2. Historic and modern mining, milling, and smelting techniques 3. Environmental issues <ol style="list-style-type: none"> i. Acid mine drainage ii. Smelter dust emissions iii. Radiation hazards 	<p>Class time: 5pm – 10pm</p>
7/25	<p>Open-notes Final Exam & Field Trip 2 – Mines and ores of the historic Leadville mining district and a stop at the active Climax molybdenum mine</p>	<p>Class time: 8am – 5:30pm (meet on campus)</p>

**Be sure to consult with appropriate offices on campus, particularly if you receive financial aid or are an international student, as dropping or withdrawing from a course may impact your status.*

Research Project: Each student will research the history of a Colorado mine, mining area, or significant mineral and deliver a 10 minute presentation (includes time for Q&A). You will not be required to develop a powerpoint (or similar) presentation. You will be required to submit a formal list of your references. More details about the research project will be given on the first day of class.

Important Field Trip Information: This course includes two day long field trips. All students must sign a “Student waiver of liability form” prior to each trip. Students are responsible for providing their own transportation to and from the field trip locations (directions will be provided). Carpooling is strongly encouraged. Students should bring a lunch, snacks, water, and sunscreen and/or hat. Proper attire includes comfortable clothes for walking and short hikes, and close toed shoes with good tread. Depending on the forecast students may also want to bring a rain jacket or umbrella. No guests will be permitted on the field trip. Additional details, including meeting location and time, will be discussed in class.

D2L: Ensure that you have access to D2L. D2L will be used to distribute course documents and presentations. You will also be able to check your grade on D2L.

Student Conduct and Academic Honesty: Students at RRCC are expected to adhere to the policies for academic integrity and the student conduct code described in the Student Handbook. All students in this class will sign a pledge to be on their honor to do their own work and to follow these policies. There is a zero tolerance policy for any form of academic dishonesty in this course. Disciplinary action will be taken against any student found guilty of academic dishonesty such as cheating or plagiarism. Although you will often be working with others, all written work you prepare **MUST** be your own. If your words match those of others, I will assume you copied rather than thinking about the answers yourself. The penalty for being dishonest in this way is far greater than simply getting a wrong answer. If you are unclear whether or not your actions are acceptable, please ask in advance. Any student guilty of any form of academic dishonesty will receive a grade of ZERO for that assignment or exam and will be subject to additional disciplinary action, up to and including failing the course and/or being expelled from the college.

ADAAA (Americans with Disabilities Act Amendments Act of 2008) and Section 504 of the Rehabilitation Act of 1973: Red Rocks Community College is committed to access for students with disabilities. If you are a student with a disability and need assistance or are interested in requesting accommodations, please contact Accessibility Services. Faculty are not obligated to provide accommodations without proper notification by Accessibility Services and accommodations are not retroactive. Students may contact the Access staff by telephone or email to make an intake appointment at 303-914-6733 or access@rrcc.edu. Accessibility Services is located in Suite 1182 at the Lakewood campus. More information is available at www.rrcc.edu/accessibility-services.

Classroom etiquette and policies:

1. Be courteous. Treat me, and your fellow students, with respect, and I will do the same.
2. Get to class and return from breaks on time.
3. Turn all cell phones to silent (vibrate mode can still be a distraction, please only leave your phone on vibrate if it is absolutely necessary). Do not use them during class unless you are dealing with an urgent matter. In that case, please leave the room to take/make your call or text. You may use laptops for taking notes or other in-class work only. If you use laptops or phones for anything other than the above, you will be asked to turn off the device.
4. If you must leave during class for any reason, do not be disruptive when doing so. I'd also appreciate it if you would let me know ahead of time if you know or expect you may need to do so.
5. Refrain from side conversations when the entire class is being addressed by me or by one of your classmates. These are very distracting to everyone.

Students not adhering to these policies are subject to disciplinary action. This may include being asked to leave the class for the day (and not being given the chance to make up what you miss as a result).

Acknowledgment of the RRCC Student Conduct Code:

"I pledge to abide by the RRCC Student Conduct Code. I will be academically honest in all of my coursework and will not tolerate the academic dishonesty of others."

Signature _____

Date _____

Acknowledgment of Syllabus for this course (GEY206-601, Summer 2015):

"I have received the syllabus and understand the work load, grading policy, responsibilities, and expectations for this class."

Signature _____

Date _____