

Semester & Year:	Spring, 2016
Course ID and Section Number:	GEOL-2-E8703 (038703) Historical Geology With Lab
Number of Credits/Units:	4.0
Day/Time: Location:	MW 10:05-11:30AM, HU-125 MW 11:40SAM-1:05PM, HU-125
Instructor's Name:	Jason R. Patton
Contact Information:	Office location and hours: HU-119, help by appointment and/or email Phone: Email: jason-patton@redwoods.edu

Course Description (catalog description as described in course outline):

An introduction to the geologic history of Earth, including past positions of tectonic plates, changes in the composition and structure of Earth's crust and the development of environments and organisms. Concepts of age dating, sedimentary analysis and the analysis of sedimentary rocks and the fossils they contain are used to understand environmental and evolutionary changes throughout Earth's history. The laboratory component includes the study of rocks, fossils, geologic maps, and paleogeography to interpret ancient environments, tectonic settings, and geologic history. Age dating, the geologic time scale, extinction events, sedimentary environments, and correlation of rock and time units are also explored in the laboratory as a means of understanding the 4.6 billion years of Earth history.

Student Learning Outcomes (as described in course outline):

1. Describe how the scientific method is used to understand natural phenomena.
2. Apply rock and fossil classification systems to organize and identify key indicators of Earth's evolution and history, as well as the major evolutionary stages and extinctions present in the fossil record.
3. Describe the fundamental components, energy transfer, and landforms involved in plate tectonics. Use these principles to describe the supercontinent cycle.
4. Explain the basis of the geologic time scale and recount the milestone events in Earth history.

Special accommodations: College of the Redwoods complies with the Americans with Disabilities

Act in making reasonable accommodations for qualified students with disabilities. Please present your written accommodation request at least one week before the first test so that necessary arrangements can be made. No last-minute arrangements or post-test adjustments will be made. If you have a disability or believe you might benefit from disability related services and may need accommodations, please see me or contact Disabled Students Programs and Services. Students may make requests for alternative media by contacting DSPPS.

Academic Misconduct: Cheating, plagiarism, collusion, abuse of resource materials, computer misuse, fabrication or falsification, multiple submissions, complicity in academic misconduct, and/ or bearing false witness will not be tolerated. Violations will be dealt with according to the procedures and sanctions proscribed by the College of the Redwoods.

The student code of conduct is available on the College of the Redwoods website at:

<http://www.redwoods.edu/District/Board/New/Chapter5/Ap5500.pdf>

College of the Redwoods is committed to equal opportunity in employment, admission to the college, and in the conduct of all of its programs and activities.

Campus Safety

RAVE - College of the Redwoods has implemented an emergency alert system. *Everyone is entered already to receive a message at their CR email address. In the event of an emergency on campus, you can also elect to receive an alert through your personal email, and/or phones at your home, office, and cell. This emergency alert system will be available to all students, staff, and other interested parties.*

Registration is necessary in order to receive emergency alerts. Please go to

<https://www.GetRave.com/login/Redwoods> and use the "Register" button on the top right portion of the registration page to create an account. During the registration process you can elect to add additional information, such as office phone, home phone, cell phone, and personal email. Please use your CR email address as your primary Registration Email. Your CR email address ends with "redwoods.edu." We will test the system each semester to be sure that you are getting alerts at all of your destinations. Please contact Public Safety, 707-476-4112, security@redwoods.edu, if you have any questions.

GEOL 2
Course Syllabus
Historical Geology With Lab (4 units)

Spring 2016 Section E8703
Lecture M&W 10:05AM -11:30AM Room HU125
Lab M&W 11:40AM - 1:05PM Room HU125

Instructor: Jason Robert Patton

email: jason-patton@redwoods.edu

Required Text: Harold Levin, The Earth Through Time, 10th ed., 2006
David R. Montgomery, The Rocks Don't Lie, 2013.

Required Supplies: three ring binder for class handouts including blank paper for drawing illustrations and notes during class; colored pencils for making illustrations, calculator

Field Trips: We will have two during-class-hours field trips and one day-long Saturday field trip.

Contact: Please don't hesitate to email me with any questions, comments, or concerns. I welcome any feedback or suggestions. The best way to contact me for any reason is by sending an email directly to my College of the Redwoods email jason-patton@redwoods.edu

Course Description

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Course Learning Outcomes

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GEOL 2 Course Syllabus Historical Geology With Lab (4 units)

Grading

Your final grade will be comprised of:

<u>Summary</u>	<u>Points</u>
Participation	100
Course Notes and Illustrations	100
The Rocks Don't Lie Questions	130
Labs and Field Trips	300
Quizzes	140
Mid Term	100
<u>Final Exam</u>	<u>130</u>
Total	1000

There are 1000 points available and grades are assigned by the percentage of total points as follows:

1000-940=A 939-900=A- 899-870=B+ 869-830=B 829-800=B-
799-770=C+ 769-700=C 699-670=D+ 669-600=D <599=F

Classroom Conduct

Side conversations among classmates are disrespectful and disruptive to the instructor and your fellow students. Questions or comments about the course material are welcome at all times but should be approached in a respectful manner.

The use of cell phones, iPods, or other items that may distract you, your instructor, or your classmates are not permitted during class. All such devices must be turned off.

You may not leave the room during an exam or quiz unless you are ready to turn in your finished exam.

Academic Honesty

You are encouraged to work together to review notes from lectures, to work on problems from the text, and to formulate ideas for any take-home assignments. However, all work you turn in must be your own independent, original work.

In the event that any work is copied from another student, zero credit will be given to all students involved (regardless of who copied from whom).

Any sources of information used in your written work must be referenced (regardless of whether the material was copied word-for-word). This includes your text book and all internet sources (reference these by including the name and URL). Any work including un-referenced material from another source (regardless of whether it was copied word-for-word) will be given zero credit.

GEOL 2

Course Syllabus

Historical Geology With Lab (4 units)

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Academic dishonesty in any form may be reported to the vice president of CR, as per the student code of conduct available at <http://www.redwoods.edu/District/Board/New/Chapter5/Ap5500.pdf> See in particular page 9, Article VIII which begins “Students are expected to demonstrate qualities of morality, integrity, honesty, civility, honor, and respect.”

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Tentative Class Schedule*

<u>Date</u>	<u>Topic</u>	<u>Readings</u>
Week 1	Lectures: Scientific Method, Geologic Philosophy, Time The Rocks Don't Lie: Ch. 1 Lab 1: Geologic Time	Ch. 1-3
Week 2	Lectures: Minerals and Igneous Rocks The Rocks Don't Lie: Ch. 2 Lab 2: Igneous Rocks	pp. 49-66
Week 3	Lectures: Sedimentary and Metamorphic Rocks The Rocks Don't Lie: Ch. 3 Lab 3: Sedimentary and Metamorphic Rocks <u>Quiz 1</u> : Minerals and Igneous Rocks	pp. 67-80
Week 4	Lectures: Sedimentation The Rocks Don't Lie: Ch. 4 Lab 4: Sedimentation and Relative Time <u>Quiz 2</u> : Sedimentary and Metamorphic Rocks	Ch. 5

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Week 5	Lectures: Patrick's Point Field Lab The Rocks Don't Lie: Ch. 5 Lab 5: Patrick's Point Field Lab	(<u>Field Trip</u> Mon) (Report Writing Wed)
Week 6	Lectures: Fossils and Evolution The Rocks Don't Lie: Ch. 6 Lab 6: Fossils <u>Quiz 3</u> : Geologic Time	Ch. 6
Week 7	Lectures: Plate Tectonics The Rocks Don't Lie: Ch. 7 Lab 7: Plate Tectonics I <u>Quiz 4</u> : Fossils	Ch. 7
Week 8	Lectures: Review and Catch Up The Rocks Don't Lie: Ch. 8 Lab 8: Plate Tectonics II Mid Term (Wednesday)	
SPRING BREAK!		
Week 9	Lectures: Centerville Lab The Rocks Don't Lie: Ch. 9 Lab 9: Centerville Lab <u>Quiz 5</u> : Plate Tectonics	(<u>Field Trip</u> Mon) (Report Writing Wed)
Saturday	Lab 10: Mad River Slough <u>Field Trip</u> 3/26/16 9 am – 3 pm	
Week 10	Lectures: Archean and Proterozoic Eon (Pre-Cambrian) The Rocks Don't Lie: Ch. 10 Lab 11: Geologic Maps	Ch. 8 & 9
Week 11	Lectures: Paleozoic Era I The Rocks Don't Lie: Ch. 11 Lab 12: Paleozoic Era I	Ch. 10 & 11

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Week 12	Lectures: Paleozoic Era II The Rocks Don't Lie: Ch. 12 Lab 13: Paleozoic Era II	Ch. 12
Week 13	Lectures: Mesozoic I The Rocks Don't Lie: Ch. 13 Lab 14: Mesozoic <u>Quiz 6</u> : Pre-Cambrian Time No Class on Wed (<u>exchange for weekend field trip</u>)	Ch. 13
Week 14	Lectures: Mesozoic I & Cenozoic I Lab 15: Cenozoic	Ch. 14 & 15
Week 15	Lectures: Cenozoic II Lab: Semester Review and Wrap Up <u>Quiz 7</u> : Mesozoic & Cenozoic Time	Ch. 16 & 17
Week 16	FINAL WEEK, <u>Final</u>	

*** Note: Instructor reserves the right to make changes to course schedule as deemed necessary.**

College of the Redwoods Resources and Information

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College of the Redwoods Eureka Campus
Historical Geology With Lab
Course Information and Assessment

Mid-Term/Final Exams: The midterms and final are worth 100 and 130 points each. The exams are a mix of multiple choice, true/false, short answer, and essay questions based on the lectures, labs, lessons, and course reading. Mid-term exams cover the material since the beginning of the course or the last exam, or whatever is most recent. The final is cumulative and will focus on the “big picture” view that is comprehensive of all subjects covered earlier in the course, in addition to the new material covered since the second mid-term.

Quizzes: There will be 7 quizzes throughout the term. Each quiz is worth 20 points.

Missing an exam: All make-up exams should be arranged for in advance when possible. In the event of an emergency or sudden illness that prevents you from attending the exam, you must contact me as soon as possible and arrange a time for the exam to be completed before our next regular class time. If you miss an exam (and do not contact me to make it up) or if you arrange a makeup that you do not take, you will receive a zero for that exam.

Course Notes and Illustrations: Each lecture may include handouts (of the presentation for that day) and several on-board illustrations that relate to the specific topic being discussed for that day. You can use the handouts to take notes and your notebook to copy and label any illustrations. You are required to have a three-ring binder containing these handouts and your notes taken during every class. You will turn in your notebooks at the end of the semester along with your activities and homework that has been completed through the semester. These will be evaluated during the Final exam. Credit is given for careful reproduction of the illustrations including any notes, labels, and graphs.

Labs and Field Trips: Each week we will focus on a specific topic and we will use some of the class time to develop these themes. Some weeks will include activities. You may need to spend some time out of class completing the activities. There are 15 labs and field trips throughout the course, each worth 20 points and they are due by the beginning of the following class. Two field trips occur during the week and one field trip occurs on a Saturday.

Reading: In this syllabus I provide a list of required reading in the Levin text *The Earth Through Time* and the Montgomery text *The Rocks Don't Lie* books for each week. The student is expected to read the assignment before class. This reading is essential to your comprehension of the material in this course and will be a key to your success. Periodically I will ask you questions from the reading at the beginning of class, before we have covered the material in lecture. These answers will count towards your activity grade for the day and can count towards the “active attendance grade boost” (see below). There will be questions from the Montgomery text and these account for 130 points (10 points each).

Final grade active attendance boost: If your final course grade after rounding to the nearest whole number is within 1 point of a grade transition (C to C+, D to C, A- to A, etc.) I will give you the boost needed to obtain the higher grade if you have actively attended most classes and succeeded in many of the in-class pop quiz questions. More than 2-3 unexcused absences is considered excessive and will disqualify you from this opportunity. Conduct not in accordance with that outlined below will also prevent you from receiving this bonus.

*** Please note that this document is informational and subject to change.**

College of the Redwoods Eureka Campus

Historical Geology With Lab

Course Expectations

Class will start on time at 10:05 AM. You are responsible to be present for and be attentive to all the material covered in class. If you need to leave the class early, please let me know before the class starts.

This is a college-level science class, and will require a commitment of your time outside of class. This at-home time will enable you to digest the material we cover in class and help when you are asked on the exams to apply these concepts to different problems and applications. As for all college courses, you will spend 2 to 3 hours per week (for every hour in class) on course material outside of class. For this class, this equals 12 to 18 hours per week. You are encouraged to set aside a specific time each week outside of class devoted solely to each course:

- Reviewing lecture notes and in-class exercises each week
- Reading the textbook
- Working on the recommended exercises from the textbook
- Completing experiment write-ups and homework assignments
- Studying for exams

Note that 12 hours per week at home is the average minimum to pass. Some students may require more time at home just to pass; for some in this course that may be enough to get an A. A student who is very attentive in class, asks questions, and takes careful notes will need less at-home time.

Absences: It is difficult to do well in this class without attending all the lectures. I understand there will be an occasional absence due to illness or emergency, however I consider **four absences per semester excessive**. School policy allows me to drop a student who has excessive absences as defined in the course syllabus. It is your responsibility to attend class on a regular basis. If you do miss a class:

1. Obtain the course material online (PowerPoint slides, extra reading, and handouts). The slides will include information about any homework or in-class exercises that were assigned. Most assignments and handouts referenced by the slides will be in your handouts.
2. Next, try to obtain a copy of lecture notes from a classmate since there are many things we cover that are not spelled out directly on the slides or handouts.
3. Read the required reading covering the material you missed.
4. After this, feel free to contact me by email with any questions.

Computer skills: This class will require computer use outside of class. Activities involving the 4 skills listed below will be included throughout the semester. In addition, you will be expected to check myCR regularly for announcements. If any of the items listed below seem foreign to you, you are encouraged to sign up this semester for CIS 100 "Basic Computer Skills", a beginning computer literacy course at CR.

1. Send and receive email from your CR Google email account.
2. Open a web browser, and access a web page if you are given the web address.
3. Access course material (handouts, slides, announcements, etc.).
4. Open Microsoft word (.doc or .docx), Microsoft Excel (.xls or .xlsx) and Adobe .pdf documents to read their contents.

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