



Syllabus for Physical Geology with Lab (GEOL-1)

Course Information – THIS IS A HYBRID COURSE

Spring, 2022

GEOL-1-E2800 and GEOL-1-E2801

David Bazard, Ph.D.

Online lecture. Face to Face Lab on either Monday or Wednesday, 10:00am-1:10pm

Lab Classroom: HU-125 (Eureka Campus, Humanities Building)

4.0 units (3.0 lecture, 1.0 lab)

Instructor Contact Information

Office location: HU108I

Office hours: MW 1:15-2pm (after lab, on campus); and TBD

Phone number: 707-476-4224

Email address: Canvas Messaging preferred. Office: dave-bazard@redwoods.edu

Catalog Description

An introductory study of physical geology with an emphasis on geologic principles and processes. The course explores the internal structure, processes, and origin of the Earth, and the processes of water, wind, gravity, and plate tectonics that contribute to the formation of the Earth's surface. The laboratory component focuses on the identification of rocks and minerals, the reading and interpretation of topographic and geologic maps, and field studies. Students will explore principles of mineral and rock formation, landform development, plate tectonics, volcanism, folding and faulting, and related topics. Note: Field Trips are required for this course. The college does not provide transportation.

Course Student Learning Outcomes

1. Describe how the scientific method is used to understand natural phenomena.
2. Describe the basic elements of plate tectonic theory, including how internal processes help shape the Earth.
3. Apply classification systems to organize and identify igneous, sedimentary, and metamorphic rock specimens and mineral specimens, and demonstrate how these classification systems are used to understand Earth processes.
4. Apply geologic principles to describe how earth materials and landscapes change over time, including description of how interaction of Earth systems result in geologic change.

Prerequisites/co-requisites/ recommended preparation: No prerequisites

Course Materials (text book)

Required: *Essentials of Geology*, Sixth Edition (Marshak; published by W.W. Norton), ISBN: 978-0393667523. You may use an electronic or rented version, or you may buy a used text since you do NOT need an access code. Older editions of this text will work for the course, but it will require extra work on your part to correlate the assigned readings to what is in these older editions. I will be referencing page numbers and figures from the 6th Ed. throughout the course.

Course/Lab Packet: This is for sale through the bookstore. I'll also be posting a version of this on Canvas, and each week announcement will include that week's packet pages. Students will need copies of this to complete and submit work. The packet for sale through the bookstore (link below) is a loose-leaf, three-hole punched packet meant to be put into a three-ring binder. Students will be removing pages of the packet for grading. Please purchase a medium-sized three ring binder for storing this packet.

Weekly Schedule (*subject to change with notification*)

Week <i>(Module)</i>	Online <i>Readings, PowerPoint Slides, and Lecture Video</i>	Lab <i>Face to Face Lab Sessions</i>
1 (Jan 17*) <i>MLKJ 1/17: no Lab this week</i>	<i>Introduction, Scientific Methods, Earth's Interior</i> Prelude: p. 3-11, Chap 1: p. 24-30, 36-41 Chap 8 (p. 255-257 only), Interlude D (p. 287-293) Course packet: p. 2-8 <ul style="list-style-type: none"> Scientific Method , Seismic Waves, Plate Tectonics, Part I <i>Online Quiz Due Friday: Science, Earth Interior</i>	<u>No Labs this first week.</u> Monday is a holiday and Wednesday lab is cancelled to keep the class on the same schedule.
2 (Jan 24)	<i>Plate Tectonics</i> Chap 2: 45-81 Course packet: p. 5-17 <i>Minerals</i> Begin Chap 3. Course packet: p. 15-19, 25-30) <i>Online Quiz Due Friday: Plate Tectonics</i>	<u>Monday and Wednesday Labs:</u> <ul style="list-style-type: none"> Scientific Method. Seismic Waves Plate Tectonics, Part I Packet: p. 2-6
3 (Jan 31)	<i>Introduction to Minerals.</i> Chapter 3. Course Packet: p. 22-32 <i>Prepare for Test 1:</i> Study Guide (Course Packet) Review: Readings, Class/Lab Activities, Quizzes. <i>Course Packet p. 20-21.</i> <i>Online Quiz Due Friday: Minerals</i>	<ul style="list-style-type: none"> Plate Tectonics, Part II Packet p. 7-17 Minerals Lab – Introduction Packet p. 22-32
4 (Feb 7)	<i>Minerals Lesson</i> Chap. 3: 85-100 Course packet p. 22-32 <i>Test1 (online timed test, due end of the week)</i>	<ul style="list-style-type: none"> Minerals Lab Packet p. 22-32 Review for Mineral Lab Quiz Packet p. 33
5 (Feb 14)	<i>Igneous Rocks</i> Interlude A: p. 107-112 Chap. 4: 115-134 Course packet: 33-36 and 48-50 of course packet) <i>Online Quiz Due Friday: Igneous Rocks</i>	<ul style="list-style-type: none"> Igneous Rocks Lab Packet p. 33-36, 48-50 Minerals Lab Quiz
6 (Feb 21)* <i>Monday Holiday</i> <i>No lab this week</i>	<i>Volcanism</i> Chap 5: 139-167 Course Packet p. 45-50 Review of Igneous Rocks for Lab Quiz (p. 44; online photos) <i>Online Quiz due Friday: Volcanism</i>	No Lab This Week (compensates for Sat April 9 Field trip) <ul style="list-style-type: none"> Online preparation for Igneous Rock Lab Quiz

7 (Feb 28)	<p><i>Preparing for Test 2:</i> Online Study Guide Questions, Review Activities and Quizzes. <i>Course Packet p. 51-52.</i></p> <p><i>Sedimentary Rocks</i> Interlude B: p. 173-179 Chapter 6: p. 189-213</p> <p><i>Online Quiz Due Friday: Sedimentary</i></p>	<ul style="list-style-type: none"> Sedimentary Rocks Lab Packet p. 53-64 <p>Igneous Rock Quiz</p>
8 (Mar 7)	<p><i>Weathering and Sedimentary Rocks</i> Weathering portion of Interlude B: p. 173-179 Chapter 6: p. 189-213</p> <p><i>Test 2 (online and timed) – due end of the week.</i></p>	<p><u>Field Trip</u> (for each lab): Sedimentary Rocks</p>
<p align="center"><u>SPRING BREAK (March 14-19): No classes</u></p>		
9 (Mar 21)	<p><i>Metamorphic Rocks</i> Chap 7: 217-235 Interlude C – The Rock Cycle: p. 239-244</p> <p><i>Review of Sedimentary and Metamorphic Rocks for Quiz</i> Course Packet: p. 75-76</p> <p><i>Online Quiz due Friday: Metamorphism</i></p>	<ul style="list-style-type: none"> Metamorphic Rock Lab Packet p. 65-74 Sedimentary and Metamorphic Rock Review Packet p. 75-76
10 (Mar 28)	<p><i>Deformation of Rocks (Part I)</i> Chap 9: p. 301-327 Course packet 81-97</p> <p><i>Online Quiz due Friday: Rock Deformation</i></p>	<ul style="list-style-type: none"> Rock Deformation Packet: p. 81-97 <p>Metamorphic and Sedimentary Rock Quiz.</p>
11 (Apr 4)	<p><i>Deformation of Rocks (Part II)</i> Chap 9 and Course Packet</p> <p><i>Moonstone Project</i></p> <p><i>Preparing for Test 3</i> Online Study Guide Questions, Class/Lab, Activities, Quizzes. Course Packet: 89-91.</p>	<ul style="list-style-type: none"> Rock Deformation Part II. Prepare for Saturday <u>Field Trip</u>. Packet: p. 77-80
<p align="center"><u>Saturday April 9 Field Trip</u> (Moonstone Beach): Noon to 2pm.</p>		
12 (Apr 11)	<p><i>Moonstone Project</i> Project Details and Requirements</p> <p><i>Geologic Time (part I)</i> Chapter 10: p. 343-365 <i>Course Packet: 92-100</i></p> <p><i>Test 3 (Online and timed) – due end of the week</i></p>	<ul style="list-style-type: none"> Moonstone Project Work – discuss report Geologic Time Lab, Part I Packet p. 92-100

13 (Apr 18)	<i>Geologic Time (part II)</i> Chapter 10: p. 343-365 <i>Online Quiz due Friday: Geologic Time</i>	<ul style="list-style-type: none"> • Geologic Time Lab, part II Packet p. 86-89 • Moonstone Project Work
14 (Apr 25)	<i>Landforms: Mass Movement and Rivers</i> Interlude F: p. 435-438 Chapter 13: p.447-464 Chapter 14: p. 469-487 <i>Online Quiz due Friday: Land Forms</i>	<ul style="list-style-type: none"> • Geologic Maps and Landforms Lab: California Map Packet p. 90 and Lab Maps Moonstone Report due (due date announced in class)
15 (May 3)	<i>Preparing for the Final Exam.</i> Online Study Guide Questions and Review Packet: p. 110-112	<ul style="list-style-type: none"> • Local Landforms. Field Trip
16 (May 10)	<i>Final Test (during Finals Week)</i>	

Note: Dates and material covered may change; any changes will be announced in class.

What To Expect: The topics to be covered each week and the corresponding reading assignments are listed on the following calendar pages. Each week you will be expected to read the assigned material, watch a lecture video, take an online quiz, and engage in online and lab activities.

Some of the labs include field trips, and you are expected to arrange your own transportation. You may complete some labs prior to the ending time, but I expect you to be available for the entire period if additional work is required. There is one Saturday Field Trip. There will be an optional replacement activity if you absolutely can't make the trip. However, you should try to plan in advance for this one trip that is part of a project.

What I Expect: I expect you to read the text material related to each topic and watch the related lecture video prior to the class sessions. I expect you to attend each class session, participate in discussions and ask questions if the material or instructions are unclear. I expect you to be responsible for your own learning and let me know if you need help or clarification.

Online Quizzes: Online quizzes (through Canvas) will be assigned during non-test weeks. These questions are related to the assigned readings.

Lab Tests: The lab tests consist of specimen identification questions, classification questions, and classification-related concept questions. Study guides are included in the course packet.

Lab Report: The lab report combines field observations with lab analysis and written presentation. Field and lab work will be a group effort, but each student will be responsible for compiling data and presenting their own findings in a written lab report.

Tests: The tests will **include questions very similar to the online quiz questions and class activities.** They will cover material presented in lecture and, sometimes, lab. A study guide for each test is provided in the course packet and will also be provided through Canvas. Students who study the activity and quiz questions typically do well on the tests.

Advice about the readings:

1. Begin by taking a quick look through the entire section being assigned and focus on the figures and captions.
2. Then carefully read through the entire section. Make sure you have an undistracted period (hour) to read through the section.
3. Read through the Chapter Summary section (as it relates to the assigned sections) and evaluate if you understand these summary statements. If not, go back to any confusing sections and read them again.
4. Reread any sections that apply to activity or class questions that you do not understand.
5. Email the instructor with questions (or ask in class) about material that is not clear, or if you have a question about a related topic.

Evaluation & Grading Policy

Grading (any changes to the amounts shown below will be announced in class):

• Online Quizzes (10 @ 10 pts each):	100 pts	10%
• Labs and Activities (9 @ 25 pts each):	225 pts	22.5%
• Lab Tests: (3@40pt each):	120 pts	12%
• Three term exams (100 pts each, 3 tests):	300 pts	30%
• Field/Lab Investigation(s) and Trips:	100 pts	10%
• Final exam:	155 pts	15.5%

Total pts: 1000 pts

Letter grades for the course are assigned based on the percentage of the total:

A: 100%–91%; A-: 89.5%-90.9% (The college does not allow for a A+ grade)

B+: 89.4% - 88%; B: 87.9% - 81%; B-: 80.9%-79.5%

C+: 79.4% - 78%; C: 77.9% - 69.5% (The college does not allow for a C- grade)

D: 69.4%-60%; F: <60%

I reserve the right to change the exact point value of an assignment and the “cutoffs” for plus and minus grades (for all students).

Missed Class and Make Up:

Each student is expected to be responsible for their absences by:

- 1) notifying the instructor as soon as possible if you miss, or will miss, class.
- 2) determine the material and instructions missed (by contacting the instructor), and
- 3) obtaining and completing missed material.

The following is provided to compensate for the possibility of missing class:

- You are allowed to submit **two day's worth** of activities and labs late without penalty, if the late assignment is submitted during the following class (or when you return).
- I will accept a third late lab/activity with a point deduction. Late work beyond the third late assignment may not be accepted or will have a substantial point deduction.
- Missed lecture exams will be handled on a case-by-case basis. There is no guarantee that a makeup will be provided. Informing me in advance of missing an exam (or soon after) will increase the likelihood that a makeup will be provided.
- Lab exams are difficult to makeup and **MUST** be made up within a few days of the missed exam.

I consider missing more than four class sessions in a semester as excessive absences. 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.

Admissions deadlines & enrollment policies

Spring 2022 Dates

- Classes begin: 1/15/22 (Saturday for online)
- Last day to add a class: 1/28/22
- Last day to drop without a W and receive a refund: 1/28/22
- Census date: 1/31/22 or 20% into class duration
- Last day to petition to file P/NP option: 2/11/23
- Lincoln's Birthday (no classes): 2/18/22
- President's Day (all-college holiday): 2/21/22
- Last day to petition to graduate or apply for certificate: 3/3/22
- Spring break (no classes): 3/14/22-3/19/22
- Cesar Chavez Day: Thursday 3/31/22
- Last day for student-initiated W (no refund): 4/1/22
- Last day for faculty-initiated W (no refund): 4/1/22
- Final examinations: 5/7/23-5/13/22
- Semester ends: 5/13/22
- Grades available for transcript release: approximately 5/23/22

Accessibility

College of the Redwoods is committed to making reasonable accommodations for qualified students with disabilities. If you have a disability or believe you might benefit from disability-related services and accommodations, please contact your instructor or [Disability Services and Programs for Students](#) (DSPS). Students may make requests for alternative media by contacting DSPS based on their campus location:

- Eureka: 707-476-4280, student services building, 1st floor
- Del Norte: 707-465-2324, main building near library
- Klamath-Trinity: 530-625-4821 Ext 103

If you are taking online classes DSPS will email approved accommodations for distance education classes to your instructor. In the case of face-to-face instruction, please present your written accommodation request to your instructor at least one week before the needed accommodation so that necessary arrangements can be made. Last minute arrangements or post-test adjustments usually cannot be accommodated.

Canvas Information

If using Canvas, include navigation instructions, tech support information, what Canvas is used for, and your expectation for how regularly students should check Canvas for your class.

Log into Canvas at <https://redwoods.instructure.com>

Password is your 8 digit birth date

For tech help, email its@redwoods.edu or call 707-476-4160

Canvas Help for students: <https://webapps.redwoods.edu/tutorial/>

Canvas online orientation workshop: [Canvas Student Orientation Course \(instructure.com\)](#)

Academic dishonesty

In the academic community, the high value placed on truth implies a corresponding intolerance of scholastic dishonesty. In cases involving academic dishonesty, determination of the grade and of the student's status in the course is left primarily to the discretion of the faculty member. In such cases, where the instructor determines that a student has demonstrated academic dishonesty, the student may receive a failing grade for the assignment and/or exam and may be reported to the Chief Student Services Officer or designee. The Student Code of Conduct ([AP 5500](#)) is available on the College of the Redwoods website. Additional information about the rights and responsibilities of students, Board policies, and administrative procedures is located in the [College Catalog](#) and on the [College of the Redwoods website](#).

Disruptive behavior

Student behavior or speech that disrupts the instructional setting will not be tolerated. Disruptive conduct may include, but is not limited to: unwarranted interruptions; failure to adhere to instructor's directions; vulgar or obscene language; slurs or other forms of intimidation; and physically or verbally abusive behavior. In such cases where the instructor determines that a student has disrupted the educational process, a disruptive student may be temporarily removed from class. In addition, the student may be reported to the Chief Student Services Officer or designee. The Student Code of Conduct ([AP 5500](#)) is available on the College of the Redwoods website. Additional information about the rights and responsibilities of students, Board policies, and administrative procedures is located in the [College Catalog](#) and on the [College of the Redwoods website](#).

Inclusive Language in the Classroom

College of the Redwoods aspires to create a learning environment in which all people feel comfortable in contributing their perspectives to classroom discussions. It therefore encourages instructors and students to use language that is inclusive and respectful.

Setting Your Preferred Name in Canvas

Students have the ability to have an alternate first name and pronouns to appear in Canvas. Contact [Admissions & Records](#) to request a change to your preferred first name and pronoun. Your Preferred Name will only be listed in Canvas. This does not change your legal name in our records. See the [Student Information Update form](#).

Community College Student Health and Wellness

Resources, tools, and trainings regarding health, mental health, wellness, basic needs and more designed for California community college students, faculty and staff are available on the California Community Colleges [Health & Wellness website](#).

[Wellness Central](#) is a free online health and wellness resource that is available 24/7 in your space at your pace.

Students seeking to request a counseling appointment for academic advising or general counseling can email counseling@redwoods.edu.

Emergency procedures / Everbridge

College of the Redwoods has implemented an emergency alert system called Everbridge. In the event of an emergency on campus you will receive an alert through your personal email and/or phones. Registration is not necessary in order to receive emergency alerts. Check to make sure your contact information is up-to-date by logging into WebAdvisor <https://webadvisor.redwoods.edu> and selecting 'Students' then 'Academic Profile' then 'Current Information Update.'

Please contact Public Safety at 707-476-4112 or security@redwoods.edu if you have any questions. For more information see the [Redwoods Public Safety Page](#).

In an emergency that requires an evacuation of the building anywhere in the District:

- Be aware of all marked exits from your area and building
- Once outside, move to the nearest evacuation point outside your building
- Keep streets and walkways clear for emergency vehicles and personnel

Do not leave campus, unless it has been deemed safe by the campus authorities.

Eureka Campus Emergency Procedures

Please review the [campus emergency map](#) for evacuation sites, including the closest site to this classroom (posted by the exit of each room). For more information on Public Safety go to the [Redwoods Public](#)

[Safety Page](#) It is the responsibility of College of the Redwoods to protect life and property from the effects of emergencies within its own jurisdiction.

In the event of an emergency:

1. Evaluate the impact the emergency has on your activity/operation and take appropriate action.
2. Dial 911, to notify local agency support such as law enforcement or fire services.
3. Notify Public Safety 707-476-4111 and inform them of the situation, with as much relevant information as possible.
4. Public Safety shall relay threat information, warnings, and alerts through the Everbridge emergency alert system, Public address system, and when possible, updates on the college website, to ensure the school community is notified.
5. Follow established procedures for the specific emergency as outlined in the College of the Redwoods Emergency Procedure Booklet, (evacuation to a safe zone, shelter in place, lockdown, assist others if possible, cooperate with First Responders, etc.).
6. If safe to do so, notify key administrators, departments, and personnel.
7. Do not leave campus, unless it is necessary to preserve life and/or has been deemed safe by the person in command.

Student Support Services

The following online resources are available to support your success as a student:

- [CR-Online](#) (Comprehensive information for online students)
- [Library Articles & Databases](#)
- [Canvas help and tutorials](#)
- [Online Student Handbook](#)

[Counseling](#) offers assistance to students in need of professional counseling services such as crisis counseling.

Learning Resource Center includes the following resources for students

- [Academic Support Center](#) for instructional support, tutoring, learning resources, and proctored exams. Includes the Math Lab & Drop-in Writing Center
- [Library Services](#) to promote information literacy and provide organized information resources.
- [Multicultural & Diversity Center](#)

Special programs are also available for eligible students include

- [Extended Opportunity Programs & Services \(EOPS\)](#) provides services to eligible income disadvantaged students including: textbook award, career academic and personal counseling, school supplies, transportation assistance, tutoring, laptop, calculator and textbook loans, priority registration, graduation cap and gown, workshops, and more!
- The TRiO Student Success Program provides eligible students with a variety of services including trips to 4-year universities, career assessments, and peer mentoring. Students can apply for the program in [Eureka](#) or in [Del Norte](#)
- The [Veteran's Resource Center](#) supports and facilitates academic success for Active Duty Military, Veterans and Dependents attending CR through relational advising, mentorship, transitional assistance, and coordination of military and Veteran-specific resources.
- Klamath-Trinity students can contact the CR KT Office for specific information about student support services at 530-625-4821