Syllabus for Physical Geology with Lab (GEOL-1)

THIS IS A HYBRID COURSE with online lecture and face to face lab

Spring 2023
GEOL-1-V4578, 4.0 units (3.0 lecture, 1.0 lab)
David Bazard, Ph.D.
Online lecture. Face to Face Lab: Tuesday 10:00AM - 01:10PM (Humanities Bldg: HU-125)

Instructor Contact Information

Office location: HU108I, Hours: T 1:10pm-2:00 pm (in office or lab classroom) and online messaging
Phone number: 707-476-4224
Canvas Messaging preferred. Non-class communication (email): 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***, Seventh Edition (Marshak; published by W.W. Norton), ISBN: 978-0393882728. 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 7th Ed. throughout the course.

Course/Lab Packet: This is for sale through the bookstore ($18.50). I'll also be posting a version of this on Canvas. 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)*

***Note:** Weeks for the online course begin on Saturday and continue through the following Friday.*

Week	**Online** ***Readings, PowerPoint Slides, and Lecture Video***	**Lab** ***Face to Face Lab Sessions***
1 (Jan 14)	***Introduction, Scientific Methods, Earth's Interior*** Prelude: p. 3-11, Chap 1: p. 24-31, 36-41 Chap 8 (p. 257-259 only), Interlude D (p. 291-297) Course packet: p. 2-*8* • Scientific Method, Seismic Waves, Plate Tectonics, Part I ***Online Quiz due Friday: Science, Earth Interior***	• Scientific Method. • Seismic Waves, • Plate Tectonics, Part I
2 (Jan 21))	***Plate Tectonics*** Chap 2: 45-83 Course packet: p. 8-19 ***Online Quiz due Friday: Plate Tectonics***	• Plate Tectonics, Part II • Minerals Lab – Part I (time permitting)
3 (Jan 28)	***Introduction to Minerals.*** Chapter 3. Course Packet: p. 22-32 ***Prepare for Test 1:*** Study Guide (Course Packet) Review: Readings, Class/Lab Activities, Quizzes. *Course Packet p. 20-21.* ***Online Quiz due Friday: Minerals***	Field Trip – Outside meeting (about 10 miles from campus)
4 (Feb 4)	***Minerals Lesson*** Chap. 3: 85-100 Course packet p. 22-32 ***Test 1 (online timed test, due end of the week)***	• Minerals Lab – Part II Packet p. 22-32 • **Review for Mineral Lab Quiz** Packet p. 33
5 (Feb 11)	***Igneous Rocks*** Interlude A: p. 107-112 Chap. 4: 115-137 Course packet: 34-43 ***Online Quiz due Friday: Igneous Rocks***	• Igneous Rocks Lab Packet p. 34-43 **Minerals Lab Quiz**
6 (Feb 18)	***Volcanism*** Chap 5: 139-167 Course Packet p. 45-50 Review of Igneous Rocks for Lab Quiz (p. 44; online photos) ***Online Quiz due Friday: Volcanism***	• Sedimentary Rock Lab, Part I (packet p. 53-61) • **Review for Igneous Rock Lab Quiz.** Packet p. 44.

7 (Feb 25)	***Preparing for Test 2:*** Online Study Guide Questions, Review Activities and Quizzes. *Course Packet p. 51-52.* ***Sedimentary Rocks*** Interlude B: p. 173-179 Chapter 6: p. 189-215 ***Online Quiz due Friday: Sedimentary***	• Sedimentary Rocks Lab – Part II (packet p. 60-64) **Igneous Rock Quiz**
8 (Mar 4)	***Weathering and Sedimentary Rocks*** Weathering portion of Interlude B: p. 173-179 Chapter 6: p. 189-213 ***Test 2 (online and timed) – due end of the week.***	**Field Trip** (for each lab): Sedimentary Rocks
Spring Break March 11-18		
9 (Mar 19)	***Metamorphic Rocks*** Chap 7: 217-235 Interlude C – The Rock Cycle: p. 239-244 ***Online Quiz due Friday: Metamorphism***	• Metamorphic Rock Lab Packet p. 65-74 • Sedimentary and Metamorphic Rock Review Packet p. 75-76 • **Review of Sedimentary and Metamorphic Rocks for Quiz** Course Packet: p. 75-76
10 (Mar 25	***Deformation of Rocks (Part I)*** Chap 9: p. 305-331 Course packet 81-97 ***Online Quiz due Friday: Rock Deformation***	• Rock Deformation Packet: p. 81-88 **Metamorphic and Sedimentary Rock Quiz.**
11 (Apr 1)	***Deformation of Rocks (Part II)*** Chap 9 and Course Packet 81-88 ***Preparing for Test 3*** Online Study Guide Questions, Class/Lab, Activities, Quizzes. Course Packet: 89-91.	• Rock Deformation Part II. • Geologic Maps • Topographic Maps
12 (Apr 8)	***Moonstone Project*** Project Details and Requirements ***Test 3 (Online and timed) – due end of the week***	• Topographic Maps Continued • Prepare for Saturday Field Trip. Packet: p. 77-80
13 (Apr15)	***Geologic Time*** Chapter 10: p. 349-371 ***Course Packet: 92-100*** ***Online Quiz due Friday: Geologic Time***	**Saturday April 15 Field Trip** (Moonstone Beach): 1pm to 3 pm. • Moonstone Project Work – • Geologic Time Lab, Part I Packet p. 92-100

14 (Apr 22)	***Landforms: Mass Movement and Rivers*** Interlude F: p. 441-444 Chapter 13: p.453-473 Chapter 14: p. 475-497 Course Packet: 101-109 ***Online Quiz due Friday: Landforms***	• Geologic Time Lab Continued • Moonstone Project Work • Maps and Landform Lab (Packet p. 101-109)
15 (Apr 29)	***Continue with Landforms:*** ***Prepare for Final Exam: Course Packet 110-112***	***Moonstone Project Due on Lab Day*** • Geologic Maps and Landforms • ***Campus Field Trip***
16 (May 6)	***Final Test (during Finals Week)***	

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 the corresponding lecture videos (usually one or two 15-minute videos), 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 watch the lecture videos and read the text material. I strongly suggest you schedule an uninterrupted period of time to watch the videos. I expect you to take advantage of the time and resources you have to complete the weekly quizzes and other online assignments. Attend each lab 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 and Activities: Online quizzes and online questions (through Canvas) will be assigned during non-test weeks. These questions are related to the assigned readings and the PowerPoint lectures.

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 and other questions and lab activities.** They cover the material presented in the online lectures and, sometimes, lab. A study guide for each test will be provided through the course packet and Canvas. The tests are open book and internet resources are allowed, but they are timed and responses must be your own work. Students who study the activity and quiz questions typically do well on the tests.

Advice about the video lectures and readings:

1. Take a quick look through the entire section being assigned and focus on the figures and captions. Read through the Chapter Summary section
2. Watch the PowerPoint lecture corresponding to the assigned chapter.
3. Then carefully read through the entire section. Make sure you have an undistracted period (hour) to read through the section.
4. Reread and rewatch any sections that require clarification. Ask me about these is lab.
5. Message me with questions (or ask in lab) 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 Online Activity Questions: 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%

Letter grades for the course are assigned based on the percentage of the total:
A: 100%–91%;
A-: <91% - 89.5%
B+: <89.5% - 88%;
B: <88% - 81%;
B-: <81%-79.5%
C+: <79.5% - 78%;
C: <78% - 69%
D: <69%-60%;
F: <60%
The college does not allow for grades of A+, C-, D+, or D-
I reserve the right to change the exact point value of an assignment and the "cutoffs" for grades.

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 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 three lab sessions, or not participating in two weeks of online activities as excessive absences. School policy allows me to drop a student who has excessive absences as defined in the course syllabus. Please contact me if a situation arises where you need to miss class.

Admissions deadlines Dates for Spring 2023 admission deadlines can be found at the following calendar:
https://www.redwoods.edu/Portals/0/_Academics/2022%20-2023%20Academic%20Calendar.pdf

- Classes begin: 1/14/23 (Saturday for online)
- Martin Luther King, Jr.'s Birthday (all campus holiday): 1/16/23
- Last day to add a class: 1/27/23 (with instructor approval)
- Last day to drop without a W and receive a refund: 1/27/23
- Census date: 1/30/23 or 20% into class duration
- Spring break (no classes): 3/13/23-3/18/23
- Last day for student-initiated W (no refund): 3/31/23
- Last day for faculty-initiated W (no refund): 3/31/23
- Final examinations: 5/6/23-5/12/23

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