

Goals. This class is mostly populated with civil, petroleum, architectural, environmental and mechanical engineers. A civil or architectural engineer needs to know about the strength and deformation of bedrock and soil that structures are built upon. A petroleum engineer needs to know about rock types, their strengths, and porosity/permeability. An environmental engineer needs to know about groundwater flow and how natural disasters (e.g., floods, earthquakes, volcanoes) affect human structures. This class will teach the basics of geology assuming no prior geologic coursework. After a brief introduction to Plate Tectonics, the first half of the class will be about how sedimentary, igneous, and metamorphic rocks are created along with their corresponding strength and fracture properties. Given the primary importance of rock identification, the first 4 labs are on mineral and rock identification. The second half of this class studies how earthquakes, river processes, weathering and erosion, land subsidence, and groundwater flow affect engineering concerns.

Lectures. MWF 1:10-2:00 pm in Agriculture Bldg 1032. **The slide decks shown in lectures are found in the Modules tab.**

Office hours. Dr. Dueker, ESB 2024, 2-4 pm Monday. TA teaching labs: Kayleigh Wilson, ESB 2006, 12-2 pm Wednesday.

Labs. All 3 labs are on Thursday with GEOL-1100-22 at 10:10 - 12:00; GEOL-1100-20 at 1:10-3:00 and GEOL-1100-21 at 3:10-5:00 pm. **Do not sign up for the GEOL-1100 10-18 lab sections that are ONLY for the non-engineering Physical Geology.** There is no lab on the first and last week of the semester.

Lab manual. The first seven labs will use a manual written for this class: Campbell-Stone, E.A., *Physical Geology Lab Manual*. It is available at the bookstore for under \$10. If the manuals are sold out, alert the bookstore and it should be available within 1 day.

Texting device, laptop, and tablet policy. Research shows that using gadgets in class significantly degrades learning and it distracts your classmates. Therefore, no use is permitted in lecture or lab classes; if an emergency exists that requires use of phone, please step outside the class.

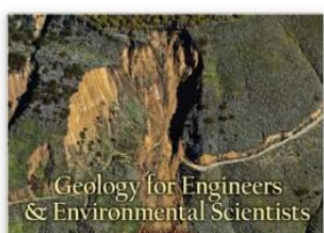
Texting/Email communication method with TA and teacher. Use the WyoCourse email facility as it has advantages for both you and your teachers. At our WyoCourses site, the Inbox button is at the left sidebar of the webpage.

Late work policy. Late work will not be accepted without a valid university excuse.

WyoCourse apps. Search for Canvas in the Android/iOS application stores and you will find tablet/phone applications. Canvas is what the software that runs WyoCourse is called.

Khan Academy plate tectonic video lectures. [Link](https://www.khanacademy.org/science/cosmology-and-astronomy/earth-history-topic) [↗](https://www.khanacademy.org/science/cosmology-and-astronomy/earth-history-topic) **(https://www.khanacademy.org/science/cosmology-and-astronomy/earth-history-topic)**

Textbook. Availability at: 1) UW bookstore; 2) Buy New/Used copy online 3) Online rentals. **Amazon Link** [↗](http://www.amazon.com/Geology-Engineers-Environmental-Scientists-3rd/dp/0131457306/ref=sr_1_1?ie=UTF8&qid=1416517961&sr=8-1&keywords=kehew)
(http://www.amazon.com/Geology-Engineers-Environmental-Scientists-3rd/dp/0131457306/ref=sr_1_1?ie=UTF8&qid=1416517961&sr=8-1&keywords=kehew)



Geology for Engineers and Environmental Scientists (3rd Edition) Paperback – January 21, 2006

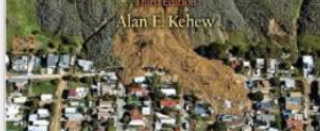
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Assignment type, grade percentages and submission method

Assignment type	Grade %	Submission method	Details
Tests	50%	In-class hardcopy	Two in-class tests that are 15% each and a final that is 20%.
Labs	20%	WyoCourse PDF upload	Hardcopy labs: rock identification, rock and soil strength, four sphere cycles, rivers, geologic time. PDF uploads done within Assignments tab.
Chapter homeworks	15%	WyoCourse PDF upload	HW's are 8-18 questions from end of chapters done on paper and uploaded as PDF file within the Assignments tab.
Chapter quizzes	10%	WyoCourse Quiz Facility	Taken at website Quizzes tab. Quizzes are 10-18 questions to prepare for tests. Quizzes are scheduled generally late afternoon on weekdays.
Attendance	5%	WyoCourse Facility	Taken randomly during the course about once every week

- **WyoCourse PDF file upload** is done by clicking on a assignment in the Assignments tab and clicking on the submit assignment button. This requires students to take pictures with camera/phone of assignment that was done on paper and make a PDF file; this PDF file is uploaded before midnight on assignment due date. To make PDF file from camera images: 1) Use free online PDF makers; 2) Use Google; 3) Use [UW computer lab \(http://microlab.uwyo.edu/alllabs.asp\)](http://microlab.uwyo.edu/alllabs.asp) that have [scanners \(http://microlab.uwyo.edu/labs/hardware.asp\)](http://microlab.uwyo.edu/labs/hardware.asp) and [Acrobat Professional \(http://microlab.uwyo.edu/Labs/software.asp\)](http://microlab.uwyo.edu/Labs/software.asp). To reiterate, all uploads must be PDF format files, not docx, or jpeg, or png/etc as we cannot add annotations to these formats.
- The website records upload time to a one minute precision. So, if an assignment was due at midnight and you submitted sometime after midnight, the work would be scored as late (20% penalty first day late).

Grade calculation. Your grade is the sum of your total points for each assignment type group - tests, labs, homework, quizzes, and attendance - weighted by the percentages shown in the table above and at the assignment and grades tabs on our website. The grade sheet always shows your current total grade. The standard grade scale is used: A (100-90), B (89.99-80), C (79.99-70), D (69.99-60), F (<59.99).

Grading methods and answer keys.

- The 3 tests are done on blue bubble sheets. The answer key is provided after the test.
- The on-line quizzes are auto-graded by the website. The answers are provided after the quizzes.
- The uploaded PDF lab uploads are graded online with scoring and comments annotated upon them for you to see.

- The in-class Lab quizzes are scored by hand and handed back the following lab.
- The uploaded PDF Homeworks are graded online with scoring and comments annotated upon them for you to see.
- After grading is done, answer keys for the Homeworks and Labs are provided on the website for you to see.

Tests. *Tests must be taken on the scheduled date.* Make-up exams will be given only to students with an official University excuse. Laboratory exercises must be turned in on the date specified to receive credit—no late assignments will be accepted without an official University excuse! Note the dates for exam schedule and final. If you cannot make those times, you need to drop the class. No electronic dictionaries. International students may ask for clarification of English terms during the test. **Students must bring an ID to the exam to verify identity when asked as some students in the past have been know to use stand-in test-takers.**

Weekly work expectations. [From UW catalog:](http://www.uwyo.edu/registrar/university_catalog/courses.html)

http://www.uwyo.edu/registrar/university_catalog/courses.html "Normally, one credit hour is earned in a course meeting one hour per week for a semester. Each credit hour unit requires an average of three hours of student effort per week". I know there are some courses that require little work to get a B. The following work schedule sums to about 5-7 hours of outside class work per week.

- 2-3 hours: Reading the assigned chapter in the textbook
- 2-3 hours: Do the 12-17 homework problems at end of each chapter on paper and upload PDF file to our website
- 1/2 hour: Take online quiz on the assigned chapter outside class during weekday
- 1/2 hours: finish lab at home and upload PDF of lab report by midnight of the following lab.

Class Reading and Lecture Outline (14 weeks; about one chapter per week)

- Chapter 1 Challenges of the 21st Century
- Chapter 2 The Earth and Its Systems
- Chapter 3 Minerals
- Chapter 4 Igneous Rocks and Processes
- Chapter 5 Sedimentary Rocks and Processes
- Chapter 6 Metamorphic Rocks and Processes
- Chapter 7 Mechanics of Earth Materials
- Chapter 8 Structural Deformation of the Earth's Crust and Earthquakes
- Chapter 9 Weathering and Erosion
- Chapter 10 Soils, Soil Hazards and Land Subsidence
- Chapter 11 Ground Water
- Chapter 12 Subsurface Contamination and Remediation SKIP
- Chapter 13 Mass Movement and Slope Stability SKIP
- Chapter 14 Rivers
- Chapter 15 Oceans and Coasts SKIP
- Chapter 16 Glaciers, Permafrost, and Deserts SKIP

Lab Exercises and Lab Quizzes

There are 12 labs and 10 lab quizzes comprise 20% of your total grade. Completed labs are uploaded as PDF files to our WyoCourse site by midnight of the day of the next lab.

week 1	no lab first week
week 2	maps
week 3	minerals
week 4	volcanoes and igneous rocks
week 5	sediment and sedimentary rocks
week 6	metamorphic rocks
week 7	Relative and absolute time
week 8	Spring Break
week 9	Rock Strength
week 10	Structure and deformation
week 11	Four spheres: geo-bio-hydro-atmospheres
week 12	Soil strength: Attenburg limits
week 13	Groundwater
week 14	no lab last week

Late work will not be accepted without a valid university excuse. The lab is graded online and you will be able to see the scoring and comments for your lab at our WyoCourse site. Quizzes will test your understanding of the previous week's lab material. There will be a short quiz at the beginning of lab every week. If you are late to lab, you may miss the quiz and will not be able to make it up. You must bring a calculator and a pencil to each lab. We will supply rulers, protractors, compasses, etc. You cannot use your phone during quizzes.

Lab Attendance. Attendance is required in lab. You cannot turn in your lab without attending—attempting to do so is considered cheating. Because all labs are at their attendance limits, you must attend the section for which you are registered. If you show up at another lab section without prior arrangement, you will be turned away.

Make-up work. If you miss a lab or quiz due to a verifiable, excused absence as determined by university regulations, or you have a verified slip from the office of student life or other valid documentation, you will be able to make up the work within one week of your return. Contact your lab instructor immediately if you miss a lab. If you show up to lab and tell the instructor that you missed the previous week's lab, you will not be able to make up to lab or quiz because the 1 week will have already expired. If you have a pre-scheduled university-excused absence, you must contact the TA 1 week or more before the scheduled absence. If you wait to contact the TA until the week after the missed lab, you will not be eligible to make up the lab or quiz. No unexcused late work will be accepted. All labs and make-up work must be turned in by the last day of classes at noon, without exception.

Other material

Dr. Dueker's research: [Dept \(http://www.uwyo.edu/geolgeophys/faculty/dueker.html\)](http://www.uwyo.edu/geolgeophys/faculty/dueker.html) [Personal Website](http://www.uwyo.edu/geolgeophys/faculty/dueker.html)

[\(http://geofaculty.uwyo.edu/dueker/\)](http://geofaculty.uwyo.edu/dueker/)

Students Think They Can Multitask. Here's Proof They Can't [Link](http://www.biz.colostate.edu/mti/tips/pages/Students-Think-They-Can-Multitask---Here%27s-Proof-They-Can%27t.aspx)

[\(http://www.biz.colostate.edu/mti/tips/pages/Students-Think-They-Can-Multitask---Here%27s-Proof-They-Can%27t.aspx\)](http://www.biz.colostate.edu/mti/tips/pages/Students-Think-They-Can-Multitask---Here%27s-Proof-They-Can%27t.aspx)

See this article if you think you are not good at math: [Link \(http://qz.com/139453/theres-one-key-difference-between-kids-who-excel-at-math-and-those-who-dont/\)](http://qz.com/139453/theres-one-key-difference-between-kids-who-excel-at-math-and-those-who-dont/)

History of World made by a high school student [Link](http://marcbrecy.perso.neuf.fr/history.html)

[\(http://marcbrecy.perso.neuf.fr/history.html\)](http://marcbrecy.perso.neuf.fr/history.html)

WyoCourse website information

WyoCourse (<http://www.uwyo.edu/wyocourses/>) run off Amazon cloud: [Student Guides](http://guides.instructure.com/m/4212)

[\(http://guides.instructure.com/m/4212\)](http://guides.instructure.com/m/4212) [_\(http://guides.instructure.com/m/4212\) setup](http://guides.instructure.com/m/4212)

WyoCourse to text you (<http://guides.instructure.com/m/4212/l/41960-how-do-i-add-my-cell-phone-number-to-canvas-to-receive-texts>)

Student ePortfolio: [_\(http://guides.instructure.com/s/2204/m/4212/l/42001-what-is-an-eportfolio\)](http://guides.instructure.com/s/2204/m/4212/l/42001-what-is-an-eportfolio) **Compile your coursework into online portfolio** [Link \(http://guides.instructure.com/s/2204/m/4212/l/42001-what-is-an-eportfolio\)](http://guides.instructure.com/s/2204/m/4212/l/42001-what-is-an-eportfolio)

How to add your picture to WyoCourse (required): [Link](http://guides.instructure.com/m/4152/l/41467-how-do-i-add-a-profile-picture)

[\(http://guides.instructure.com/m/4152/l/41467-how-do-i-add-a-profile-picture\)](http://guides.instructure.com/m/4152/l/41467-how-do-i-add-a-profile-picture)

How to upload an online assignment to WyoCourse (required): [Link](http://guides.instructure.com/s/2204/m/4212/l/41972-how-do-i-submit-an-online-assignment)

[\(http://guides.instructure.com/s/2204/m/4212/l/41972-how-do-i-submit-an-online-assignment\)](http://guides.instructure.com/s/2204/m/4212/l/41972-how-do-i-submit-an-online-assignment)

Academic dishonesty and examples of this

Academic dishonesty is defined by UW regulation 802, revision 2, as “an act attempted or performed which misrepresents one’s involvement in an academic task in any way, or permits another student to misrepresent the latter’s involvement in an academic task by assisting the misrepresentation.” This includes but is not limited to 1) copying lab answers from a previous semester or different lab section and turning the work in as your own; 2) copying answers to a quiz from another student; 3) discussing quiz content with a student in another lab section. Plagiarism and cheating are not tolerated, and there is a university procedure to judge such cases.


- Looking at another student's exam during testing
- Copying another student's lab
- Copying another student's homework
- Asking another student for questions/answer to online quizzes.

- Using a cell phone, tablet, laptop during test.
- Looking at any written material during test.
- Writing material on your hand to use during a test.

Student Support Services

In case of an accident or anything that prevents you from attending class for an extended period, contact the Office of Student Life (307)766-3296, [dos@uwyo.edu \(mailto:dos@uwyo.edu\)](mailto:dos@uwyo.edu). For free counseling, contact the University Counseling Center (307)766-2187, [uccstaff@uwyo.edu \(mailto:uccstaff@uwyo.edu\)](mailto:uccstaff@uwyo.edu). For disability support, the University Disability Support Services can be reached at (307)766-6189, [udss@uwyo.edu \(mailto:udss@uwyo.edu\)](mailto:udss@uwyo.edu). The UW Veterans Services Center can be reached at (307)766-6908, [uw-vets@uwyo.edu \(mailto:uw-vets@uwyo.edu\)](mailto:uw-vets@uwyo.edu).



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