Introduction to Geology: Geology 1010 (-150, -151, -153)
Prof. Karen Kortz

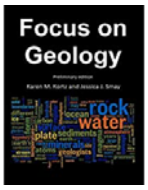
Course information: 4-credit, lab science course (lecture 3 hours, lab 2 hours)
Lecture: MW 8:30-9:45 or 10:00-11:15, room 2535
Lab: M 11:30-1:30 or W 11:30-1:30 or W 1:30-3:30, all in room 2537

Contact the instructor: email: kkortz@ccri.edu (preferred—I will respond within 1 school day)
office phone: 333-7443
office: room 1374 (1st floor faculty office area)
office hours: M 7:00-8:30a, 1:30-4:30p, W 7:00-8:30a

Course description: This course investigates the planet Earth, explaining the geologic events and features through plate tectonics. Major topics included are the study of minerals and rocks; volcanoes; earthquakes; weathering and erosion; streams and floods; and groundwater.

Student learning outcomes: By the end of this course, you will be able to…
- Think critically about fundamental concepts in geology
- Explain people's influence on Earth and Earth's influence on people
- Communicate geologic concepts effectively

Required text:
- Order on Amazon or buy from the bookstore: Focus on Geology, preliminary edition by Kortz and Smay (ISBN 1732629609)
- Buy from the bookstore: Lecture Tutorials for Introductory Geoscience, 2e by Kortz and Smay (ISBN 1464101051)
- Access to the CLASS for learning website (free, see below)



Grade breakdown:

Assignment	Number of points	Approx. %
One-hour exams	3 exams x 100 points each	37%
Online quizzes	13 quizzes x 10 points each	16%
Labs	10 labs x 20 points each	25%
Final project	40 points	5%
Homework	65 points	8%
Class participation	75 points	9%

*Grading Scale**:

		93-100%	A	90-92%	A-
87-89%	B+	83-86%	B	80-82%	B-
77-79%	C+	70-76%	C		
67-69%	D+	60-66%	D	below 60%	F

*PLEASE NOTE: You need a 50% average on the three exams to pass the class. This means that if your average grade for the class is 60% or above but your average for the exams is lower than 50%, you will fail the class. Be sure to put time and effort into the exams!

You are responsible for following the policies in the College Catalog (http://www.ccri.edu/catalog/) and Student Handbook (http://www.ccri.edu/advising/student_services/handbook.html).

Any student with a documented disability may arrange reasonable accommodations. As part of this process, students are encouraged to contact the office of Disability Services for Students as early in the semester as possible (http://www.ccri.edu/dss/index.shtml).

Exams

There will be 3 one-hour hour exams covering material from lectures, labs, reading, and homework, although they will focus on the lecture and lab material. This is one reason why attendance to each class is very important! Exams will consist of short answer and multiple choice questions. The exams will focus on testing how well you understand the material, not how well you can memorize facts.

There will be NO MAKE-UP EXAMS. Please talk to me if you missed an exam for extenuating circumstances. To pass the class with a D or higher, you need to average at least 50% on the three hour-exams.

Online Quizzes

There will be 13 online quizzes on the CLASS website to be completed outside of class time throughout the semester as indicated on the schedule. These quizzes are based on the lectures, reading, videos, and labs. The learning objectives for each quiz and the source of that information are given in a separate handout ("Learning Objectives and Quizzes"). These quizzes will help you in a few ways: They help you know whether or not you understand the information from class, they help you study for exams, they help you understand how confident you are in the material, and they help you learn what to expect on exams.

To access the quizzes on the CLASS for learning website, please visit: http://www.classforlearning.com. Begin by setting up your account:

- Go to www.classforlearning.com and sign up. Use your CCRI email address.
- After you complete the sign up process, you will be sent an email with a link to activate your account and log into CLASS.
- Enter your email and password and you're in!
- We will add quizzes for new topics as we get to them in class. For example, Quiz "A: Geology, Layers, and Rocks" should be available for you to see when you log in. If you want to take a quiz, click "Take a Quiz" from the left-hand menu and you will see quizzes shared with you. Click the blue "Take" button and follow the prompts to get started! If you have problems, a possibility is that you may need to use another internet browser.

You will earn 1 point for each question you answer correctly on each quiz. You may take each quiz unlimited times, and your highest score will be used to calculate your grade. In addition, if you complete any 5 quizzes in the week before each due date, you will receive 3 bonus points per week. The questions asked on each quiz are randomly selected from a pool of questions, so you will be asked different questions each time you take the quiz. You may work together when completing quizzes, but another student cannot do the work for you.

I recommend taking the quiz soon after lecture and well before the due date while the material is still fresh in your head. Research shows that taking the quiz shortly after learning the material will help you better remember the information (which will make studying for the exam easier!). You also learn better if you space out your learning and don't cram. In addition, if you wait until the day they are due, and for some reason you cannot submit the quiz, then you will not get credit for the quiz, even if it is due to circumstances out of your control (such as a computer that crashes, someone sick, etc).

Lab

Lab exercises are an important part of this geology class. You will investigate concepts in more detail than what we cover in lecture. You will work together in groups in the labs, but you must write down your own answers and not copy off of other members of the group and write the exact same answers. If I determine that this has been done, I will give a zero.

Lab exercises will be due at the end of each lab. It is very important that you attend every lab and that you show up on time. You will lose points on your lab if you show up late. Lab cannot be made up unless you talk to me beforehand, and, even then, many labs cannot be made up. In some cases, you may be able to join another lab section for a week.

Final Poster

There will be a final project due in lab near the end of the semester. This project will require you to create a mini-poster that displays one of your homework or lab assignments. More information about the project will be given at a later date.

Homework

The due dates for each homework are indicated on the schedule. These homeworks will need to be submitted as directed (either typed or submitted online). Three of the assignments will be due one week before each exam (HW 1, 2, and 5), and the grade on those homeworks will count as part of your exam grade. The other homeworks will count towards your homework grade. These other homeworks include two longer homeworks (as indicated on the schedule) and a few shorter questionnaires. Late assignments will only be accepted as indicated.

Class Participation

Research shows that listening to lecture is not the best way for most students to learn. Therefore, to break lecture up and to make the class more interactive, there will be many short assignments done during class time. This allows you to participate in your own learning, since, ultimately, it is your decision on whether or not you want to learn.

Some examples of activities we will do during class are completing Lecture Tutorials (from the workbook) and answering clicker questions, where everyone votes anonymously to a question I ask during lecture. Both of these techniques are useful for many reasons. They allow you to see what material you understand and what you don't, they let me see if the class needs extra explanation about a topic, they help you think about your learning, they help you learn what types of questions might be on the exam, and they allow you to talk to other students in the class, teaching them and learning from them.

As a result, class attendance is very important! You can not participate if you are not there. You are allowed to miss only 3 classes without penalty. After three have been missed, 5 points will be taken away from class participation for each class missed.

Extra Credit

I will give 2 extra credit points, with a maximum of 14 points, for each recent article related to geology (from a newspaper, online, etc.) brought to me. This extra credit will be added to your quiz grade. Some example places online to look for articles are: Earth Magazine (www.earthmagazine.org) and Live Science (www.livescience.com especially Planet Earth and Space).

There will be no individual extra credit assignments, so be sure to do the work for the class when it is assigned. However, on occasion, I may assign an extra credit assignment to the entire class.

Advice from Previous Students to Help You Succeed

(in no particular order)

- Make sure to take the online quizzes more than once since questions on the exams relate to the online quizzes
- Start studying for exams right after your class ends because the material will be fresh in your head and it will only benefit you and your memory in the long run
- Make sure to read the chapters in the book because it gives you even more information than what you have in your notes.
- Stay organized! Keep all Lecture Tutorials and labs.
- Pay attention in class and take good notes. Things that are on the exam are taught in class in a way that you will understand.
- Do the quizzes until you feel like you mastered the material. The quizzes are a great study tool.
- Try to find an interest in the material and make it fun. I found this class very interesting mostly because I can relate it to things I see and hear in the news.
- Follow the exam outline given in class as a way to organize your notes to prepare your notes for studying and to make sure you are not missing material.
- Study over time and don't wait till the last minute. The more you go over your material and notes, it will make it easier to absorb, making the quizzes easier
- Study ahead of time and do not wait until the last minute. With all the sections covered on the exams, there is way too much to memorize last minute. Study little by little and the material will eventually make sense.
- Take the online quizzes to help you know what you already know and what you need to work on. Plus, you can take them a few times, so take one, study, see results, take another, study, see results…
- Draw diagrams since pictures make information easier to understand and help you remember things easier as opposed to just remembering text.
- Know your terms and how to apply them. Memorizing won't get you very far in this class. You need understanding.
- Do the handouts even if they're not collected.
- Come everyday, you cannot afford to miss a class
- Do the reading. I found it helpful to be prepared for class.
- Study your notes and focus on having an understanding of how everything works
- Pay close attention; do all in-class assignments because they help in thinking analytically
- It's never too early to work on your poster. You never know when your pipes might explode, so start the project ASAP.
- You'll only get out of it what you put in, and it's well worth the effort

This syllabus is subject to change at any time at the discretion of the instructor. Students are responsible for keeping current with changes made to this syllabus.

Class Schedule

Please note that the schedule is subject to change.

Date	Topic	Reading and Videos*	Due	Lab
Sept 3	**NO CLASSES**			**No lab**
Sept 5	**1** Introduction and geology	1.1-1.8 *Defining Geology*		
Sep 10	**2** Earth's layers and rocks	1.10, 2.2, 2.4-2.6, 5.1-5.2, 5.4		**#1**: Minerals 4.1-4.5, 4.7-4.9
Sep 12	**3** GPS	1.11-1.12		
Sep 17	**4** Plate tectonics overview and evidence	1.9, 3.1-3.6, 3.14-3.16 *Tectonic Plates*; *Rates of Plate Motions*	Quiz A	**#2**: GPS and Earthquakes
Sep 19	**5** Divergent and transform plate boundaries; hotspots	3.7-3.8, 312-3.13, 3.17 *Divergent Plate Boundaries*; *Transform Plate Boundaries*		
Sep 24	**6** Convergent plate boundaries	3.10-3.11, 15.4-15.5 *Convergent Plate Boundaries*	Quiz B	**#3**: Earthquakes 10.1-10.2
Sep 26	**7** Earthquakes	10.1-10.5, 10.7, 10.9 *Earthquake Hazards I: Ground Failure*		
Oct 1	**8** Earthquake destruction	10.8, 10.10-10.12	Quiz C	**#4**: Igneous Rocks 6.1-6.4 *Naming Igneous Rocks*
Oct 3	**9** Igneous rocks and magma	6.1-6.12 *Naming Igneous Rocks*	HW 1	
Oct 8	**NO CLASSES**			**No lab**
Oct 10 (=M)	**10 EXAM 1** (Lectures 1-8)		Quiz D	
Oct 15	**11** Volcanoes	6.13, 7.1-7.4 *How to Classify Volcanoes*; *What are Volcanic Hazards?*; *Magma Viscosity & Gas Content & Milkshakes*	Quiz E	**#5**: Sedimentary Rocks 8.11, 8.14-8.15 *Sedimentary Rocks*
Oct 17	**12** Plate tectonics and Mt. St. Helens	7.5-7.11		

*Videos are titles in the "Geoscience Videos" series on Youtube. More information and self-quizzes can be found here: *https://geosciencevideos.wordpress.com/*

Oct 22	**13** Sediments and sedimentary rocks	8.1-8.4, 8.7-8.15 *Sedimentary Rocks*	Quiz F	**#6**: Metamorphic Rocks 5.3, 9.1-9.7 *Metamorphic Rocks*
Oct 24	**14** Landslides	16.4-16.6		
Oct 29	**15** Landslide destruction	16.7	Quiz G	**#7**: GPS and Glaciers
Oct 31	**16** Greenhouse effect and climate change	12.1-12.17 *Climate Change Evidence*		
Nov 5 (GSA)	**17** Finish Lab 7 if necessary		Quiz H	**No lab**
Nov 7 (GSA)	**18** Exam study activity		HW 2	
Nov 12	**NO CLASSES**			**No lab**
Nov 14	**19 EXAM 2** (Lectures 9-15)			
Nov 19	**20** Coasts	15.6-15.10	Quiz I	**#8**: Cratering *The Scientific Process*
Nov 21	**21** Streams	13.1-13.6 *Streamflow*		
Nov 26	**22** Floods	13.7-13.10	Quiz J	**#9**: Groundwater 14.7, 14.10
Nov 28	**23** Groundwater	14.1-14.09 *Where is the Water Table?*; *What is an Aquifer?*; *Porosity and Permeability*	HW 3	
Dec 3	**24** Groundwater contamination	14.10	Quiz K	**#10**: GPS and Groundwater
Dec 5	**25** Glaciers	16.8-16.12 *Ice Ages and Climate Cycles*; *Classifying Glaciers*; *Glacial Landforms*	HW 4	
Dec 10	**26** Resources	5.5-5.11 *Coal, Oil and Natural Gas*	Quiz L	**Final Poster**
Dec 12	**27** Planets	2.7-2.10, 16.1-16.3	HW 5	
Dec ? (finals)	**EXAM 3** (Lectures 16-27)		Quiz M	