Syllabus
Historical Geology - Geo 1220 Lecture and Geo 1225 Lab

Instructor:
Office Room:
Email:
Office Phone:
Office Hours:
Class Time:
Class Location:
Prerequisite(s): GEO 1110 and GEO 1115
Required Text: *Historical Geology: Evolution of Earth and Life Through Time,* 8th Edition, 2016 by Wicander and Monroe. A used textbook is great!! An older edition will likely work but the student is responsible for any discrepancies between editions. We will NOT need access to the publisher's website.

"You are capable of more than you know. Choose a goal that seems right for you and strive to be the best, however hard the path. Aim high. Behave honorably. Prepare to be alone at times, and to endure failure. Persist! The world needs all you can give."
— Edward O. Wilson

"Geology is the science which investigates the successive changes that have taken place in the organic and inorganic kingdoms of nature; it enquires into the causes of these changes, and the influence which they have exerted in modifying the surface and external structure of our planet."
— Sir Charles Lyell

Geo 1220 Course Description: This course presents the history of the earth through geologic time. Topics will include the formation of mountain ranges, basins, and sedimentary strata; tectonics through time; and the evolution of biota through time per the fossil record.
Geo 1220 Student Learning Outcomes (SLOs): At the end of this course a student should be able to:

- Analyze and evaluate the theories for earth's origin.
- Analyze and evaluate the model of plate tectonics.
- Interpret the origin, evolution, and features of ocean basins and continents by interpreting the origin of rocks within the context of plate tectonics.
- Identify and classify Phanerozoic fossils.
- Analyze fossil characteristics to interpret past depositional environments, paleogeography, and lithofacies/biofacies/temporal correlation.
- Describe the methods used to establish the geologic time scale such as radiometric age-dating and relative age-dating techniques.

Geo 1225 Course Description: This is the laboratory course for Geo 1220.
Geo 1225 Student Learning Outcomes (SLOs): At the end of this course a student should be able to:

- Identify basic rock types and minerals.
- Implement relative and absolute age-dating techniques.
- Interpret the origin, evolution, and features of ocean basins and continents by interpreting the origin of rocks within the context of plate tectonics.
- Identify and classify Phanerozoic fossils.
- Analyze fossil characteristics to interpret past depositional environments, paleogeography, and lithofacies/biofacies/temporal correlation.

Attendance Policy:

- Regular and prompt attendance is expected at all classes. Regular attendance and consistent study habits are necessary for success in college. Faculty members have the prerogative of lowering grades for excessive absence.
- Attendance will be taken verbally at the beginning of class.

- Attendance is required at least once during the first week of class, otherwise the student may be dropped from the class.
- You must come to class on time. Coming in late is highly disruptive.
- It is the student's responsibility to drop the class if they are no longer interested in remaining in the course.

"Rocks are records of events that took place at the time they formed. They are books. They have a different vocabulary, a different alphabet, but you learn how to read them."
- John McPhee

How to succeed in this course:

- **Attendance**: Come to every class and come on time. Treat school like work.
- **Professional behavior:** I expect students to conduct themselves in a professional manner. This means coming to class on time, being respectful of other student's questions and comments, and not talking when someone else has the floor. If you cannot respect these policies, then you may be asked to withdraw from the course and/or be dropped. Coming in late is disruptive to the other students and important announcements are covered in the first few minutes of class.
- **Textbook**: You need to have the textbook for this class. You might be able to get by with an older edition but you will be responsible for any differences between editions. A copy of this textbook is on reserve in the library.
- **Lecture Notes**: Lecture notes that are based on my PowerPoint presentation will be provided electronically on Canvas.
- **Exams**. A study guide will be provided.
- **My Weekly Expectations of You:** You should dedicate about 6 hours per week for work outside of class time. Most of your learning for this majors class will occur by doing the project activities and reading text followed by chapter quizzes. The focus of this class will be in-class hands-on activities. Mondays will be a mix of lecture and small activities. Wednesdays will be mostly lab. Be prepared to stay for the entire class period and bring your textbook since we'll be using it in class. The reading and quizzes are to keep you on track with reviewing the material in the textbook BEFORE we work on projects in class.
- Talk to your instructor at any time or during office hours about how to succeed in this course and improve study skills.

Assignments:

- **Chapter Reading and Quizzes** - Students will read the chapter for that week BEFORE I lecture on it, take notes on the chapter, and take a quiz on Canvas BEFORE we discuss the chapter in class. Some quiz questions will be vocabulary questions, simple multiple-choice questions, word-problems requiring critical thinking and analysis. Canvas is the college's electronic learning management software where the content for this class is hosted. Quiz duration is will be about 30 minutes, is open book, and you have two opportunities to complete the quiz before it is due. Remember to read the chapter and take notes on it BEFORE starting the quiz.
- **In-Class Assignments/Projects:** Be prepared to work on in-class assignments and projects that will mostly (but not all) be linked to lab activities. Having your textbook and lab materials in class will help you with these activities. So, we will use some lecture class time to work on lab materials. Some of these may be take home activities, pre-labs, or assignments due at the end of class.
- **Final Research Project:** This class has an engaging final research project that is a significant part of your final grade. You will have a choice of: 1) the Self-Guided Field Trip Investigation or 2) the Independent Research Project. Details on these projects will be provided within the first two weeks of class. For the **Self-Guided Field Trip Assignment**, a student will visit an outdoor space and such as Little Cottonwood Canyon or Antelope Island State Park and write a research paper on the Historical geology of that location based on their reading of books and papers and their own observations. For the **Independent Research Project**, a student will work closely with the professor on developing a research question, hypothesis, and method for testing that hypothesis in the field. This will include collecting soil or water samples and analyzing them in the lab or field using the research-grade equipment in our geology lab such as the XRF analyzer, water quality meters, and GPS/GIS equipment. **Students who enroll in the 3 unit Geo 2350 Field Studies course (Starting February 8 Monday at 1:00 pm) will learn how to use this equipment and conduct field studies like this. The final project for Geo 2350 is the same as the Independent Research Project for this class and will serve as the final project for both classes. More information on Geo 2350 is here: http://geologyslcc.weebly.com/field-**

studies.html. To see past years student projects, see the posters in the hall and here: http://geologyslcc.weebly.com/student-research.html

- **Laboratory Projects:** Every week we will have a lab activity that will make up the core part of both classes since this class is designed as a hands-on project based class. Activities will cover one or two weeks' worth of material. Labs will be provided mostly electronically via Canvas. Students will be expected to print them out and bring them to class unless the lab is not posted by the professor, which will happen sometimes. We will introduce and/or work on some of the lab activities in lecture class. You will turn in the lab the following week after taking it home to finish it or work on it during Open Lab which is every Monday and Wednesday from 1 – 4 pm. Each weeks' worth of lab is 10 points and makes up approximately half of your lab grade. Each week we may have one or two labs of varying length, but each week is worth 10 points, so if there are two labs in one week, each will be worth 5 points. This grade is separate from the lecture class Geo 1110. The content between the two classes is linked but grades are separate. Lab exams will require you to do the same type of work, often with identification tables, but you'll have to do the exams alone. The labs are your opportunity to practice for the exams which have a much larger impact on your grade.
- **Extra Credit:** 10 points extra credit for enrolling in Geo 2350 Field Studies – Spring Field trip to Moab and Salt Lake. More information on Geo 2350 is here: http://geologyslcc.weebly.com/field-studies.html.
- **ePortfolio:** Near the end of class you will reformat your Final Research Project into an ePortfolio page like the example here: http://geologyslcc.weebly.com/eportfolio.html

Make-up and Late Policy:

- All late assignments will have points removed. The later it is, the more you lose. You cannot make-up any exams or quizzes. The reason for missing an exam or quiz does not change this policy. If you know you are going to miss a day, talk with me about turning in an activity early.

How to Calculate Your Grade:

To determine your grade percentage, sum the total points possible and total points you received. Divide the total points you received by the total points possible and multiply the answer by 100%. For example, Bill received an 80 out of 100 points on his first test, and 10 out of 20 points for five quizzes. His total is 90 points out of 120 possible points. 90 divided by 120 = 0.75. Then, take 0.75 x 100 % = 75% a grade of "C".

Grading Scale:
90-100% A
80-89.4% B
70-79.4% C
60-69.4% D
0-59.4% E

LECTURE - Grading Scale and Distribution:

Exam 1	100 points
Exam 2	100 points
Exam 3	100 points
Quizzes (5 points each)	approx. 60 points
Final Research Project	100 points
Other in-class assignments	approx. 50 points
ePortfolio (of field report)	20 points
Total Points*	530 points

LAB - Grading Scale and Distribution:

Exam 1	100 points
Exam 2	100 points
Labs (approx. 10 points ea.)	approx. 140 points
Total Points*	340 points

*Total points are approximate, as additional assignments will likely be added during the semester. Actual points and grades will be posted on Canvas. Always check your Canvas grade and do your own calculations as Canvas grade errors can occur. More assignments generally benefit students since the exams tend to be difficult.

Approximate Lecture Schedule: Actual schedule can be tracked on Canvas

Week	Chapter and Lecture Topics (Geo 1220)	Notes	Lab (Geo 1225)
Jan 11	Introductions and Syllabus 1 – Dynamic and Evolving Earth		1 – Fundamentals Review 1: Rocks and minerals.

Jan 18	**No Class Monday – MLK Day**		2 – Fundamentals Review 2: Rocks and maps.
Jan 25	4 – Geologic Time, 5 – Rocks, Fossils, and Time		3 – Dating Methods
Feb 1	6 – Sedimentary Rocks, 7 - Evolution		4 - Stratigraphy and Correlation
Feb 8	8 – Precambrian (Hadean and Archean)	**Exam 1 (Monday)**	5– Stratigraphy and Correlation
Feb 15	**No Class Monday - President's Day**		6 – Paleogeography
Feb 22	9 – Precambrian (Proterozoic)		7 - Paleogeography
Feb 29	10 – Early Paleozoic Era Earth History		**Lab Exam 1**
Mar 7	11 – Later Paleozoic Era Earth History		8 – Fossils
Mar 14	**No Class – Spring Break**		**No Lab**
Mar 21	12 –Paleozoic Era Life (Invertebrates), 13 – Paleozoic Era Life (Vertebrates and Plants)		9 - Paleozoic Fossils
Mar 28	14 – Mesozoic Era Earth History	**Exam 2 (Monday)**	10 - Paleozoic Fossils
Apr 4	15 – Mesozoic Era Life		11 – Mesozoic Fossils
Apr 11	16- Cenozoic Era Earth History (Paleogene and Neogene [Tertiary] Periods)		12 - Geologic Map Interpretation
Apr 18	17- Cenozoic Era Earth History (Quaternary Period)		13 – Geologic Map Interpretation
Apr 25	18 – Life of the Cenozoic Era		14 - Cenozoic Fossils
May 2	**Finals Week**	**Exam 3 Monday May 2 5:30 – 8:20**	**Lab Exam 2 Wednesday May 4 5:30-8:20**

Incomplete Grade and Withdraw from Class: A grade of "I" (Incomplete) is the instructor's option and is not given except only in the most extenuating of circumstances for which there is verifiable written documentation. In order to receive an incomplete, nearly all course work must have been completed (e.g. ~75%) with a passing grade. Last day to drop this class *with refund* is September 16, last day to withdraw (*without refund)* is October 30. **It is the responsibility of the student to drop/withdraw from this class, not the instructor.**

College-Wide Learning Outcomes: The Core Themes of SLCC's Mission focuses on Access and Success, Transfer Education, Workforce Education and Community Engagement. As such, all courses and programs address one or more of the below College-Wide Learning Outcomes. Upon successful completion of any program at SLCC, students should:

- Acquire substantive knowledge in the discipline of their choice sufficient for further study, and/or demonstrate competencies required by employers to be hired and succeed in the workplace.

- Communicate effectively.
- Develop quantitative literacies necessary for their chosen field of study.
- Think Critically.
- Develop the knowledge and skills to be civically engaged, and/or to work with others in a professional and constructive manner.

SLCC Writing Center
Your assignments and discussions MUST be written with MINIMAL spelling or grammatical errors. SLCC's Writing Center is multi-functional. In addition to computers for class use, the Writing Center also offers an advising program where you have the opportunity to discuss your work with a peer tutor or faculty-writing advisor. The Writing Center advisor can help you think about your writing process by sharing impressions of your materials, offering revision strategies, discussing different ways to approach an assignment, as well as to provide an experienced reader for your work.

SLCC ePortfolio Statement
In order for SLCC students to have a place to display and chronicle projects that demonstrate discipline-specific skills, critical thinking, and collaboration, SLCC has instituted a Gen Ed ePortfolio requirement in which students display their work from General Education courses. Students taking Gen Ed courses must place significant projects from those courses on a website they create that acts as a virtual portfolio of accomplishments in each course. In this way, prospective employers, community members, and transfer institutions can easily see the best of what each student has accomplished while attending SLCC. Your ePortfolio will allow you to include your educational goals, describe your extracurricular activities, and post your resume. When you finish your time at SLCC, your ePortfolio will then be a multi-media showcase of your educational experience. Visit http://www.slcc.edu/gened/eportfolio for more details.
You may visit the ePortfolio Lab in the basement of the Taylorsville Redwood Library during business hours, and staff will help you without an appointment. Finally, questions regarding the ePortfolio can be directed to eportfolio@slcc.edu.

Americans with Disabilities Act: Students with medical, psychological, learning or other disabilities desiring accommodations or services under ADA, should contact the Disability Resource Center (DRC). The DRC determines eligibility for and authorizes the provision of these accommodations and services for the college. Please contact the DRC at the Student Center, Suite 244, Redwood Campus, 4600 So. Redwood Rd, 84123. Phone: (801) 957-4659, TTY: 957-4646, Fax: 957- 4947 or by drc@slcc.edu.

Academic Dishonesty: Absolutely NOT tolerated and includes all forms of cheating and plagiarism as outlined in the Student Code. Cheating will be dealt with as harshly as allowed by the college *on the first instance*, which includes your being failed from the class.

Although I encourage students to work together on some assignments, you must turn in your own assignments with your own answers in your own words. You are responsible for your own work. If you plagiarize an exam or assignment you will receive a grade of "F" on the material or exam and a possible "F" in the class. For field trip reports, you must take your own photos, make your own notes, and cite your references correctly.

Cheating includes:

- copying from another's test, assignment, or lab; or obtaining answers from another person during the test
- submitting work previously presented in another course, if contrary to the rules in either course
- using or consulting during an examination sources or materials not authorized by the instructor
- using a cellular phone, text messaging device, digital camera, iPod, or other electronic device
- that can convey information during an examination
- altering or interfering with grading or grading instructions
- deliberately altering or interfering with examination materials, such as lab exam setups
- sitting for an examination by a surrogate, or as a surrogate
- talking or consulting with another person (except the instructor) during an examination
- giving information to, or receiving information from, another student that provides the recipient with an undeserved advantage on an examination, such as sharing information about an exam with a student in another section, or telling a student what to expect on a alternative exam

- any other act committed by a student in the course of his or her academic work which defrauds or misrepresents, including aiding or abetting in any of the actions described above.

Plagiarism includes:

- incorporating the ideas, words, sentences, paragraphs or parts thereof, or the specific substance of another's work, without giving due credit, and representing the product as one's own work. (Note that this includes copying or using the same words as another student on a written assignment, even if you were permitted to work together on the assignment. You must write in your own words.)
- representing another's artistic, scholarly, or similar works as one's own.

Student Code of Conduct: The student is expected to follow the SLCC Student Code of Conduct found at http://www.slcc.edu/policies/docs/Student_Code_of_Conduct.pdf

Emergency Evacuation Procedures: we will leave the building immediately in case of an emergency. We will follow school guidelines at: http://www.slcc.edu/emergency-prepare/emergency-procedures.aspx

Title IX Information:

20 U.S.C.A. Section 1681 (a): TITLE IX

"No person in the United States shall, on the basis of sex, be excluded from participation in, be denied benefit of, or be subjected to discrimination under any education program or activity receiving federal funds."

Examples of violations (but not limited to):

- Sexual advances, requests for sexual favors and sexually motivated physical conduct
- Overt or subtle pressure for sexual activity
- Sexually offensive verbalization including remarks, "teasing", slurs, and innuendo
- Repeated inappropriate jokes or comments about sex or gender specific traits
- Conduct that is demeaning or derisive and occurs substantially because of one's gender
- Sexual assault
- Sexual Violence
- Gender based disparate treatment

Violations can occur in any college environment, such as (but not limited to):

- Field Trips
- Student Clubs
- Transportation
- Classrooms
- Athletics
- On Campus Events

If you have questions or concerns regarding your rights or responsibilities, or if you would like to file a Title IX complaint please contact:

Students-

[redacted]