



Geology 1403.103H3/1403.603H3

Physical Geology

Fall 2025

Tuesdays 2:00 PM – 4:50 PM, STEAM Rm 307

Instructor: Georgiana Kramer, Ph.D.
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office: STEAM, Bldg. #22, Rm. 325-26
office phone: 409-933-8931

Student hours:

Mondays: 9:30 am – 11:00 am
Tuesdays: 11:30 am – 2:00 pm
Wednesdays: 9:30 am – 11:00 am
Thursdays: 12:00 pm – 2:00 pm (virtual & by appointment)

Announcements & Communicating with Your Instructor:

Check the course page on BrightSpace/D2L daily for announcements and instructions.

ALL electronic communication with the instructor must be through your COM email. Due to FERPA restrictions, faculty cannot share any information about performance in the class through other electronic means.

Course requirements: The course uses a textbook (detailed below, lab assignments, homework, and a paper and presentation. Your assessment of the material will be through lab and lecture exams, class attendance and behavior, and assignments.

Required Textbook/Materials: You will need a printed or ebook version of the textbook:

Title: Essentials of Geology, 13th edition
Author: Frederick K Lutgens & Edward J. Tarbuck
ISBN-13: 9780134700380
Publisher: Pearson 2017

Textbooks and/or courseware will be available through VitalSource digitally. Cost of the course materials: \$81.75. The course materials will be available on the first day of class and you will be given the opportunity to opt-out of the e-book prior to the census day of the class. If you choose not to use the course materials, you will be reimbursed after census day of the class. The materials are not refundable after the census day. You will receive an email with more information about the use of the course materials closer to the start of the semester.

Course Description: Introduction to the study of the materials and processes that have modified and shaped the surface and interior of Earth over time. These processes are described by theories based on experimental data and geologic data gathered from field observations. **Prerequisite:** TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better.

Student Learner Outcome	Maps to Core Objective	Assessed via this Assignment
1. Describe how the scientific method has led to our current understanding of Earth's structure and processes.	Communication	Lecture Exam
2. Interpret the origin and distribution of minerals, rocks and geologic resources.	Critical Thinking	Lab Practical
3. Describe the theory of plate tectonics and its relationship to the formation and distribution of Earth's crustal features.	Communication	Lecture Exam
4. Quantify the rates of physical and chemical processes acting on Earth and how these processes fit into the context of geologic time.	Critical Thinking	Lecture Exam
5. Communicate how surface processes are driven by interactions among Earth's systems (e.g., the geosphere, hydrosphere, biosphere, and atmosphere).	Communication	Lecture Exam
6. Identify and describe the internal structure and dynamics of Earth.	Communication	Lecture Exam
7. Describe the interaction of humans with Earth (e.g., resource development or hazard assessment).	Communication	Lab Practical
8. Classify rocks and minerals based on chemical composition, physical properties, and origin.	Empirical and Quantitative	Lab Practical
9. Apply knowledge of topographic maps to quantify geometrical aspects of topography.	Critical Thinking	Lab Practical
10. Identify landforms on maps, diagrams, and/or photographs and explain the processes that created them.	Critical Thinking	Lab Practical
11. Differentiate the types of plate boundaries and their associated features on maps and profiles and explain the processes that occur at each type of boundary.	Critical Thinking	Lecture Exam

12. Identify basic structural features on maps, block diagrams and cross sections and infer how they were created.	Critical Thinking	Lecture Exam
13. Demonstrate the collection, analysis, and reporting of data.	Teamwork	Lab Assignment
14. Write a research-based paper.	Critical Thinking	Paper
15. Create a professional, scientific presentation and deliver oral presentation to peers.	Communication	Presentation

Determination of Course Grade/Detailed Grading Formula:

Possible points earned for assignments & tests [‡]		Total points	% of final grade
Midterm Exam	150 points	150	13.4%
Lab Exams	100 points each (4 (-1)* exams)	300	26.8%
Special Lab Assignment	100 points	100	8.9%
Critical Writing & Presentation	200 points	200	18%
Participation & Professionalism	70-100 points	70	6.3%
Comprehensive Lecture Final Exam	300 points	300	26.8%
		1120	100%

[‡] Possible points can exceed these values from extra credit questions on exams and extra credit assignments.

* Your lowest lab practical will be dropped, so not calculated in the final grade.

Grades will be calculated on a Total Points Earned / Total Points Possible system. Therefore, your grade will be based upon the total number of points that you earn on all assignments and exams in the course divided by the total points that can be earned on all assignments in the course. Your grade can be calculated at any point in the semester by the following formula:

Your Grade = (Total Points Earned / Total Points Possible) x 100

Grade Range:

A 89-100

B 77-88

C 64-76

D 50-63

F >50

FX F earned by excessive absences
(>2 *unexcused* absences)

Late Work, Make-Up, and Extra-Credit Policy: The class calendar has all the due dates for all homework, lab assignments, and exams. Late work is not accepted. Assignments that are submitted past the deadline will receive a zero. Make-up exams are allowed only for lecture exams and only under extenuating circumstances and at the instructor's discretion. THERE ARE NO MAKE-UP EXAMS FOR LAB PRACTICALS. Additional assignments and/or extra credit may be given during the semester, per the instructor's discretion.

Online & Classroom Etiquette:

Despite being online, you still need to interact with your fellow classmates. Please behave accordingly in polite society. So first and foremost, Remember the golden rule:

Treat others as you would want them to treat you.

Or if you are someone who likes to be used, ignored, talked over, and/or the only one working, then please simply be kind to your classmates.

Sleeping in Class: You are gaining nothing by coming to class and sleeping. It's rude, unprofessional, and you are making a bad impression. It is understandable that the sound of my melodious voice can sometimes have a relaxing effect, that might lull a person to nod off, especially if they did not obtain adequate sleep the night before. Regardless, you are an adult and need to act professionally. Therefore, excessive sleeping in class will negatively affect your Participation and Professionalism score.

Cell Phones: Remember that cell phones should be put away for lab. Like sleeping, using your cell phone throughout class is rude and inconsiderate to the professor and classmates. Cell phones should be placed on silent and put away while in lab. It is NOT recommended to use the internet to solve your labs, so you shouldn't need your phone.

Personal Conversations: When in lab, conversations are encouraged while completing the assigned tasks. However, if I am speaking to the class at-large, the conversations should cease. Otherwise, someone that wants or needs to hear what I am saying is not going to be able to hear me. Even though you may already know what I am discussing, the person near you may not.

Civility: All class members deserve to be treated with dignity and respect. Please ensure that your discussions with your classmates are not prejudicial. In terms of communication with the instructor, remember this is a formal classroom setting. College protocol as established

in the Student Handbook will be observed. Should you need to address the course instructor, you should utilize my title (i.e. Professor Kramer or Dr. Kramer). Moreover, email correspondence should be respectful and follow standard rules of English grammar.

Attendance Policy: You are required to attend every lab. Attendance will be taken every day and submitted to college administrators. Labs are group projects, and you are letting down your team by not attending lab. If you cannot attend class, you must email your professor as soon as you know. **More than 1 unexcused absence will result in an FX grade.**

Academic Dishonesty: I have no tolerance for cheating. Any incident of academic dishonesty will be dealt with in accordance with college policy and the Student Handbook. Academic dishonesty - such as cheating on exams - is an extremely serious offense and will result in a grade of zero on that exam and the student will be referred to the Office of Student Conduct for the appropriate disciplinary action.

Plagiarism is using someone else's words or ideas and claiming them as your own. Plagiarism is a very serious offense. Plagiarism includes paraphrasing someone else's words without giving a proper citation, copying directly from a website and pasting it into your paper, using someone else's words without quotation marks. Any assignment containing any plagiarized material will receive a grade of zero and the student will be referred to the Office of Student Conduct for the appropriate disciplinary action.

Examples of plagiarism include:

1. Submitting someone else's work with or without their knowledge.
2. Paraphrasing or copying from a source (such as the internet, or books, or journals/magazines) without proper citation.
3. Turning in a paper that was prepared through a website service.
4. PDF documents, inserted Latin characters or filled in spaces with white colored characters are considered an attempt to bypass the plagiarism checker and will be a zero!
5. Copying materials straight from source text (even if it is from the internet), providing the appropriate citation (e.g. Works Cited or Bibliography) but leaving out quotation marks or in-text citation.

Resource about ways to avoid, or check for, plagiarism: <https://www.duplichecker.com/>

Student Concerns: If you have any questions or concerns about any aspect of this course, please contact me using the contact information previously provided. If, after discussing your concern with me, you continue to have questions or concerns, please contact Sheena Abernathy, Science & Math Department Chair at sabernathy@com.edu or 409-933-8330.

Course outline: See Course Calendar

Sheet1

Week	Dates	Topic	Chapter	Lab
Week 1	08/19	Orientation	-	Lab 1: The Basics and Density
		Earth System & Formation	1	
Week 2	08/26	Plate Tectonics	2	Lab 2: Mineral Properties & Identification
		Matter & Minerals		
		+ Bowen's Reaction Series	3	
Week 3	09/02	Igneous Rocks	4	Lab 3: Plate Tectonics
Week 4	09/09	Volcanoes	5	
Lab Practical 1: Labs 1-3				
				Lab 4: Igneous Rocks & Bowen's Reaction Series Silicates
Week 5	09/16	Weathering & Soil	7	
		Sedimentary Rocks	7	
		Metamorphism &		
Week 6	09/23	Metamorphic Rocks	8	Lab 5: Earthquakes
		Earthquakes & Earth's		
		Interior	10	
Week 7	09/30	Lab Practical 2: Labs 4-5		
		Midterm Review	1-10	
Week 8	10/07	Midterm		
		Geologic Time	11	Lab 6: Sedimentary Rocks
Week 9	10/14	Deformation & Mountains	18	Lab 7: Geologic Time
		Hydrology & Stream		
		Processes	12	
				Lab 8: Identifying Surface Features from Space
Week 10	10/21	Groundwater	13	(Special Lab Assignment)
		Glaciers	15	
	10/21	Lab 8 (Special Lab Assignment) Due at 8:00pm		
Week 11	10/28	Lab Practical 3: Labs 6,7,8		
		Deserts and Winds	16	
Week 12	11/04	Shorelines & Ocean Floor	10,17	Lab 9: Metamorphic Rocks
		Planetary Science	PS	
Week 13	11/10	Geology Term Paper & Presentation Due at 8:00pm		
	11/11	Class Presentations		
Week 14	11/18	Planetary Science	PS	Lab 10: Topographic Maps
		Climate Change	20	
Week 15	11/25	Lab Practical 4: Labs 9,10		
		Comprehensive Lecture Final Exam		
Week 16	12/02	Final Exam is Tuesday, December 2 at 2:00 pm – <u>NO EXCEPTIONS</u>		

Institutional Policies and Guidelines

Grade Appeal Process: Concerns about the accuracy of grades should first be discussed with the instructor. A request for a change of grade is a formal request and must be made within six months of the grade assignment. Directions for filing an appeal can be found in the student handbook <https://www.com.edu/student-services/student-handbook.html>. An appeal will not be considered because of general dissatisfaction with a grade, penalty, or outcome of a course. Disagreement with the instructor's professional judgment of the quality of the student's work and performance is also not an admissible basis for a grade appeal.

Academic Success & Support Services: College of the Mainland is committed to providing students the necessary support and tools for success in their college careers. Support is offered through our Tutoring Services, Library, Counseling, and through Student Services. Please discuss any concerns with your faculty or an advisor.

ADA Statement: Any student with a documented disability needing academic accommodation is requested to contact:

Kimberly Lachney, Student Accessibility Services Coordinator

Phone: 409-933-8919

Email: AccessibilityServices@com.edu

Location: COM Doyle Family Administration Building, Student Success Center

Textbook Purchasing Statement: A student attending College of the Mainland is not under any obligation to purchase a textbook from the college-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

Withdrawal Policy: Students may withdraw from this course for any reason prior to the last eligible day for a "W" grade. Before withdrawing students should speak with the instructor and consult an advisor. Students are permitted to withdraw only six times during their college career by state law. The last date to withdraw from the 1st 8-week session is October 1. The last date to withdraw from the 16-week session is November 14. The last date to withdraw for the 2nd 8-week session is November 25.

FN Grading: The FN grade is issued in cases of failure due to a lack of attendance, as determined by the instructor. The FN grade may be issued for cases in which the student ceases or fails to attend class, submit assignments, or participate in required capacities, and for which the student has failed to withdraw. The issuing of the FN grade is at the discretion of the instructor. The last date of attendance should be documented for submission of an FN grade.

Early Alert Program: The Student Success Center at College of the Mainland has implemented an Early Alert Program because student success and retention are very important to us. I have

been asked to refer students to the program throughout the semester if they are having difficulty completing assignments or have poor attendance. If you are referred to the Early Alert Program you will be contacted by someone in the Student Success Center who will schedule a meeting with you to see what assistance they can offer in order for you to meet your academic goals.

Resources to Help with Stress:

If you are experiencing stress or anxiety about your daily living needs including food, housing or just feel you could benefit from free resources to help you through a difficult time, please click here <https://www.com.edu/community-resource-center/>. College of the Mainland has partnered with free community resources to help you stay on track with your schoolwork, by addressing life issues that get in the way of doing your best in school. All services are private and confidential. You may also contact the Dean of Students office at deanofstudents@com.edu or communityresources@com.edu.

Nondiscrimination Statement:

The College District prohibits discrimination, including harassment, against any individual on the basis of race, color, religion, national origin, age, veteran status, disability, sex, sexual orientation, gender (including gender identity and gender expression), or any other basis prohibited by law. Retaliation against anyone involved in the complaint process is a violation of College District policy.