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GEO 101N.01: Introduction to Physical Geology

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Introduction to Physical Geology (GEO 101N, 3 credits) Fall, 2018

Instructor: Dr. Jim Sears
email: james.sears@umontana.edu

Office: CHCB 362
Phone: (406)243-5251

Class Meetings: *MWF from 11:00 AM - 11:50 AM, CHCB 131*

Office Hours: *Monday and Friday 12-1 PM or by appointment. Please do not hesitate to contact me to arrange to meet at another time.*

Course Description: *This course is an introduction to geosciences; the study of how Earth works. Humans around the world are impacted every day by interaction with our planet, including geologic hazards and access to natural resources. This course will help you to develop your understanding of both the physical processes that have gone into making the Earth what it is today, and an awareness of how Montana fits into the global picture.*

Course Objectives: *After completing this course, you will be able to:*

- describe, analyze, and assess the geologic features, events, and processes that impact your life
- use evidence (e.g., from graphs, rocks, maps, etc.) to support an interpretation or explain a concept
- understand the general principles associated with the discipline of geosciences including:
 - 1) Geoscientists use repeatable observations and testable ideas to explain and understand our planet
 - 2) Earth is 4.6 billion years old and has a complex and varied history
 - 3) Earth is a complex system of interacting rock, water, air, and life
 - 4) Earth is continuously changing, primarily due to active plate tectonics and erosion
 - 5) Humans depend on Earth for resources that are formed by geologic processes
 - 6) Natural hazards pose risks to humans and must be understood in order to minimize and mitigate risks
 - 7) Geologic processes have impacted the development of human civilization and the actions of humans can significantly impact the Earth

Required materials:

GEO 101N is included in the bookstore's Inclusive Access Program. This program grants you access to your required course materials by the first day of class at the discounted rate the bookstore has negotiated on your behalf. Your student account has already been charged this discounted rate. If for any reason you decide to purchase your materials elsewhere you can opt-out of this program by the add/drop deadline and will receive a refund to your student account.

For any questions about billing please contact Jon Aliri at jaliri@montanabookstore.com.

To access your materials:

- Click the RedShelf link in Moodle
- Click View Course Materials
- Follow the instructions to redeem your unique code.

If you have any trouble accessing your course materials please feel free to reach out to help@redshelf.com.

To opt-out:

- Click the RedShelf link in Moodle
- Click View Course Materials
- Scroll down to the grey opt-out button and follow the prompts

You will have until 9/17/18 to complete this process and you will be responsible for getting access to the materials elsewhere.

[illegible]

Final grade: This course must be taken for a traditional letter grade to meet the Natural Sciences General Education requirement. A minimum final grade of C- is required to meet a Gen Ed requirement.

The following scale may be adjusted at my discretion.

A 93-100%	A- 90-92%	B+ 87-89%	B 83-86%	B- 80-82%
C+ 77-79%	C 73-76%	C- 70-72%	D+ 67-69%	D 63-66%
D- 0-62%	F 59 or below			

Exams: There will be two midterm exams and a final exam (a portion of which will cover topics from the whole semester). Exams will be multiple choice. Bring red scantrons. All material covered during class meetings, in the text, and in other required assignments may appear on exams. Makeup exams will be allowed only for university-excused events and for extraordinary circumstances. If you need to request/discuss a makeup exam, it is required that you contact me in advance of the exam date and as early as possible. **All students are required to take the final exam.**

Extra Credit: Maximum extra credit that can be earned is 5% of course grade.

Activities could include a **Saturday field trip**, online exercises, and other independent activities TBA.

Communication: Please note that I will only use your official UM email. This is required by UM to comply with FERPA (the Federal Educational Rights and Privacy Act). **It is your responsibility to make sure you read messages sent to your UM email address in a timely manner.**

Studying & Time Expectations: A standard benchmark for a college course is **2-3 hours of work outside of class for each hour in class**. This means that for our 3-hour class, you should plan to spend 6-9 hours per week outside of class on reading the textbook chapter, doing assignments and other forms of study.

Students with Disabilities: Whenever possible, and in accordance with civil rights laws, the University of Montana will attempt to provide reasonable modifications to students with disabilities who request and require them. Please feel free to set up a time to meet with me to discuss any modifications that may be necessary for this course. For more information, visit the Disability Services for Students website at www.umt.edu/dss/

Academic Integrity: All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the Student Conduct Code. The Code is available for review online at http://www.umt.edu/vpsa/policies/student_conduct.php

Classroom courtesy: Please do not engage in extraneous talking and other distracting behavior in the classroom. Use of cell phones, laptops, and other electronic devices for purposes other than participating in class is distracting and disrespectful and is not acceptable in the classroom.

GEO101 Spring, 2018 Approximate Course Schedule

Date	Day	Chapter in <i>Essentials of Geology</i>, Lutgens and Tarbuck 13e
Aug 27	M	Ch. 1 Intro to Geology
Aug 29	W	Ch. 1 Intro to Geology
Aug 31	F	Ch. 1 Intro to Geology
Sep 3	M	Labor Day Holiday - No Class
Sep 5	W	Ch. 2 Plate Tectonics
Sep 7	F	Ch. 2 Plate Tectonics
Sep 10	M	Ch. 3 Matter & Minerals
Sep 12	W	Ch. 3 Matter & Minerals
Feb. 14	F	Ch. 3 Matter & Minerals
Sep 17	M	Ch. 4 Igneous Rocks & Intrusive Activity
Sep 19	W	Ch. 4 Igneous Rocks & Intrusive Activity

Date	Day	Chapter in <i>Essentials of Geology, Lutgens and Tarbuck 13e</i>
Sep 21	F	Ch. 4 Igneous Rocks & Intrusive Activity
Sep 24	M	Ch. 7 Sedimentary Rocks
Sep 26	W	Ch. 7 Sedimentary Rocks
Sep 28	F	Ch. 7 Sedimentary Rocks
Oct 1	M	Ch. 8 Metamorphic Rocks
Oct 3	W	Ch. 8 Metamorphic Rocks
Oct 5	F	EXAM #1 (covers Ch. 1-4, 7, 8)
Oct 8	M	Ch. 5 Volcanoes & Volcanic Hazards
Oct 10	W	Ch. 5 Volcanoes & Volcanic Hazards
Oct 12	F	Ch. 5 Volcanoes & Volcanic Hazards
Oct 15	M	Ch. 18 Geologic Time
Oct 17	W	Ch. 18 Geologic Time
Oct 19	F	Ch. 18 Geologic Time
Oct 22	M	Ch. 10 Origin & Evolution of the Ocean Floor
Oct 24	W	Ch. 10 Origin & Evolution of the Ocean Floor
Oct 26	F	Ch. 10 Origin & Evolution of the Ocean Floor
Oct 29	M	Ch. 11 Crustal Deformation & Mountain Building
Oct 31	W	Ch. 11 Crustal Deformation & Mountain Building
Nov 2	F	Ch. 11 Crustal Deformation & Mountain Building
Nov 5	M	Montana Geology
Nov 7	W	Montana Geology
Nov 9	F	EXAM #2 (covers Ch. 5, 10, 11, 18, and Montana Geology)
Nov 12	M	Veteran's Day Holiday - no class
Nov 14	W	Ch. 9 Earthquakes & Earth's Interior
Nov 16	F	Ch. 9 Earthquakes & Earth's Interior
Nov 19	M	Ch. 19 Earth's Evolution
Nov 21-23	W-F	Thanksgiving Break - no class
Nov 26	M	Ch. 13 Running Water
Nov 28	W	Ch. 13 Running Water
Nov 30	F	Ch. 13 Running Water
Dec 3	M	Ch. 15 Glaciers & Glaciation
Dec 5	W	Ch. 15 Glaciers & Glaciation
Dec 7	F	Ch. 15 Glaciers & Glaciation

Dec 14 Friday FINAL EXAM 10:10-12:10 AM (Comprehensive)

The above schedule, policies, procedures, and assignments for this course are subject to change in the event of extenuating circumstances, by mutual agreement, and/or to ensure better student learning.

