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Fall 9-1-2020

### GEO 101N.B01: Introduction to Physical Geology

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# Introduction to Physical Geology

(GEO 101N, 3 credits) FALL, 2020

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

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

**Class Meetings:** MWF from 1:00 PM – 1:50 PM, North Underground Lecture Hall  
**Office Hours: MWF 10-11 AM 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

**Textbook:** Earth Science: An Introduction. Hendrix, Thompson and Turk

**Assessment:** 2 Midterm Exams - 25% each; 50% total  
Final Exam (required) – 50%

**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. 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.**

**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/](http://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](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 Fall 2020 - Approximate Course Schedule**

<b>Date</b>	<b>Day</b>	<b>Chapter in Earth</b>
Aug 19	W	Ch. 1 Earth Systems
Aug 21	F	Ch. 1 Earth Systems
Aug 24	M	Ch. 1 Earth Systems
Aug 26	W	Ch. 2 Minerals
Aug 28	F	Ch. 2 Minerals
Aug 31	M	Ch. 2 Minerals
Sep 2	W	Ch. 3 Rocks
Sep 4	F	Ch. 3 Rocks
Sep 7	M	LABOR DAY – NO CLASS
Sep 9	W	Ch. 3 Rocks
Sep 11	F	Ch. 4 Time
Sep 14	M	Ch. 4 Time
Sep 16	W	Ch. 4 Time
Sep 18	F	Ch. 5 Resources

<b>Date</b>	<b>Day</b>	<b>Chapter in Earth</b>
Sep 21	M	Ch. 5 Resources
Sep 23	W	Ch. 5 Resources
Sep 25	F	EXAM #1 (covers Ch. 1, 2, 3, 4, 5)
Sep 28	M	Ch. 6 Active Earth
Sep 30	W	Ch. 6 Active Earth
Oct 2	F	Ch. 6 Active Earth
Oct 5	M	Ch. 7 Earthquakes
Oct 7	W	Ch. 7 Earthquakes
Oct 9	F	Ch. 7 Earthquakes
Oct 12	M	Ch. 8 Volcanoes
Oct 14	W	Ch. 8 Volcanoes
Oct 16	F	Ch. 8 Volcanoes
Oct 19	M	Ch. 9 Mountains
Oct 21	W	Ch. 9 Mountains
Oct 23	F	Ch. 9 Mountains
Oct 26	M	Montana Rockies
Oct 28	W	EXAM #2 (covers Ch. 6, 7, 8, 9, and Montana's Rockies)
Oct 30	F	Ch. 10 Weathering, Soil, Erosion
Nov 2	M	Ch. 10 Weathering, Soil, Erosion
Nov 4	W	
Nov 6	F	Ch. 11 Freshwater
Nov 9	M	Ch. 11 Freshwater
Nov 11	W	VETERANS DAY - NO CLASSES
Nov 13	F	Ch. 12 Water Resources
Nov 16	M	Ch. 13 Glaciers & Glaciations
Nov 18	W	Ch. 13 Glaciers & Glaciations – Last day of classes

**Nov 19 Thursday FINAL EXAM** 1:10-3:10 PM (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.

**Covid Safety Precautions:**

- Stay home if you feel sick and/or if exhibiting COVID-19 symptoms
- Mask use is required within the classroom
- Clean your personal work space when you arrive and before you leave class
- Class attendance will be recorded to support contact tracing efforts
- This class is being recorded for students who cannot attend in person
- For more information:
  - UM Coronavirus Website: <https://www.umt.edu/coronavirus>
  - UM COVID-19 Fall 2020 website: <https://www.umt.edu/coronavirus/fall2020.php>