

Physical Geology

Spring 2007

Geol 101-01– Index 210485

MWF 9:00 – 9:50, Physical Sciences Complex, PSC 140

Instructor: Scott S. Hughes, Office PS-235 on ISU campus, 208-282-3365; hughscot@isu.edu

Text: ***GEOLOGY: An Introduction to Physical Geology*** by Stanley Chernicoff and Donna Whitney, Houghton Mifflin Publ., 4th ed., 2007.

Course Description: An introduction to the fundamentals of geology. You will learn about rocks and minerals, geologic time, plate tectonics, earthquakes, volcanoes, surface processes, and more. GEOL 101, when taken with either GEOL 101L or GEOL 110 (1-credit lab course), satisfies GOAL 5 of the General Education Requirements.

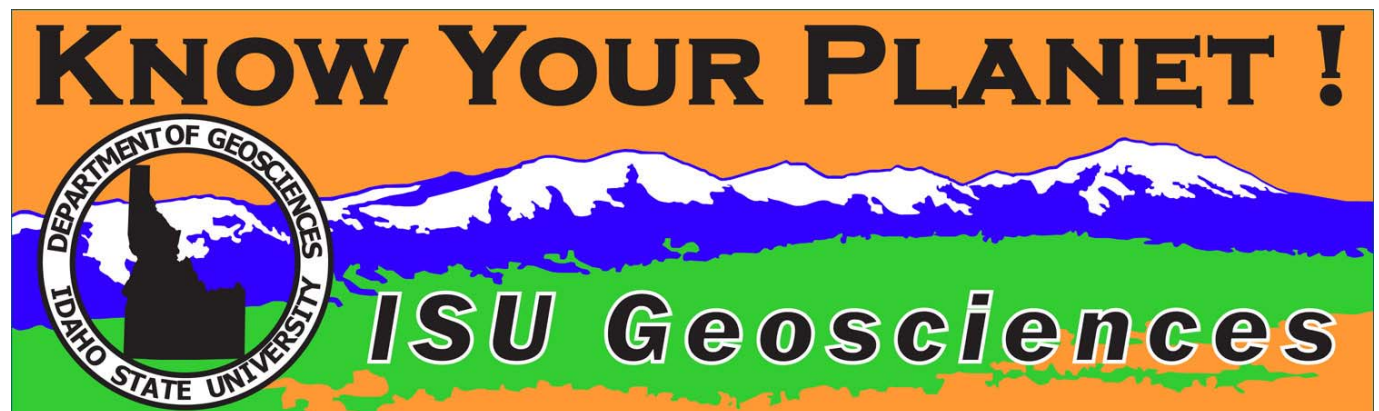
GEOL 101L, **Physical Geology Laboratory**, and GEOL 110, **Physical Geology for Scientists Lab**, are separate from this course. If you are not already signed up for either lab course, you should seriously consider doing so in order to have a greater understanding of geologic processes and gain a hands-on learning experience that will help you in this class and future science courses. There are numerous concepts to be learned in Geology 101, so ask questions in class, take legible notes, read ahead, and always look up terms you don't understand!

We will loosely follow the outline of the book, but lots of time will be spent on certain topics, and less time on others (listed in parentheses). All textbook topics are important, but time is limited. It is also important that you look at the GLOSSARY and other Appendices at the end of textbook, which will help you overcome some of the geological language barriers and provide additional insights.

My Philosophy: I tend to focus on concepts and processes that promote critical thinking skills rather than on rote memorization of numerous facts and definitions. There is a need for such memorization of facts, but my hope is that you learn how the facts are applied. Thus we will focus more on how data are gathered and how problems are evaluated in order to study the natural processes occurring on this planet and on other planets.

Field Trip: There may be an optional field trip one Friday afternoon or Saturday. This will be a great opportunity to apply what you have learned in the classroom and to see the local geology. The trip will be announced.

OUR MOTTO



GEOL 101-01 Lecture Schedule

<u>WEEK</u>	<u>READING</u>	<u>TOPICS (Read Ahead!)</u>	
1	Ch 1, Ap B	Planet Earth, Geologic Processes, Rock Cycle, Plate Tectonics, Earth Systems	
2	Ch 2, Ap D	(MLK Day on Monday – no class) Elements, Compounds, Minerals, Properties & Compositions	
3	Ch 3	Magma and Igneous Rocks – The Hot Stuff	
4	Ch 4	Volcanism, Types of Volcanoes, Styles of Eruption – More Hot Stuff	
5	Ch 5&6	Weathering and Erosion, Sedimentary Processes and Rocks	
6	Ch 7	Metamorphic Rocks, Temperature and Pressure; Review for First Exam	
(6)	Feb 16	Friday – HOUR EXAM #1 (Ch 1-7)	(20%)
7	Ch 8	(President’s Day on Monday – no class) Geologic Time, Absolute and Relative	
8	Ch 9	Rock Deformation and Structures, Faults, Folds, Mountain Building	
9	Ch 10, 11	Earthquakes, Geophysical Studies of Earth’s Interior	
		Spring Break – March 12 – 16	
10	Ch 12	Plate Tectonics – The Unified Theory	
11	Ch 13	Origin of Oceans and Continents; Exam Review	
(11)	Mar 30	Friday – HOUR EXAM #2 (Ch 8-13)	(25%)
12	Ch 14, 15	Mass Movement, Streams & Floods, Erosion	
13	Ch 16, 17	Groundwater and Pollution, Glaciers, Climate Change	
14	Ch 18, (19)	Deserts, Aeolian Processes, (Coastal Processes)	
15	Ch 20	Humans and Natural Resources	
16		Catch up and Final Review	
	May 09	Wednesday – FINAL EXAM – 7:30 to 9:30 a.m.	(35%)
TBA		15-minute quizzes, 10 points each	(10%)
		Random attendance checks, 5 points each	(10%)

Your Final Grade will be based on two 1-hour exams worth 45 % total, a final exam worth 35 %, random attendance checks (10%), and a few quizzes (10%). Quizzes will be announced ahead of time, but we will have at least one POP QUIZ. Random attendance checks will be taken throughout the term. The lowest quiz grade will be dropped. Exams will be considered **comprehensive**, although each one will emphasize material covered in class since the previous one.

IMPORTANT MESSAGE: Our program is committed to all students achieving their potential. If you have a disability or think you have a disability (physical, learning disability, hearing, vision, psychiatric) which may need a reasonable accommodation, please contact the **ADA Disabilities Resource Center** located in Graveley Hall, Room 123, Box 8121, 208-282-3599 as early as possible.