PHYSICAL GEOLOGY

GEOSCIENCES 1303 – Syllabus

SPRING 2006

Instructor: Dr. Robert Rutford

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Office Hours: M-F, 11:00a.m.-12:00 noon (or by appointment)

Lectures: TR 9:30-10:45 a.m. (see attached schedule)

Text: Physical Geology: 11th Edition, McGeary, Plummer & Carlson

Field Trip: An all-day Saturday field trip will be held later in the semester. The exact date will be announced during the second week of class. Attendance on the field trip is mandatory. Questions about the field trip observations will appear on subsequent tests.

Grading: Four tests and a final exam are scheduled. The three highest scores on the tests plus the final exam and the field trip test will be used in determining the course grade; the lowest test score will be dropped. No make-up tests will be given without an excused absence in advance. Review sessions will be held prior to each test at a time to be arranged. Test questions will be from the textbook and lectures. Lectures

will cover the most important topics and will aid in understanding the text.

Course

Objectives: This introduction to Physical Geology considers the earth as a unique planet. After an introduction to the minerals and rocks that make up the outer crust of the earth, we will discuss geologic structures and geologic time. We will then consider the processes at work to shape the surface of the earth, processes with which we deal on a daily basis. The interior of the ears, ocean basins, plate tectonics, earthquakes, and mountain building will then become the focus of the course. Finally, we will discuss geologic resources and economic geology.

The goal is to give the students a basis knowledge about the earth on which we live, an appreciation of the importance of geologic processes, and some understanding of the interaction between the physical earth and human activities.

Course Outline and Reading Assignments

Date		Chapter Title
Jan.10	T	Chapter 1 Introduction
Jan.12	R	Chapter 2 Atoms, Elements and Minerals
Jan. 17	T	Chapter 3 Igneous Rocks, Intrusive Activity, And the Origin of Igneous Rocks
Jan.19	R	Chapter 4 Volcanism and Extrusive Rocks
Jan.24	T	Chapter 5 Weathering Soil

Jan.26 R TEST #1
(Chapters 1,2,3,4)

Jan.31 T Chapter 6
Sediments and Sedimentary Rocks

Feb.2 R Chapter 7
Metamorphism, Metamorphic Rocks,

and Hydrothermal Rocks

Feb.7 T Chapter 8
Geologic Time

Feb.9 R Chapter 9
Mass
Wasting

Feb.14 T TEST #2
(Chapters 5,6,7,8)

Feb.16 R Chapter 10
Streams and Floods

Feb.21 T Chapter 10
Streams and Floods

Feb.23 R Chapter 11
Ground
Water

Feb.28 T Chapter 14
Waves,
Beaches and Coasts

Mar. 2 R TEST #3
(Chapters 9,10,11,14)

Mar.7 T -
SPRING BREAK

Mar.9 R -
SPRING BREAK

Mar.14 T Chapter 12
Glaciers and Glaciation

Mar.16 R Chapter 12
Glaciers and Glaciation

Mar.21 T Chapter 13
Deserts and Wind Action

Mar.23 R Chapter 15
Geological Structures

Mar.28	T	Chapter 16 Earthquakes	
Mar.30	R	Chapter 17 The Earth’s Interior	
Apr.4	T	TEST #4 (Chapters 12, 13, 15, 16)	
Apr.6	R	Chapter 18 The Sea Floor	
Apr.11	T	Chapter 19 Plate Tectonics	
Apr.13	R	Chapter 20 Mountain belts and Continental Crust	
Apr.18	T	Chapter 21 Geologic Resources	
Apr.20	R	Chapter 22 The Earth’s Companions	
Apr.27	T	FINAL EXAM	8:00 a.m.-Includes Chapters 17-22 and also comprehensive