

HONORS: GEOLOGY (110; 5 credits)

SPRING SEMESTER, 2012

INSTRUCTOR: William N. Mode

OFFICE: Harrington 214

EMAIL: mode@uwosh.edu

PHONE: 424-7004

OFFICE HOURS: 10:20 to 11:20 a.m., M, W, F; or by appointment or chance

TEXTBOOKS: *The Changing Earth* (6th ed.), J. S. Monroe and R. Wicander

Laboratory Manual for Physical Geology (7th ed.), N. W. Jones & C. E. Jones

Honors Geology Course Manual (2012), W. N. Mode

E-Reserves also has some material that you need to print and bring to class.

MEETINGS: *Lecture:* 9:40 to 11:10 a.m., Tuesday and Thursday in Harrington 217

Discussion: 11:30 a.m. to 12:30 p.m., Thursday in Harrington 113

Lab: 3:00 p.m. to 5:10 p.m., Tuesday in Harrington 114

COURSE OBJECTIVES: Students will learn: 1) basic principles of geology and how to apply them to laboratory, field, and other practical situations; 2) ways in which geology influences their life and ways in which humans influence geologic systems; and 3) to see connections between geology and other areas of human endeavor such as art, literature, and politics. These objectives embody the goals of a liberal arts education.

INSTRUCTIONAL SYSTEM: This is a traditional lecture course with four scheduled examinations. Laboratory and discussion require active participation by students.

ATTENDANCE: Laboratory and discussion attendance is required, and I strongly recommend attending lecture. Your chance for success in the course will be much greater if you attend every class session.

EXAMINATIONS: Four required exams are given. Exams will consist of a mixture of essay, short answer, matching, and multiple choice questions. The *Course Manual* contains a study guide and sample exam questions.

EXAM 1: Thursday, February 23; covers Chaps. 1 - 5 & 8 in Monroe and Wicander.

EXAM 2: Thursday, March 15; covers Chaps. 6, 7 & 9 - 12 in Monroe and Wicander.

EXAM 3: Thursday, April 12; covers Chaps. 13 - 18 in Monroe and Wicander.

EXAM 4: Thursday, May 10; covers Chaps. 19 - 24 in Monroe and Wicander

COURSE PROJECT: The course project will consist of journal writing each week, a 10-page paper **due May 10**, and a brief oral presentation of the paper in class.

FIELD TRIP: The required field trip is scheduled for **Saturday, April 28**.

GRADING: Lecture exams, the course project, and laboratory score will determine the grade for the course. The course average will comprise the average of the four exam scores, given a weight of 60%; the course project, 20%; and the laboratory score, 20%. The laboratory score is determined by participation (20%) and four quizzes (20% each). The grade scale will be no more rigorous than:

93 - 100%	A
90 - 92	A-
87 - 89	B+
83 - 86	B
80 - 82	B-
77 - 79	C+
73 - 76	C
70 - 72	C-
67 - 69	D+
63 - 66	D
60 - 62	D-
<60	F

COURSE SCHEDULE

<u>WK</u>	<u>LECTURE TOPICS</u>	<u>ASSIGNED READING IN TEXT</u> (required)	<u>LAB</u>
1	T: Fundamentals and plate tectonics Th: Plate tectonics	Chapters 1 & 2 (Monroe & Wicander)	Jones ² , Chap. 16 & 17, earthquakes and plate tectonics
2	T: Minerals Th: Rocks and igneous rocks	Chapters 3 & 4	Jones ² , Chap. 1 & 2, Minerals
3	T: Igneous Rocks Th: Volcanism	Chapters 4 & 5	Jones ² , Chap. 3, Igneous rocks
4	T: Metamorphic rocks Th: Exam 1	Chapter 8	Jones ² , Chap. 4 & 5, Sedimentary & metamorphic rocks
5	T: Weathering, erosion and soil; Sediment and sedimentary rocks Th: Earthquakes	Chapters 6, 7 & 9	Quiz on minerals & rocks; Jones ² , Chap. 6, Topographic maps
6	T: Mountain building Th: Mass wasting	Chapters 10 & 11	Jones ² , Chap. 14 & 15, Structural geology & geologic maps
7	T: Running water Th: Exam 2	Chapter 12	Jones ² , Chap. 8 & 9, Streams and groundwater,
8	T: Groundwater Th: Glaciers and glaciation	Chapters 13 & 14	Quiz on Chap. 16, 17, 6, 14, & 15; and Jones ² , Chaps. 10 & 12, Glaciation & dunes
9	T: Wind and deserts Th: Shorelines	Chapters 15 & 16	Jones ² , Chap. 11 & 13, Shorelines & geologic time
10	T: Geologic time & Evolution Th: Exam 3	Chapters 17 & 18	Fossils
11	T: Precambrian earth Th: Precambrian life	Chapter 19	Quiz on Chap. 8, 9, 10, 12, 11, & 13; and Paleozoic fossils*
12	Th: Paleozoic earth Th: Paleozoic life	Chapters 20 & 21	Mesozoic fossils*; Field trip Saturday, April 28
13	T: Mesozoic earth Th: Mesozoic life	Chapter 22	Cenozoic fossils*
14	T: Cenozoic earth and life Th: Exam 4	Chapters 23 & 24	Quiz on fossils & field trip

*If weather permits, we will take a two-hour field trip in Winnebago County on one of these three weeks.