

HONORS: GEOLOGY (110; 5 credits)
SPRING SEMESTER, 2011

INSTRUCTOR: William N. Mode

OFFICE: Harrington 214

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PHONE: 424-7004

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

TEXTBOOKS: *The Changing Earth* (5th ed.), J. S. Monroe and R. Wicander

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

Honors Geology Course Manual (2011), W. N. Mode

RESERVE READING: *Understanding Earth*, F. Press and R. Siever

Earth and Life Through Time, H. L. Levin

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

Discussion: 3:00 to 4:00 p.m., Thursday in Harrington 217

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 exams are given. Attendance is required at each exam. 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 24; Exam covers Chaps. 1 - 5 & 7 in Monroe and Wicander.

EXAM 2: Thursday, March 15; Exam covers Chaps. 6 and 8 - 12 in Monroe and Wicander.

EXAM 3: Thursday, April 16; Exam covers Chaps. 13 - 18 in Monroe and Wicander.

EXAM 4: Thursday, May 12; Exam 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 12, and a brief oral presentation of the paper in class.

FIELD TRIP: The required field trip is scheduled for **Saturday, April 30.**

GRADING: Lecture exams, the course project, and laboratory score will determine the grade for the course. The overall average for the course 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</u>		<u>LAB</u>
		<u>TEXT</u> (required)	<u>RESERVE</u> (recommended)	
1	T: Fundamentals and plate tectonics Th: Plate tectonics	Chapters 1 & 2	Press & Siever, Chap. 1 & 20	Jones ² , Chap. 16 & 17, earthquakes and plate tectonics
2	T: Minerals Th: Rocks and igneous rocks	Chapters 3 & 4	Press & Siever, Chap. 2, 3, & 4	Jones ² , Chap. 1 & 2, Minerals
3	T: Igneous Rocks Th: Volcanism	Chapters 4 & 5	Press & Siever, Chap. 5, 6, & 7	Jones ² , Chap. 3, Igneous rocks
4	T: Metamorphic rocks Th: Exam 1	Chapter 7	Press & Siever, Chap. 8	Jones ² , Chap. 4 & 5, Sedimentary & metamorphic rocks
5	T: Weathering, soil, and sedimentary rocks Th: Earthquakes & Sea floor	Chapters 6, 8 & 9	Press & Siever, Chap. 18, 19, & 17	Quiz on minerals & rocks; Jones ² , Chap. 6, Topographic maps
6	T: Mountain building Th: Mass wasting	Chapters 10 & 11	Press & Siever, Chap. 10 & 11	Jones ² , Chap. 14 & 15, Structural geology & geologic maps
7	T: Running water Th: Exam 2	Chapter 12	Press & Siever, Chap. 13	Jones ² , Chap. 8 & 9, Streams and groundwater,
8	T: Groundwater Th: Glaciers and glaciation	Chapters 13 & 14	Press & Siever, Chap. 12 & 15	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	Press & Siever, Chap. 14 & 17	Jones ² , Chap. 11 & 13, Shorelines & geologic time
10	T: Geologic time & Evolution Th: Exam 3	Chapters 17 & 18	Levin, Chap. 4	Fossils
11	T: Precambrian earth Th: Precambrian life	Chapter 19	Levin, Chap. 6 & 7	Quiz on Chap. 8, 9, 10, 12, 11, & 13; and Paleozoic fossils*
12	Th: Paleozoic earth Th: Paleozoic life	Chapters 20 & 21	Levin, Chap. 8, 9, & 10	Mesozoic fossils*; Field trip Saturday, April 30
13	T: Mesozoic earth Th: Mesozoic life	Chapter 22	Levin, Chap. 11, & 12	Cenozoic fossils*
14	T: Cenozoic earth and life Th: Exam 4	Chapters 23 & 24	Levin, Chap. 13, 14, & 15	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.