

GEOLOGY 300
ENVIRONMENTAL GEOLOGY
SPRING SEMESTER, 2007
(Call #: 10176)

Professor: D.P. Schwert (FLC 314E; Tel.: 231-7496; e-mail: donald.schwert@ndsu.edu)

Office Hours: Open. Appointments are welcome; simply phone, e-mail, or let me know otherwise when you want to visit.

Class Time and Place: 9:30 to 10:45 a.m., Tuesdays and Thursdays, Stevens Hall Room 134.

Text: "Environmental Geology" by Keller, 8th edition.

Instructional Web Site: www.ndsu.edu/instruct/schwert/geosci/g300

Tentative Lecture and Exam Schedule, Reading Assignments:

T	Jan	9	An introduction to Environmental Geology	(Chap. 1)
R		11	Soils: Engineering Factors I	(Chaps. 2, 3)
T		16	Soils: Engineering Factors II	
R		18	Soils: Engineering Factors III	
T		23	Tour: Midwest Testing (Keith Johnson). Meet at 9:30 a.m., Stevens parking lot	
R		25	Soils: Geotechnical conditions in the F-M region	
T		30	Soil failures: Red River Valley	
R	Feb	1	Thixotropy	
			<u>Term Project Titles Due</u>	
T		6	Quicksand & liquefaction; Floodplain management	(Chap. 5)
R		8	Floodplain management: Fargo	
T		13	"Greenway on the Red" (Genevieve Thompson, speaker)	
R		15	<u>Exam 1</u> ; Groundwater I	(Chaps. 10, 11)
T		20	Groundwater II; Subsidence	(Chap. 6)
R		22	Subsidence	
T		27	Urban Case History: New Orleans (pre-Katrina modeling)	
R	Mar	1	Urban Case History: Orlando	
T		6	Planning Issues in Cass County, North Dakota (Michael Zimney, speaker)	
R		8	Geology of dams	
T		13	NO CLASS: Spring Break & Death Valley Field Course	
R		15	NO CLASS: Spring Break & Death Valley Field Course	

Project interviews with DPS this week:

T	20	NO CLASS: Easter Break	
R	22	Geology of dams	
T	27	Seismic planning	(Chap. 7)
R	29	Urban Case History: Seismic planning in the San Francisco region	
T	Apr 3	Exam 2 , Medical geology I	(Chap. 13)
R	5	Medical geology II	
T	10	Medical geology III	
R	12	Radon	
T	17	Coastal geology I	(Chap. 9)
R	19	Volcanic hazards	
T	24	Term Projects Due , Student Project Reports (20 minutes per student)	
R	26	Student Project Reports (20 minutes per student)	
T	May 1	Student Project Reports (20 minutes per student)	
R	3	Student Project Reports (20 minutes per student)	
R	10	FINAL EXAM, 1:00 p.m. to 3:00 p.m.	

Exams:

Full attendance at all classes is an expectation of this course. Quizzes may be given at any time.

Grades:

Grading will be based on four exams (short answer, multiple choice, and essay), occasional quizzes, approximately six homework assignments, and a term project and presentation. The final exam will be cumulative. Each person will undertake an independent class project on some aspect of Environmental Geology, and will present results as a class presentation, as a 10-12 page report and a one-page pre-presentation handout to be mounted on the Geology 300 web site.

Two exams	40%
Quizzes and homework	15%
Term Project	25%
Final Exam	20%

The final letter grade will be assigned based on the following table, unless the class average deviates significantly from 75%. In the latter case, a “curve” will be applied.

A = 90-100; B = 80-89; C = 70 - 79; D = 60-69; F = <60

“Borderline” cases will be judged individually, based on grade improvement, demonstrated effort, class participation, etc.

Special Needs:

Any students who require special accommodations for learning or who have special needs should share those concerns or requests with the instructor as soon as possible.

Academic Responsibility:

All work in this course must be completed in a manner consistent with NDSU University Senate Policy, Section 335: Code of Academic Responsibility and Conduct (www.ndsu.nodak.edu/policy/335.htm).

Catalog Description:

Human interaction with Earth's environment. Earthquakes, floods, volcanoes, landslides, water use, pollution, energy, mining, and land-use planning. Prereq.: Geology 105, 105L.

Intended Student Outcomes:

- To understand the relation of humans to the physical environment, including soil stability, water use, and land use.
- To understand the occurrence of natural hazards and methods of hazard mitigation.
- To demonstrate the scientific method through examples in the environment.
- To demonstrate the use of mathematical reasoning to solve environmental questions.
- To prepare a geologic report on an environmental issue, and present results in oral, written, and electronic forms.

Other: Where is FLC 314E?:

From the elevator on the third floor of Family Life Center, turn right and then take your first right – into a small hallway. I'm at the second door to your left along this hallway.