

THIS IS AN EXAMPLE SYLLABUS FOR GEOLOGY 116. IT DESCRIBES THE NATURE OF THE COURSE. THE SYLLABUS FOR THE FALL 2000 SEMESTER, WHICH MAY BE DIFFERENT IN MINOR RESPECTS, WILL BE MADE AVAILABLE AS SOON AS IT HAS BEEN PREPARED.

"Civilization exists by geologic consent, subject to change without notice"

—Will Durrant, Historian

Lecture: Monday, Wednesday, Friday, 11:00 - 11:50 111 Bretske Hall

Instructor: J. W. Mies, Ph.D. 102 Bretske Hall
 e-mail: jmies@cecasun.utc.edu Office phone: 755-4606
 www: <http://www.utc.edu/~jmies>

Text: Rogers, J. J. W. and Feiss, P. G., 1998, *People and the Earth*. Cambridge University Press., 338 p., ISBN 0-521-56872-2 .
 Assigned readings and other reference materials are on reserve in Lupton Library.

Prerequisite: math placement level 20 or Mathematics 106

Hours: 3 credit hours / 3 contact hours

Description: Geology 116 helps the student to develop geologic perspectives of Earth and the ways in which it enhances and limits our life styles, including natural disasters and basic issues of sustainability. The course promotes an accurate understanding of Earth and the insights necessary to making conscientious environmental decisions. Specific topics may vary in keeping with current issues.

Students that are interested in taking geology courses beyond Geology 116, are encouraged to take *Physical Geology* (Geology 111 and Geology 181, lecture and lab) and *Historical Geology* (Geology 112 and Geology 182, lecture and lab).

TENTATIVE SCHEDULE

	M	W	F	Topic	Reading(s)
Aug	23			Turkish e'quake of Aug. 17, Intro to GEOL 116	
		25		A geologist's view of Earth	Hamblin & Christansen (1998) Ch. 1, 2, 8
			27	Earth systems and the global perspective	
	30			The theory of plate tectonics	
Sep		1		Earth history and geologic time	
			3	Basic issues of man and Earth	
	6			Labor Day Holiday	
		8		Geologic hazards and natural disasters	Rogers & Feiss (1998) §3.0 - 3.2
			10	Earthquakes —causes, types, and occurrence	Bolt (1999) Ch. 1, App. A,B,C; Rogers & Feiss (1998) §3.3; TBA
	13			— destructive effects	
		15		— risk, prediction, and safeguards	
			17	— discussion of recent event(s)	
	20			Volcanic eruptions—causes, types, and occurrence	Rogers & Feiss (1998) §3.4; Williams (1996)
		22		— destructive effects	
			24	— risk, prediction, and safeguards	
	27			— discussion of recent event(s)	

TENTATIVE LECTURE SCHEDULE (CONT'D)

	29	EXAM 1		
Oct	1	Tsunamis, coastal flooding and erosion—...		Rogers & Feiss (1998) §3.5, 3.7;
	4	— destructive effects		Gonzalez (1999)
	6	University Convocation		
	8	— risk, prediction, and safeguards		
	11	— discussion of recent event(s)		
	13	Land slides —causes, types, and occurrence		Rogers & Feiss (1998) §3.8;
	15	— risk, prediction, and safeguards		TBA
	18	— discussion of recent event(s)		
	20	Resources—basic considerations		Ausubel (1996).
	22	Fall Break		
	25	Fall Break		
	27	Water—hydrologic cycle and global perspective		Rogers & Feiss (1998) Ch. 4;
	29	— human uses		TBA
Nov	1	— surface water resources		
	3	— groundwater resources		
	5	— discussion of issue(s)		
	8	Metallic and industrial minerals—basic consid.		Rogers & Feiss (1998) Ch. 6;
	10	— geology of mineral deposits		Hamblin & Christansen (1998)
	12	— methods and env. consequences		Ch. 24 (p. 642-651)
	15	— discussion of issue(s)		
	17	EXAM 2		
	19	Global environmental change and Earth systems		Rogers & Feiss (1998) Ch. 8;
	22	Controls and evolution of climate and atmos.		Turekian (1996) Ch. 4, 5, 6;
	24	Circulations of the atmosphere and oceans		Taylor (1999)
	26	Thanksgiving Holiday		
	29	Changes of sea level		
Dec	1	Temperature variation over time		
	3	Effects of human activity on climate and atmos.		
	6	The future		Rogers & Feiss (1998) Ch. 9
	10	FINAL EXAM		
		Friday, December 10, 11:00 am to 1:00 pm		

GRADES

The final numerical grade for this class will be computed as follows.

15 % Exam 1 (Sept. 29)	_____	x 0.15 = _____.
20 % Exam 2 (Nov. 17)	_____	x 0.20 = _____.
25 % Final Exam (Dec. 10, 11:00 am)	_____	x 0.25 = _____.
15 % Average of 3 or 4 short papers	_____	x 0.15 = _____.
15 % Environmental events diary	_____	x 0.15 = _____.
10 % Attendance and participation	_____	x 0.10 = _____.
	<i>TOTAL (Final numerical grade) = _____.</i>	

The final letter-grade for this class will conform to the following scale, based upon the computed final numerical grade.

F 59.9, D=60-69.9, C=70-79.9, B=80-89.9, A=90-100

GRADES (CONT'D)

Students' writing, which will be required for exams, short papers, and the events diary, will count for no less than 20 % of the final grade in this class.

EXAMS

Exams will be comprehensive; each exam will cover all material that precedes it.

The second and third (final) exams will emphasize the material covered since the previous exam (i.e. 50% by point value).

Exams may include questions of multiple-choice, matching, and fill-in-the-blank formats, and may require simple computation. No less than 10% of each exam (by point value), will require short written answers (several well-composed sentences, plus diagrams).

Make-up exams will be provided in only the most adverse circumstances (e.g. serious illness). Documentation of the circumstance (e.g. doctor's note) may be required.

Arrangements for a make-up exam must be made with the instructor prior to the scheduled time of the regular exam.

In the event that a student is provided with a make-up exam, he or she should anticipate that it is likely to be different from the regular exam.

SHORT PAPERS

Students will be required to write short (1- to 2-page) papers for 3 or 4 of the key issues raised by readings and discussed in class. Each paper should address technical and social aspects of the issue and the student's opinion on related problems and solutions. Papers are to be word processed and printed, double spaced, using a common font. Papers should include an appropriate title and the student's name.

ENVIRONMENTAL EVENTS DIARY

Students will be required to record and reflect on events during the course of the semester that are relevant to the class (e.g. natural and man-made environmental disasters, debates of or votes on legislation, newsworthy technological developments or scientific discoveries).

Location-specific events (e.g. earthquakes, volcanic eruptions, avalanches or landslides) should be indexed to locations identified on a conveniently sized world map.

OTHER POLICIES

Students are expected to attend class regularly.

Attendance and participation will be considered in the final grade. (See *Grades*.)

Students are expected to be punctual, prepared for class, attentive, and respectful of others.

Students that arrive late for an exam may not be permitted to take the exam.

Assignments are expected to be turned in on time. Late assignments will be accepted in only the most adverse circumstances (e.g. serious illness or accident). Documentation of the circumstance (e.g. doctor's note or police report) may be required.

All students are expected to follow the UTC honor code.

ATTENTION: If you have a disability that may require special assistance or accommodation, or you have questions related to any accommodations for testing, note takers, readers, etc., please contact your professor as soon as possible. Students may also contact the CAP/AAA Office (785-2202) with questions about services offered to UTC students with qualified disabilities.

It is the responsibility of the student to keep informed of changes to this syllabus and of any missed material.