UNIVERSITY OF KANSAS
(GEOLOGY DEPARTMENT)

The University of Kansas

Don W. Steeples
Department of Geology

February 15, 1995

Dr. Wayne Blanchard
FEMA/EMI, Building N/Room 200
Emmitsburg, MD 21727 FAX (301) 447-1081

Dear Dr. Blanchard:

Attached are the materials we discussed on the telephone on April 12, concerning a course that I teach at the University of Kansas entitled "Earthquakes and Other Natural Disasters". This is the first year for the course, which seems to be going well. I anticipate the course will be offered yearly in the spring semester. It is also offered via 2-way audio-visual link by television to the KU Regents Center campus in Kansas City.

There is a strong possibility the course will be offered in the future via correspondence for credit from KU's Division of Continuing Education. This would include videotaped lessons, reading assignments, and written homework exercises on such topics as how to measure and locate earthquakes and how to calculate a 100-year flood for a particular locality.

While I teach the course, the contact person for information about the correspondence course is Nancy Colyer, Director of Independent Study, Division of Continuing Education, The University of Kansas, Lawrence, Kansas, 66045 and telephone (913) 864-4792.

The course can be taken for either 2 or 3 semester hours of graduate or undergraduate credit, depending on whether a term project or paper is included in the course or not. If you have questions about the course, let me know.

Sincerely,

Don W. Steeples
McGee Distinguished Professor of Geophysics

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Earthquakes and Other Natural Disasters:
Geology 571 Syllabus, Spring, 1995

Instructor: Don Steeples, Room 17 Lindley Hall

Date	*Lecture Subjects*	*Reading Assignments*	
January 11	Introduction to course, textbooks & exams Introduction to geology and seismology		
18	What we feel in an earthquake Introduction to plate tectonics	1-17	Bolt
25	Where earthquakes occur Measuring earthquakes	25-40 43-53	Bolt
February 1	Exploring inside the earth Review	59-67	Bolt
8	**Exam 1 during first hour** Faults in the earth during second hour	71-90	Bolt
15	The causes of earthquakes The size of an earthquake	97-109 115-131	Bolt Bolt
22	Tsunamis Earthquakes and water	137-156 159-174	Bolt Bolt
March 1	Events that precede an earthquake Review	181-209	Bolt
8	**Exam 2 during first hour** Self protection in an earthquake during second hour	215-231	Bolt
15	Building for earthquake resistance Famous catastrophic earthquakes	237-265 32-57	Bolt Officer
22	**Spring Break, No Class**		
29	Volcanoes Mt. St. Helens and Krakatau explode	3-30	Officer
April 5	Floods in general and the Flood of 1993 in particular Review	59-80	Officer
12	**Exam 3 during first hour** Tornado movie during second hour		
19	Hurricanes Catastrophic impacts of meteorites; extinctions; ice ages	82-123	Officer
26	Global change Nuclear waste; pollution; smog	125-178	Officer
May 3	Global change; ozone depletion; greenhouse effect Review	180-213	Officer
10	**Final Exam @ 7:10 p.m.**		

Other Course Information

Required Textbooks:

1. "Earthquakes," third edition, by Bruce Bolt, Freeman, and Co., ISBN #0-7167-2236-4, which costs $16.95 in paperback.

2. "Tales of the Earth," by Charles Officer & Jake Page, Oxford University Press, ISBN #0-19-509048-9, which costs $10.95 in paperback.

Exams:

Exams will be short essay, multiple choice, matching, and filling in blanks such as identifying features on unlabeled maps and diagrams. Only the best three of your exam grades will count toward your final course grade. For this reason, make-up examinations will be given only under unusual circumstances (unavoidable absences previously excused by instructor or documentable, severe illness). If you receive an A on all three of the hour exams, you will not have to take the final exam.

Grade Composition:	**%**
Hour exams (best two of three to count)	66
Final exam (comprehensive final)	33
Classroom participation	1
	100

While I do not have a fixed grading scale, the bottom of the A's in my courses typically runs somewhere around 90%. The class median is usually a "B".

If you wish to talk to me about the course or personal matters, please come and see me during office hours (MTWR 10:30 - 11:30 a.m. and 2:30 - 3:30 p.m., or by appointment). My office is in Room 17, Lindley Hall, phone 864-2730. If you have a disability or other condition that may require special accommodation, please let me know at the earliest opportunity. Good luck in the course!

Extra Hour of Credit:

If you want to **take this course for three hours of credit instead of two hours**, the third credit hour requires one of the following:

1. a 15-20 page term paper on an approved subject;
2. building a homemade seismograph;
3. writing a report with graphics, based on earth-related data obtained from the INTERNET;
4. or other term project approved by the instructor.

The paper or project for the third hour will count for 1/3 of the semester course grade. Specific procedures for adding the third hour will be discussed in class at the start of the second class period.

For Students at the Regents Center:

I plan to come to the Regents Center at least twice during the semester to meet with the class in person, either individually or as a group. On those occasions, probably Saturdays, I will be available for as long as necessary to answer questions or discuss other matters such as term projects. I will also try to keep the Lawrence TV crew around for a few minutes after class so you can communicate with me outside of class.

Don Steeples, McGee Professor of Geophysics, KU Department of Geology

RESEARCH TOPICS FOR GEOLOGY 571

Earthquakes and other Natural Disasters

Potential term paper topics:

The 1989 Loma Prieta California earthquake

The 1994 Northridge California earthquake

Mt. St. Helens eruption and biological recovery of the environment

The Great Flood of 1993

The eruption of Krakatau in 1883

The eruption of Vesuvius in 79 AD

The eruption of Santorini and the destruction of Atlantis

The Cretaceous-Tertiary boundary: meteorite impact?

The Shoemaker-Levy comet impact on Jupiter in 1994

Earthquake danger in the Pacific Northwest

Cascade volcano hazards in the Pacific Northwest

A comparison of the 1971 San Fernando Valley earthquake and Northridge, 1994

The prediction of the Mt. Pinatubo eruption in the Philippines

Earthquake prediction: false hope or future hazard reducer?

New Madrid: earthquake risk in the Midcontinent

The greenhouse effect: is man's worse than nature's?

Tornadoes: improved warnings from the new Doppler radars

Hurricanes: would global warming make them more severe?

Hurricane Andrew in 1992: What if it had hit New Orleans?

Potential term projects:

Build a homemade seismograph

Program a display of seismic data from a surplus geophone onto your computer screen

Design a procedure and obtain classroom information about disasters from the INTERNET