GEOLOGY 360 Spring 2008 (Netoff)
COURSE SYLLABUS -- ENVIRONMENTAL GEOLOGY

I. IDENTIFYING INFORMATION

Course: GEL 360 Environmental Geology (3 credits)
Instructor: Dennis Netoff; B.A., Chico State College,CA; Ph.D. and M.A., U. of Colorado, Boulder, CO
Office: LDB 322
Phone: (936) 294-1454; E-mail: geo_din@shsu.edu
Hours: posted on office door
Prerequisites: GEL 133; 113
Text: none; WEB sites (e.g., U. S. Geological Survey, NOAA, State Geological Surveys, etc.)
Other Materials: access to computer, web material

II. GENERAL COURSE DESCRIPTION

The course offers an introduction to geological processes and materials, and how they affect people and the environment. Specific topics include earthquakes, volcanism, mass wasting and subsidence, floods, and coastal hazards. Other topics may include soils, water and energy resources, global warming, and hazardous waste disposal.

III. COURSE OBJECTIVES

The student should be able to (1) demonstrate an awareness of the interaction of geological processes and human activities; (2) apply geologic information to solving related environmental problems; (3) recommend ways of coping with specific geologic problems through recognition oft their potential, predicting their occurrence and where possible, controlling them.

IV. GRADING POLICIES

Grades are performance-based. A combination of announced quizzes (6-8), exercises, and projects, each component of equal weight, will make up the lecture/lab grade. See attendance policy re: grades.

No makeups are given for quizzes, exercises, or projects. No extra credit. Missed quizzes/exercises/projects are recorded as zeros.

Grading scale: 85-100% = A; 75-84% = B; 60-74% = C; 50-59% = D

Students with a disability which may affect their academic performance can arrange for a conference with the instructor within the first two weeks of the semester in order that appropriate achievement strategies can be considered.

V. ATTENDANCE POLICY

The University requires each instructor to keep a record of attendance. Attendance is taken at the beginning of the hour. Tardies count as absences. An important part of the learning process takes place in the lecture and lab portion of this course. Class attendance and participation are therefore strongly encouraged. You have ***9 'free' hours*** of absence ('excused' + nonexcused); beyond that limit, the course grade becomes an automatic ***F***.

VI. CLASS CONDUCT, CHEATING, PLAGIARISM

Actions that are detrimental to the learning environment of the class (talking, use of cell phones, leaving in mid-lecture, sleeping, tardies) will receive one warning & then will be dropped from the class. Cheating, dishonesty, and plagiarism will not be tolerated, and may, as a minimum, result in course failure.

VII. VISITORS

Visitors (family, friends, etc.) are allowed in class only by pre-arrangement with the instructor.

VIII. COURSE CONTENT AND READINGS

Overview
- origin of environmental problems
- humans, geology, and the environment

Earth materials and processes
- atoms, minerals and rocks
- internal vs. external processes
- plate tectonics

Hazards associated with internal processes
- ***earthquakes***
  - causes, distribution, relation to plate tectonics
  - scales
  - hazards and hazard mitigation
- ***volcanoes***
  - causes, distribution, plate tectonics
  - hazards and hazard mitigation

Hazards and problems associated with surficial processes
- ***weathering*** and stone deterioration (optional topic)
- ***landslides***
  - stability factors, classification of landslides
  - risk assessment and prediction
  - prevention and control
- ***subsidence and collapse***
- ***expandable soils***
- ***floods***
  - basin hydrology and stream channels
  - floods and flood hazard reduction
- ***coastal hazards***
  - coastal processes and types of coasts
  - erosion vs. depositional problems and possible solutions

Other environmental problems and issues (selected optional topics)
- ***Global warming***: geologic and hydrologic impacts
- ***soil resources***
- ***water resources***
- ***energy resources***
- ***mineral resources***
- ***waste disposal***
  - municipal
  - nuclear