Environmental Geology

Code	Credit Hours
ENV-848	3-0

Course Description

The objectives of this course are to:

Understand and implement tools to measure natural hazards related with geological systems.

Enable the students to develop basic understanding of Environmental geology and its role in sustainability of environment.

Text Book:

1. Barbara W M, Brain J S, Stephen C P, 1996, Environmental Geology, John Wiley and Sons Inc. New York.

Reference Book:

2. Montgomery C W, 1999, Environmental Geology, 4th ed. William C. Publisher, Brown USA.
3. Blatt H, 1997, Our Geologic Environment, Prentice Hall Inc. Eangle Wood Cliffs. New Jersey, USA.
4. Akhtar R, 1991, Environment and Health: Themes in Medical Geography, Pak Book Corporation.

Prerequisites

NIL

Assessment System for Theory

Quizzes	10-15%
Assignments	5-10%
Mid Terms	25-30%
Project	0-10%
ESE	45-50%

Teaching Plan

Week No	Topics	Learning outcomes
1	Introduction	Course Outline, objectives, teaching plan, assessment method, concepts review
2-6	Basics of Geological Processes	Introduction: our place in the environment, Geologic framework: the home planet, earth systems and cycles, earth structure and materials.
7-8	Geological Hazards	Hazardous geologic processes: assessing geologic hazards and risks, earthquakes, volcanic activity, tsunamis, landslides, mass wasting, subsidence, floods, hazards of ocean and weather and meteorite impacts.
9	**MID TERM EXAM**	
10-11	Applications and	Using and Caring for Earth Resources: the nature of earth

	role in environment	resources, energy from fossil fuels, energy alternatives, mineral resources, soil resources and water resources. Human Impact on the environment: managing waste disposal contaminants in the geologic environment and atmospheric change.
13-17	Medical Geology	the role of geologic materials in health; trace elements in natural waters, radon and trace elements in soil. The effects of radioactivity on human health, and its remedial measures. Contamination of air and ground water resources by nuclear wastes and nuclear explosions. Environmental Law: History, development and protection of environment, some case histories, environmental legislations: water law and land use planning laws.
18	**End Semester Exams**	