



SUBJECT DATASHEET

Semester:	2009/10/1
Subject:	Introduction to Environmental Geology
Code:	VEMLKVM122F
Responsible department:	Department of Earth and Environmental Sciences
Responsible department code:	MKFT
Responsible lecturer:	dr. Mihály Pósfai

Educational objectives:

To acquire fundamental knowledge of the basic principles of geology that are necessary for an understanding of problems in environmental geology. Based on the course, students should be able to appreciate the geological processes that affect our regional environment, evaluate the effects of anthropogenic activities, and understand the possible engineering solutions to problems in environmental geology.

Detailed content of the subject:

Fundamentals of mineralogy - Introductory geometrical crystallography: symmetry, lattice, unit cell - Chemical and physical properties of crystals - Rock-forming and environmentally important minerals Petrology - Composition of Earth's crust, rock-forming processes, plate tectonics - Igneous, metamorphic and sedimentary rocks: formation and main types Structural geology - Bedding, rock deformation, faulting and folding - The geological timescale, dating Engineering geology - Construction geology (slopes, roads, tunnels, mines, dams) - Environmental geology - resource exploitation, acid mine drainage, waste deposits, radioactive waste storage, rocks as building materials and their deterioration

Requirements:

Oral examination during the end-of-semester test period. Grading is based on the oral exam.

Required and suggested references:

Török Ákos: Geológia mérnököknek. Műegyetemi Kiadó, Budapest, 2007 Hartai Éva: A változó Föld. Miskolci Egyetemi Kiadó, Miskolc, 2004 Báldi Tamás: Elemző (általános) földtan I-II. ELTE TTK, Budapest, 1992.