



COURSE DATASHEET

Semester:	2014/15/1
Course:	Soil- and Groundwater Protection
Code:	VEMKKVM412T
Responsible department:	Department of Environmental Engineering
Department code:	MKKV
Responsible instructor:	Dr. Erzsébet Horváth

Course objectives:

knowledge in remediation recreation processes

Course content:

1. The influence of soil pollutants to the environmental elements and ecosystem;
2. data basics and soil monitoring;
3. The properties of soil-colloids; reactions on their surfaces: adsorption, adhesion, kohesion and protolysis;
4. Acid-base properties, redox reactions;
5. leaving the kolloid systems off
6. reactions between the soil and pollutants
7. The most important papameters influencing the pollution movement
8. organic pollutants and heavy metals in the soil, parameters influencing the mobility: solubility, pH, reactivity and persistency
9. Dosis and toxicity
10. Determination of heavy metals in the soil by the using of speciation analysis
11. organic micro-pollutants in the soil and their determination methods
12. Average; estimating of the damage, technologies and processes on the basis of caseworks

Requirements, evaluation and grading:

According to the requirements of fulfillment.

Required and recommended readings:

- C.A.J. Appelo, D. Postma: Geochemistry, groundwater and pollution, 1992. Rotterdam.
Hydrocarbon Contaminated Soils and Groundwater: Calabrese, E.J., Kostecki, P.T.,
Lewis Publishers, 1992.
Bear, J., Verrujit, A.: Modelling Groundwater Flow and Pollution, D. Reidel Publishing Co., 1987.