



COURSE DATASHEET

Semester:	2015/16/2
Course:	Environmental Chemistry
Code:	VEMKAKM112N
Responsible department:	Department of General and Inorganic Chemistry
Department code:	MKAK
Responsible instructor:	dr. Ottó Horváth

Course objectives:

Introduction of chemical processes spontaneously taking place in the nature, transport and biogeochemical cycles of important elements, as well as impacts and transformations of man-made pollutants.

Course content:

- Transport processes and chemical reactions.
- Distributional equilibria, redox equilibria.
- Hydrolysis processes, complex formation equilibria.
- Methylation reactions in the environment.
- The environmental chemistry and biogeochemical cycles of carbon, anthropogenic impacts.
- The environmental chemistry and biogeochemical cycles of nitrogen, anthropogenic impacts..
- The environmental chemistry and biogeochemical cycles of oxygen, anthropogenic impacts.
- The environmental chemistry and biogeochemical cycles of phosphorous, anthropogenic impacts.
- The environmental chemistry and biogeochemical cycles of sulfur and arsenic, anthropogenic impacts..
- The environmental chemistry and biogeochemical cycles of tin and lead, anthropogenic impacts..
- The environmental chemistry and biogeochemical cycles of zinc and cadmium, anthropogenic impacts.
- The environmental chemistry and biogeochemical cycles of mercury and chromium, anthropogenic impacts.
- The environmental chemistry and biogeochemical cycles of manganese, anthropogenic impacts.
- The environmental chemistry and biogeochemical cycles of iron and copper, anthropogenic impacts.
- Transport processes of man-made pollutants (chemodynamics).
- Spontaneous transformations of pollutants in natural environments.

Requirements, evaluation and grading:

Written examination. 50% ought to be reached for a pass mark

Required and recommended readings:

Butcher, S.S. et al. Global Biogeochemical Cycles, Academic Press, London, 1992.



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Required and recommended readings:

A. Gianguzza, E. Pelizetti, S. Sammarto (eds.): Marine Chemistry, Kluwer, Dordrecht, 1997
R. P. Wayne: Chemistry of Atmospheres, Oxford University Press, Oxford, 1994
Alan G. Howard: Aquatic Environmental Chemistry, Oxford University Press, Oxford, 1998
D. Merritts, A. De Wet, K. Menking: Environmental Geology, Freeman, New York, 1998