Level: Bachelor

Course title: Environmental chemistry

Status: obligatory

ECTS: 8

Requirements: none

Learning objectives

To provide students with systematic knowledge of the most important areas of physical chemistry necessary for understanding the physical and chemical processes in the environment.

Learning outcomes

General knowledge and understanding of the state of the matter, energy changes in physical and chemical processes, chemical and physical equilibrium, the processes at interfaces, chemical kinetics and photochemistry.

Syllabus

Theoretical instruction

Liquid state. Surface tension and viscosity. Gaseous state. Ideal and real gas state. The laws of thermodynamics, thermochemistry, chemical potential. Chemical equilibrium. Thermodynamic principles of multi-component equilibria. Ideal and dilute solutions. Real solutions. Processes at interfaces. Air-water interface. Soil-water interface. Soil-air interface. Chemical kinetics. Fundamentals of colloidal chemistry. Photochemical processes.

Practical instruction

Computational tasks from the major topics in the curriculum.

Weekly teaching load				Other: **-**
Lectures: 3	Exercises: 3	Other forms of teaching: -	Student research: -	