Level: bachelor

Course title: Environmental quality control

Status: obligatory

ECTS: 9

Requirements: none

Learning objectives

To teach students about parameters related to environmental quality, application of spectrometric and chromatographic analytical methods for analysis of inorganic and organic pollutants in environmental quality control (gaseous, liquid and solid samples) by applying principles of good laboratory practice.

Learning outcomes

- Student is able to choose analytical method for environmental quality parameter determination.
- Student is able to apply chromatographic and spectrometric analytical method for analysis of environmental samples by applying principles of good laboratory practice.
- Student is able to recognize analytical errors and to analyze them.
- Student uses computer in data analysis and reporting.

Syllabus

Theoretical instruction

Quality of the environment and factors that influence it. Parameters used to define quality of the environment-types, meaning, and sources. Samples in laboratory for environmental quality control – water, air, soil, biota. Sample storage, conservation and preparation for the analysis. Spectrometric methods in environmental quality control and good laboratory practice. Chromatographic methods in environmental quality control and good laboratory practice. Coupled analytical techniques. Analytical method-content. Analytical errors and their analysis. Overview of analytical methods for inorganic and organic substances.

Practical instruction

Sample preparation. Spectrometric methods in environmental quality control. Chromatographic methods in environmental quality control. Data analysis.

Weekly teaching load				Other: -
Lectures: 3	Exercises: 3	Other forms of teaching: 2	Student research: -	