

Level: PhD				
Course title: Selected Topics in Analytical Chemistry (DSH-604)				
Status: Elective				
ECTS: 15				
Requirements: None				
Learning objectives To provide broad and balanced knowledge of the key chemical concepts from the selected topics in analytical chemistry. To introduce students to modern trends in chemical analysis, as well as in organization of chemical quality control of various materials.				
Learning outcomes After successful completion of the course, a student is able to demonstrate knowledge in chemical and physico-chemical analysis of different materials, as well as in organization of the chemical quality control.				
Syllabus <i>Theoretical instructions</i> Analytical process. Chemical methods in analytical chemistry. Instrumental methods. Basic functions of the instrument. Optical methods. Mass spectrometry. Electroanalytical methods. Thermoanalytical methods. Analytical application of magnetic susceptibility. Radioanalytical methods. Separation methods in analytical chemistry: liquid and gas chromatography, ion chromatography, capillary electrophoresis. Coupled analytical systems. Chemometrics. Quality control in analytical chemistry. <i>Other forms of teaching</i> Review of the literature. Project preparation.				
Weekly teaching load				Other:
Lectures: 5	Exercises: /	Other forms of teaching: 5	Student research: /	