

Level: master				
Course title: DIDACTICS OF HIGHER EDUCATION OF CHEMISTRY				
Status: elective				
ECTS: 6				
Requirements: none				
Learning objectives Training students for teaching within the laboratory and auditory exercises in higher education of chemical disciplines.				
Learning outcomes After successfully completing the course, the student is able to critically assess the importance and the role of academic chemistry education in modern society; critically assess differences in cognition in chemistry teaching and scientific cognition, analyze the development of scientific knowledge in chemistry during history; define characteristics of learning in chemistry and differentiate levels of knowledge representation in chemistry; critically assess the relationship between the goals and outcomes of chemistry subject in academic chemistry education; define and explain the elements of the organizational structure of higher education in chemistry; organize and present the structure of chemical knowledge; objectively evaluate and assess the student achievement in a declarative, procedural and conceptual chemistry knowledge.				
Syllabus <i>Theoretical instruction</i> The unity of teaching and learning of chemistry in academic education. Context and problem-based learning in academic education. Learning based on research. The practical work of students in the academic chemistry education. Cooperative and collaborative work of students. Computer-aided learning in academic chemistry education. Student practice in chemical industry. Evaluation and valorization of student achievement in chemistry. <i>Practical instruction: Exercises, Other forms of teaching, Study research work</i> Modelling of desirable knowledge structures in selected teaching chemistry topics. Defining the expected outcomes of teaching chemistry in certain chemical disciplines. Concretization of the expected outcomes within the chosen teaching topics. Analysis of basic chemical concepts (corpuscular concept, the preservation concept, the concept of equilibrium, acids and bases concept, the concept of sustainable development). Educational software in academic chemistry education. Construction of instruments for evaluation and valorization of students' achievement. Self-evaluation of teachers work. Preparing teachers for teaching chemistry (per semester, thematic planning and lesson planning).				
Weekly teaching load				Other:
Lectures: 2	Exercises: 2	Other forms of teaching: 1	Student research:	