

Level: Bachelor				
Course title: Methodology of chemistry teaching II				
Status: elective				
ECTS: 8				
Requirements: none				
Learning objectives Development of methodological competences and training of students - future chemistry professors for the successful realization of chemistry teaching in primary and secondary education.				
Learning outcome After successfully completing the course, the student is able to: analyze, critically evaluate and select the optimal teaching methods for implementation of different teaching topics in primary and secondary school chemistry teaching; define and interpret the most important educational strategy in teaching chemistry; describe, select and apply appropriate forms of work in a given teaching situations; justify the requirements in teaching facilities, equipment and teaching resources necessary for modern chemistry teaching and actively be committed to the implementation of these requirements in a real teaching situation; define and interpret the cognitive, psychological and methodical preparation of students for chemistry teaching process; apply different forms of evaluation of students' achievement in chemistry; construct chemistry knowledge tests and elaborate on the test results; analyze the educational component in teaching chemistry; prepare annual work plan, plan teaching subject and teaching units and events; self-evaluate the teaching process.				
Syllabus <i>Theoretical instruction</i> Teaching methods in chemistry. Verbal and textual methods. The method of chemical experiments. Illustrative-demonstrational methods. Combined methods. Selection and use of teaching methods. Active teaching of chemistry. Forms and types of teaching in chemistry: regular, additional, supplemental and optional classes. Frontal, group and individual forms of work in teaching chemistry. Team, programmed and problem-solving teaching chemistry. Professional excursions. The course of the teaching process in chemistry teaching: introduction of students into the teaching work, processing of new contents, practice and repetition. Control and evaluation of knowledge in chemistry teaching. Standards of student achievement in chemistry teaching, educational minimum. Exams. Test of knowledge as a tool for control and evaluation of knowledge in chemistry. Construction of achievement test in chemistry and performance of evaluation on the test. Organization of chemistry teaching class. Articulation and the class flow. Upbringing in the chemistry teaching process: intellectual, operational-technical, moral, aesthetic education and education for environmental protection. Teaching facilities, equipment and teaching aids: chemical cabinet, laboratories, specialized classroom. Teaching and auxiliary means in teaching chemistry. Preparing professors for chemistry teaching: annual plan, planning the instructional theme, preparing for a teaching unit. Evaluation and self-evaluation of professor's work. Keeping of the operation documentation. References in chemistry teaching. <i>Practical instruction: Exercises, Other forms of teaching, Study research work</i> Laboratory exercises for demonstration and student experiments in organic chemistry topics and biochemistry. Mapping standards and outcomes in educational issues. The design and statistical analysis of achievement tests in chemistry.				
Weekly teaching load				Other:
Lectures: 2	Exercises: 4	Other forms of teaching:	Student research:	

