

Level: specialist				
Course title: INSTRUCTIONAL TECHNOLOGY IN CHEMISTRY EDUCATION – ADVANCED COURSE SPH-603				
Status: elective				
ECTS: 5				
Requirements: none				
Learning objectives Enabling students for advanced implementation of modern educational technology in chemistry teaching.				
Learning outcomes <i>After successful completion of the course, a student is able to:</i> <ul style="list-style-type: none"> • define and classify models and modelling in chemistry education, • explain the role of computers in individualization of chemistry teaching, • conduct interactive virtual experiments, • explain the pedagogical implications of simulations and didactic games in chemistry teaching process and design appropriate games, • define and explain educational strategies in computer-based chemistry education (linear, intrinsic, adaptive strategy). 				
Syllabus <i>Theoretical instruction</i> Definition of educational technology in chemistry education. Models and modelling in chemistry teaching process: definition, characteristics, classification and types of models. Methodology of modelling in chemistry education. Implementation of computers in chemistry education, individualization of teaching process using computers, computer data processing. Virtual experiments. Simulations and didactic games. Educational strategies in chemistry education: linear, intrinsic, adaptive strategy, Socrates' dialog.				
<i>Practical instruction</i> is designed in accordance with the theoretical syllabus.				
Weekly teaching load				Other:
Lectures: 2	Exercises:	Other forms of teaching: 2	Student research:	