

Level: Master				
Course title: Seminar – Concept of Chemical Equilibrium in Teaching Chemistry				
Status: elective				
ECTS: 5				
Requirements: none				
Learning objectives: To enable students to use the concept of chemical equilibrium in aqueous solution to elucidate the course of chemical reactions, implementation of different techniques of presenting information, develop capability of skilful communication of acquired knowledge in form of a seminar paper.				
Learning outcomes: After completing the course, students should be able to analyze the types of simultaneous chemical equilibria in aqueous solutions and explain the course of the reaction choosing the determining one, to use different sources of information, employ IT-based techniques for interpretation and presentation of the results.				
Syllabus <i>Theoretical instruction:</i> basic principles of elaboration strategy for analytical determinations. Types of chemical equilibrium in aqueous solutions: acid-base equilibria, precipitation and complex-formation reactions, redox equilibria. Relationship between different types of equilibria in aqueous solutions. Equilibria in non-aqueous solutions. Literature search. Literature review and data categorization as source materials for writing the seminar paper. <i>Additional activities:</i> Interpretation of literature data and data obtained by search of electronic databases. Preparation of the concept of a type of equilibrium chosen for presentation. Critical analysis of possible equilibria influencing the determining equilibrium. Instructions for writing the seminar paper.				
Weekly teaching load				Other: 2
Lectures: 2	Exercises:	Other forms of teaching:	Student research:	