

Study program: Faculty of Environmental protection			
Type and level of study: Doctoral academic studies			
Course Title: SELECTED TOPICS OF INSTRUMENTAL METHODS OF ANALYSIS			
Teachers: Mira Pucarević			
Status: ELECTIVE, III semester			
ECTS: 15			
Prerequisite: None			
The goal of course Acquiring knowledge and skills related to the application of instrumental methods of analysis for self-use equipment, planning, installation and performance analysis, and interpretation of the analysis results..			
The outcome of the subject Students will have increased knowledge of new techniques and mechanisms used in instrumental analysis of specific analytes. You will be familiar with the methods of validation of standard and non-standard methods			
Syllabus <i>Theoretical study</i> – Students become familiar with the latest instrumental methods used in the analysis of environmental conditions: gel-permeation chromatography and purification, gas chromatography mass spectrometry (GC-MS/MS), liquid chromatography-tandem mass spectrometry (HPLC-MS/MS) and post column derivatization, the interpretation of mass spectra, authentication compounds, the parameters optimization of analytical methods. Coping with modern instrumental methods; determination of different analytes in model systems using the instrumental methods of analysis; the collection, processing and interpretation of results			
Literature N. J. Marjanović, I. F. Jankoviš: Instrumentalne metode analize, udžbenik sa praktičnim primerima, Tehnološki fakultet i Zavod za izdavanje udžbenika, Novi Sad, 1983. J. Mišović, T. Ast: Instrumentalne metode hemijske analize, TMF Beograd, 1992. DA Skoog, FJ Holler, SR Crouch, Introduction to instrumental analysis, 6th Ed. Brooks/Cole, 2006 S Ahuja, N. Jespersen, Modern Instrumental Analysis, Elsevier Science, 2006 Daniel C. Harris, Quantitative Chemical Analysis, W.H. Freeman and Company, 7th edition, New York, 2007.			
Number of lectures:			Other Classes
Lectures: 3	Practices: 7	Other forms of teaching:	
Student research work:			
Teaching methods: Lectures, using computer technology, discussions with students, individual and team work.			
Score (maximum 100 points)			
Pre-commitments	Poens	The final exam	Poens
Activity during lectures	10	Written exam	
Practical classes		Oral examination	40
Colloquia			
Seminars	50		
<i>Total</i>	60		40