

Study program: Faculty of Environmental protection			
Type and level of study: Doctoral academic studies			
Course Title: SPECTROCHEMICAL METHODS FOR TRACE ELEMENTS ANALYSES			
Teachers: Nataša Stojić			
Status: ELECTIVE, IV semester			
ECTS: 15			
Prerequisite: None			
The goal of course The goal is for students to gain the theoretical basis of spectrochemical analysis of trace elements, the acquisition of knowledge and skills necessary for the application of standard methods and introducing the latest spectrochemical methods. In addition, the goal is the adoption of methodologies for performing the spectrochemical analysis by sampling the processing of results.			
The outcome of the subject Students will be able to understand the theoretical basis, characteristics and application possibilities of spectrochemical methods, as well as a higher level of understanding of methodology for performing spectrochemical analytical methods.			
Syllabus <i>Theoretical study</i> – The theoretical basis of spectrochemical analysis of trace elements: the spectrum structure, the width and intensity of spectral lines. The spectral instruments: functioning principle, the basic scheme, the properties of the device. Quality of measurements, sampling, sample preparation, standards and methodology of spectrochemical methods. Methods of emission spectrometry, methods of absorption spectrometry, methods of optical and X-ray fluorescence spectrometry, mass spectrometry, the method of introducing the sample. New spectrochemical methods, coupled techniques, speciation. Comparison of spectrochemical and other methods of analysis of trace elements.			
Literature 1. C.Vandecasteele, C.B.Block, Modern Methods for Trace Element Determination, John Wiley & Sons, Chichester 1993. 2. G. Gauglitz, T. Vo-Dinh, Handbook of Spectroscopy, Wiley-VCH, Weinheim 2003 3. I.D.Ingle, Jr., S.R.Crouch, Spectrochemical Analysis, Prentice-Hall, London 1988			
Number of lectures: 5			Other Classes
Lectures: 3	Practices: 7	Other forms of teaching:	
Teaching methods: Lectures, using computer technology, discussions with students, individual and team work, practical classes			
Score (maximum 100 points)			
Pre-commitments	Poens	The final exam	Poens
Activity during lectures		Written exam	
Practical classes		Oral examination	35
Colloquia	35		
Seminars	30		
<i>Total</i>	65		35