

Study program: Faculty of Environmental protection			
Type and level of study: Doctoral academic studies			
Course Title: ENVIRONMENTAL INDICATORS			
Teacher(s): Mirjana Radovanović			
Status: ELECTIVE, III semester			
ECTS: 15			
Prerequisite: None			
The goal of the course: To provide students with theoretical and practical knowledge of the methods used to monitoring of changes in the environment. Particular emphasis will be placed on the use of different types of indicators to determine the quality of the environment and the systematization of indicators showing the interaction among people and the environment.			
The outcome of the subject: After completing this course, students will be able to apply theoretical and practical knowledge of systematic monitoring of interaction processes in the environment.			
Syllabus: <i>Theoretical study</i> – Definitions. History of study. Basic principles of environmental monitoring. Different levels and methods of monitoring. Monitoring air environment. The methodology of the sampling air. Chemical analyzes of air. Monitoring terrestrial environment. Mechanical, physical and microbiological testing of soil. Monitoring of the aquatic environment. Testing of water samples. Biomonitoring methods. Types and characteristics of bio-indicators. File structure communities of organisms as indicators of the environment. Guidelines for the routine sampling and analysis. The method of rapid assessment. Systematic monitoring of monitoring of interaction processes in the environment. Consideration of a number of numerical data and environmental indicators. Systematization of indicators showing the interaction of people and the environment. Introduction and application of DPSIR methodology (DPSIR framework) which describes the relationship between the causes and consequences of the problem. The elements of the methodology are driving factors (D - Driving Forces), pressure (P - Pressures), Condition (S - State), the impact of (I - Impact), the reaction of society (R - Response). Introduction to the National List of Indicators of Environmental Protection of Serbia. <i>Practical classes</i> – Case studies.			
Literature: Filipović, D. 1999. Modeliranje životne sredine gradova-monitoring i zaštita. Zadužbina Andrejević. 111 strana. Barbour, M.T., J. Gerritsen, B.D. Snyder, & J.B. Stribling. 1999. "Rapid Bioassessment Protocols for Use in Streams and Wadeable Rivers: Periphyton, Benthic Macroinvertebrates and Fish, Second Edition." EPA 841-B-99- 002. U.S. Environmental Protection Agency; Office of Water; Washington, D.C.			
Number of lectures:			Other Classes
Lectures: 3	Practices:	Other forms of teaching:	
Teaching methods: Lectures, consultations, individual work.			
Pre-commitments	Poens	The final exam	Poens
Activity during lectures	10	Written exam	40
Practical classes		Oral examination	
Colloquia			
Seminars	50		
<i>Total</i>			