

Course Unit Descriptor

Study Programme: Doctoral Academic Studies in Environmental Protection, Doctoral Academic Studies in Chemistry			
Course Unit Title: Remediation Processes			
Course Unit Code: DZZS-705			
Name of Lecturer(s): Full Professor Srđan Rončević, Associate Professor Snežana Maletić			
Type and Level of Studies: PhD degree			
Course Status (compulsory/elective): Elective			
Semester (winter/summer): Summer			
Language of instruction: English			
Mode of course unit delivery (face-to-face/distance learning): Face-to-face			
Number of ECTS Allocated: 15			
Prerequisites: None			
Course Aims: Training students to individually perform assessment and remediation of contaminated sites.			
Learning Outcomes: After completing the course, students should know how to independently apply gained knowledge of the remediation processes for contaminated sites and remediation management processes; independently plan and carry out experiments and critically evaluate the results of monitoring remediation processes; independently select the best remediation technique.			
Syllabus: <i>Theory</i> Mechanisms and kinetics of biodegradation and biotransformation of specific pollutants. Processes in porous mediums during remediation: physical, chemical and biological processes of contaminated sites, distribution mechanisms of pollution, transport of nutrients and electron acceptors, respiration. Evaluation of contaminated sites and monitoring: hydro-geological characteristics of the site, aquifer characterization. Monitoring of natural remediation. Choosing the best remediation techniques. Remediation processes management. <i>Practice</i> Project design – Evaluation of selected sites and identifying the best remediation technique.			
Required Reading: 1. M.N. Sara: Site Assessment and Remediation Handbook, second edition, Lewis Publishers, 2003. 2. Scientific papers in the field of remediation of contaminated sites.			
Weekly Contact Hours: 10	Lectures: 5	Practical work: 5	
Teaching Methods: Lectures, desk study projects			
Knowledge Assessment (maximum of 100 points): 100			
Pre-exam obligations	points	Final exam	points
Desk study project	50	Oral exam	50