Course Unit Descriptor

Study Programme: Environmental Engineering			
Course Unit Title: Environmental Practicum			
Course Unit Code: Z503A			
Name of Lecturer(s): Radonić Jelena			
Type and Level of Studies: Master level			
Course Status (compulsory/elective): compulsory			
Semester (winter/summer): winter			
Language of instruction: English			
Mode of course unit delivery (face-to-face/distance learning): face-to-face			
Number of ECTS Allocated: 7			
Prerequisites: None			
Course Aims: Acquisition of practical knowledge in environmental engineering field. Visits to factories, laboratories and institutes and pragmatic understanding of the real problems in water, air and soil protection. Simulation and optimization of protection process and wastewater, air and soil treatments, using appropriate software packages. Lectures cover the theoretical overview of the specifics of each process in air, water and soil protection field.			
Learning Outcomes: Students will directly use acquired knowledge in practice to solve complex problems in the field of environmental protection.			
Syllabus: The parameters of wastewater. Wastewater. Deposition. Coagulation. Flotation. Filtration. Aeration. Degassing. Disinfection. Membrane processes. Biological wastewater treatment. Sludges. Methods for sludge thickening. Sludge conditioning. Sludge dehidration. Exhaust fumes. Gas-gas separation. Gas-solid separation. Workshop with topics: solutions for wastewater for Carnex meat plant; ideas for clean technology in sugar industry; optimization of wastewater cleaning process; reducing pollution through energy savings – Pinch technology application. Software SuperPro Designer application in selected examples from practice.			
Required Reading: Relevant literature in English, tbd			
Weekly Contact Hours: 8	**Lectures: 4**	**Practical work: 4**	
Teaching Methods: Lectures, computer practice, field practice, study tours and individual consultations.			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	**Final exam**	points
Group Assignment		Examination Assignment	
Exercises			
Test			

Test			
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			