

Study Programme: Environmental Engineering And Occupational Safety Engineering			
Course Unit Title: Wastewater treatment technologies			
Course Unit Code: Z499			
Name of Lecturer(s): Mihajlović Ivana, Petrović Maja			
Type and Level of Studies: bachelor			
Course Status (compulsory/elective): elective			
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: Acquiring knowledge about specific requirements and procedures for municipal wastewater treatment. Providing knowledge to students on specific requirements and procedures for industrial wastewater treatment. Providing knowledge to students about optimizing procedures for the treatment of specific industrial pollutants.			
Learning Outcomes: After the completion of the course and passing the exam, students will be able to: - identify efficient and economically justified wastewater treatment procedures in communal activities, - identify efficient and economically justified wastewater treatment procedures in specific industrial systems, - propose optimal procedures for the treatment of specific industrial pollutants.			
Syllabus. Sources and types of wastewater (municipal wastewater, landfill leachate, sanitary wastewater, atmospheric wastewater). Sources and types of industrial wastewater (printing industry, food industry, chemical industry, petrochemical industry, metal processing industry, etc.). Overview of typical characteristics of municipal wastewater. Overview of typical characteristics of industrial wastewater. The influence of wastewater characteristics on the selection of the relevant wastewater treatment process. Conventional and advanced wastewater treatment processes. Selection and optimization of wastewater treatment depending on characteristics of wastewater and other indicators of the industrial process.			
Required Reading: Relevant literature in English, tbd			
Weekly Contact Hours: 2	Lectures: 3	Practical work: 0	
Teaching Methods: Lectures. Computer exercises. During the semester, students are required to attend lectures and computer exercises. Pre-exam requirements are formed by summing points obtained for attendance at lectures and exercises and on 2 tests. After successfully realized pre-exam requirements, students take the final exam consisting of two parts: written and oral.			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	Final exam	points
Attendance			
Computer exercises			
Tests (4x)			

