

Course Unit Descriptor

<b>Study Programme:</b> Bachelor Academic Studies in Chemistry - Quality Control and Environmental Management, Bachelor Academic Studies in Environmental Protection – Environmental Protection Analyst			
<b>Course Unit Title:</b> Water Pollution			
<b>Course Unit Code:</b> IZZS-204			
<b>Name of Lecturer(s):</b> Assistant Professor Dragana Tomašević Pilipović			
<b>Type and Level of Studies:</b> Bachelor of Science Degree			
<b>Course Status (compulsory/elective):</b> Elective			
<b>Semester (winter/summer):</b> Winter			
<b>Language of instruction:</b> English			
<b>Mode of course unit delivery (face-to-face/distance learning):</b> Face-to-face			
<b>Number of ECTS Allocated:</b> 5			
<b>Prerequisites:</b> None			
<b>Course Aims:</b> Train students to control the quality of natural and waste waters and define the chemical and ecological status of surface water and groundwater.			
<b>Learning Outcomes:</b> Understanding the chemical processes in natural waters. Master the necessary knowledge about the effects of pollutants on aquatic ecosystems, as well as the impact of pollutants on groundwater.			
<b>Syllabus:</b> <i>Theory</i> Studying the hydrological balance and fundamental indicators of the quality of natural waters. Water as an ecosystem. Factors affecting the quality of water in nature. Natural and anthropogenic pollution. Studying the processes that lead to water pollution. Biological pollutants. Thermal water pollution. Chemical pollutants in water (oil and derivatives, pesticides, surface-active substances, polychlorinated biphenyls, polycyclic aromatic hydrocarbons, metals, etc.). Radioactive pollutants in the water. Distribution and migration of pollutants in aquatic environments. <i>Practice</i> Determination of physico-chemical, organic and inorganic, and biological parameters of water quality parameters and data interpretation. Determination of the solubility of gases, oxidation-reduction potential of water, distribution coefficients in the water / sediment for selected materials, based on the monitoring of natural waters. Calculation of the pressure for a given body of water.			
<b>Required Reading:</b> 1. Metcalf & Eddy: Wastewater Engineering, treatment disposal reuse. McGraw-Hill, 2004.			
<b>Weekly Contact Hours:</b> 4	<b>Lectures:</b> 2	<b>Practical work:</b> 2	
<b>Teaching Methods:</b> Lectures, laboratory work and seminar			
<b>Knowledge Assessment (maximum of 100 points):</b> 100			
<b>Pre-exam obligations</b>	points	<b>Final exam</b>	points
Active class participation	5	Written exam	40
Practical work	20		
Preliminary exam	15	Oral exam	10
Seminars	10		