

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> Environmental Risk Assessment			
<b>Course Unit Code:</b> OZZS-402			
<b>Name of Lecturer(s):</b> Full Professor Jasmina Agbaba, Assistant Professor Malcolm Watson			
<b>Type and Level of Studies:</b> Bachelor of Science Degree			
<b>Course Status (compulsory/elective):</b> Compulsory			
<b>Semester (winter/summer):</b> Summer			
<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> 6			
<b>Prerequisites:</b> None			
<b>Course Aims:</b> Students gain advanced knowledge in the field of risk assessment and prediction of environmental problems, and master the basic methods of forecasting and risk assessment of the environment. Students should be able to plan and implement simplified procedures of risk assessment and critically assess the significance of the obtained outcomes given the importance and limitations of risk assessment.			
<b>Learning Outcomes:</b> Students will be able to demonstrate systematic understanding of the basic concepts of risk assessment in the environment, will have the ability to collect data and apply the appropriate model for risk assessment in order to solve the unknown types of environmental problems, the ability to link the outcomes of a risk assessment. In addition, students will acquire the skills necessary to work independently in the evaluation of risks, with the ability to make decisions in complex and unpredictable situations.			
<b>Syllabus:</b> <i>Theory:</i> The study of logic and expression of risk assessment, including human risk assessment (hazard identification, exposure assessment, dose-response assessment and risk characterization) and ecological risk assessment (problem formulation, characterization and environmental effects of exposure and risk characterization). The study of methods for the prediction and assessment of the risks to the environment, including the following topics: global distribution of contaminants, bioaccumulation and bioconcentration in aquatic organisms, structure activity relationships for predicting ecological effects of chemicals, predictive ecotoxicology, population modelling, environmental risk assessment - current USEPA recommendations and future directions . <i>Practice:</i> Practical teaching closely follows the theoretical lessons, with students applying a variety of risk assessment tools.			
<b>Required Reading:</b> 1. Calow, P. P., 1997, <i>Handbook of environmental risk assessment and management</i> , Blackwell Science, Oxford, UK, ISBN: 978-0865427327. 2. Ricci, P. F., 2006, <i>Environmental and health risk assessment and management: principles and practices (Environmental pollution)</i> , Springer, Dordrecht, the Netherlands, ISBN: 978-9048169610.			
<b>Weekly Contact Hours:</b> 5	<b>Lectures:</b> 3	<b>Practical work:</b> 2	
<b>Teaching Methods:</b> Lectures, laboratory work.			
<b>Knowledge Assessment (maximum of 100 points):</b> 100			
<b>Pre-exam obligations</b>	points	<b>Final exam</b>	points
Active class participation	10	Written exam	30
Practical work	20	Oral exam	20
Preliminary exam(s)	20		