

Course Unit Descriptor

<b>Study Programme:</b> MSc Ecological Risk Assessment			
<b>Course Unit Title:</b> Regulatory Ecotoxicology and Ecological Risk Assessment of the Chemicals			
<b>Course Unit Code:</b> ME18			
<b>Name of Lecturer(s):</b> Prof dr Ivana Teodorovic			
<b>Type and Level of Studies:</b> Master Academic Degree			
<b>Course Status (compulsory/elective):</b> Compulsory			
<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> 8			
<b>Prerequisites:</b> Ecotoxicology, Chemistry / Environmental Chemistry, Animal Physiology, Plant Physiology			
<b>Course Aims:</b> Introduction to the term and specific classes of regulated chemicals, processes and principles of regulatory driven ecological risk assessment of chemicals.			
<b>Learning Outcomes:</b> Comprehensive overview of regulatory framework in regulated chemical management, understanding of the role of ecotoxicology in complex system of chemical management and acquiring practical skills and knowledge necessary for regulatory driven ecological risk assessment of chemicals.			
<b>Syllabus:</b> Regulated chemicals: definitions, comparative overview of different classes of regulated chemicals (pesticides - active substances and plant protection products, industrial chemicals, biocides, priority substances in water cycle, priority hazardous chemicals), regulatory frameworks and competent authorities for chemicals relevant for environmental protection (EFSA, ECHA, EC). Risk assessment and risk management of regulated chemicals. Prospective risk assessment. Retrospective risk assessment. Basic principle of chemical risk assessment: hazard – exposure – effects –risk. Definitions of hazard and hazard quotient. Exposure assessment. PEC derivation. Exposure modeling. Biological effects. PNEC and RAC derivation. Similarities and differences in human and ecological risk assessment process for different regulated chemicals. Ecotoxicology, Toxicology and Environmental epidemiology in risk assessment of chemicals.			
<b>Required Reading:</b> Leeuwen, C.J. van, Vermeire, T.G. (Eds.) (2007) Risk Assessment of Chemicals: An Introduction. Springer. ISBN 978-1-4020-6102-8. Selected guidelines (OECD, US EPA, EFSA, ECHA) for ecological risk assessment. Chemical Regulations. Selected draft assessment reports for regulated chemicals. FOCUS and other publicly available software for ERA.			
<b>Weekly Contact Hours:</b>	<b>Lectures:</b> 2	<b>Practical work:</b> 8	
<b>Teaching Methods:</b> Lectures, discussions, individual or group research, project proposal presentation			
<b>Knowledge Assessment (maximum of 100 points): 100</b>			
<b>Pre-exam obligations</b>	points	<b>Final exam</b>	points
Active class participation		written exam	
Practical work	up to 30	oral exam	up to 70

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