Study programme: Master Academic Studies
Analyst of Environmental Protection, Master in Geography

Level: master academic studies

Course title: Environmental Risk Assessment	**Course code:**	OZZS-402

Teacher: Jelena Molnar, PhD (др Јелена Молнар)

Status: obligatory for Master Academic Studies Analyst of Environmental Protection

ECTS: 7

Requirements: none

Learning objectives
Introducing students to methods of predicting and assessing environmental risks.

Learning outcomes
Students obtain knowledge in human and ecological risk assessment.

Syllabus

Theoretical instruction

Introduction to the logic of risk assessment and its expression including the human risk assessment (identifying hazards, assessment of exposure, hazard evaluation and dose response, and risk characterisation) and ecological risk assessment (problem formulation, characterisation of exposure and ecological effects, and risk characterisation).
Studying methods for environmental risk prediction and assessment including the following topics: global distribution of pollutants, bioaccumulation and bioconcentration in aquatic organisms, structure of the correlation of activities for predicting the ecological effect of chemicals, predictive ecotoxicology, population modelling, ecological risk assessment – current USEPA recommendations and future trends.

Practical instruction

Studying methods for environmental risk assessment and prediction together with risk assessment case studies. Browsing the Internet and/or standard library documentation according to the defined lecture topical issues.

Literature:

1. В. Балтић и Ј. Агбаба: Хемијски аспект квалитета воде за пиће и процена ризика, Квалитет воде за пиће, Природно-математички факултет, Департман за хемију, Нови Сад, 2006.
2. С. Шкунца-Миловановић, Б. Ђуровић: Пестициди у храни, Савезни завод за здравствену заштиту, НИРО "Привредни преглед, Београд, 1989.
3. Д. Ђурић и Љ. Петровић: Загађење животне средине и здравље човека - Екотоксикологија, 1996.

Additional literature:

1. G.M. Rand: Fundamentals of aquatic toxicology: environmental fate and risk assessment, Taylor & Francis, 1995.
2. M.A. Mayes, M.G. Barrow: Aquatic toxicology and risk assessment, ASTM International, 1992.
3. D.J. Hoffman, B.A. Rattner, G.A. Burton, J. Cairns: Handbook of ecotoxicology, CRC Press, 2002.
4. D. Connell, P. Lam, B. Richardson, R. Wu: Introduction to ecotoxicology, Blackwell

Publishing, 1999.
5. M.C. Newman, M.A. Unger: Fundamentals of Ecotoxicology, Lewis Publishers, 2003.
6. A.E. McBean, A.F. Rovers: Statistical Procedures for Analysis of Environmental Monitoring Data and Risk Assessment, Prentice Hall PTR, New Jersey, 1998.
7. R.A. Conway: Environmental Risk Analysis for Chemicals. Van Nostrand Reinhold Company, 1982.

Active teaching hours					Other
Lectures: 3 (45)	Auditory exercises: 2 (30)	Laboratory exercises	Other forms of teaching	Study research work	

Teaching methods
Lectures, theoretical and calculation exercises, seminar papers and consultations.

Grading (maximum number of points 100)

Pre-exam obligations	points	**Final exam**	points
Activity in lectures	10	Written exam	25
Practical work	25		
Colloquium	20	Oral exam	20