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

Course title: Environmental Risk Assessment

Teacher(s): Jasmina Agbaba, Jelena Molnar Jazić

Status: compulsory

ECTS: 6

Requirements: none

Learning objectives

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.

Learning outcomes

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.

Syllabus

Theoretical instruction

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 .

Practical instruction

Practical teaching follows the theoretical lessons.

Literature

1. Materijal s predavanja u elektronskom obliku (dostupan na servisu za podršku e-učenju - Moodle)
2. V. Baltić i J. Agbaba: Hemijski aspekt kvaliteta vode za piće i procena rizika, Kvalitet vode za piće, Prirodno-matematički fakultet, Departman za hemiju, Novi Sad, 2006.
3. S. Škunca-Milovanović, B. Đurović: Pesticidi u hrani, Savezni zavod za zdravstvenu zaštitu, NIRO "Privredni pregled, Beograd, 1989.
4. D. Đurić i LJ. Petrović: Zagađenje životne sredine i zdravlje čoveka -Ekotoksikologija, 1996.
5. G.M. Rand: Fundamentals of aquatic toxicology: environmental fate and risk assessment, Taylor & Francis, 1995.
6. D.J. Hoffman, B.A. Rattner, G.A. Burton, J. Cairns: Handbook of ecotoxicology, CRC Press, 2002.
7. M.C. Newman, M.A. Unger: Fundamentals of Ecotoxicology, Lewis Publishers, 2003.

Weekly teaching load 5 (75)	**Lectures 3**	**Exercises 2**

Methods of Teaching

Frontal teaching, theoretica exercise, consultations

Grading method (maximu 100 points)

Pre-examination assignments	points	**Final examination**	points
Activities during lectures	**0-10**	Written examination	**30**
Activities during exercises	**0-20**	Oral examination	**20**
Colloquia	**0-20**	.....	
Seminar paper			