Course title: Selected topics of eco-chemical education

Lecturer: Jasna Adamov

Status: obligatory/elective elective

ECTS: 15

Requirements:

Learning objectives

Training of PhD students for motivating and environmental education of students in primary and secondary schools within the chemical educational content

Learning outcomes After taking the course, the student:

General capabilities: demonstrate comprehensive knowledge of basic ecological processes incorporated in chemical education content.

Subject-specific capabilities: Student will be able to

- demonstrate methodological ability to detect irresponsible use of chemical products and environmental pollution
- successfully organize educational research in the field of eco-chemical education.

Syllabus

Theoretical instruction

Toxic xenobiotics. Metabolism of persistent xenobiotics. The origins and development of the theory of environmental risk. Four stages of analysis and risk assessment. Software development for the assessment of health risks. Pollution, health, environment and man. Toxic pollutants at home. Recycling at school. Activities in the school ecological section

Students research

Calculating the environmental and health risks. The application and design of software and evaluation of human exposure to environmental toxicants..

Suggested literature:

1. Palmer, J. - Environmental Education in the 21st Century: Theory, Practice, Progress and Promise, Routledge Abingdon UK, 1998.

2. Easton, T. - Taking Sides: Clashing Views on Controversial Environmental Issues, McGraw-Hill/Dushkin; 2010.

3. Orr, D. - Earth in Mind: On Education, Environment, and the Human Prospect, Island Press; 2004.

4. Uhl, C. - Developing Ecological Consciousness: Paths to a Sustainable Future, Rowman & Littlefield Publishers, 2003.

5. Stone, M. - Smart by Nature: Schooling for Sustainability, Watershed Media; 2009.

Weekly teaching load Other: Lectures: Exercises: Other forms of teaching: Student research: Other: 5 5 5 5 6 6 **Teaching methodology** lectures, practical exercises, assignments, discussions, seminars, consultations 6 6 **Grading (maximal number of points 100)** Seminar 30 points 5 5 6

Oral exam 70 points