Level: Specialist studies

Course title: Toxicology of aquatic ecosystems (advanced course)

Status: elective

ECTS: 5

Requirements: none

Learning objectives

Advanced study of the mechanisms of toxicity of pollutants on aquatic ecosystems and organisms, methods for monitoring pollutants and their effects, the prediction of environmental effects and risk assessment and risk management.

Learning outcomes

Students learn of advanced topics including the cycle of toxicants in aquatic ecosystems, and are able to independently perform critical analysis of situations involving pollution.

Syllabus

Theoretical instruction

This subject covers problems related to adoption, bioaccumulation, detoxification and excretion of toxic components by aquatic organisms, and a better understanding of the potential harmful effects of contaminants at different levels of biological organization from sub-cellular to ecosystem level. Physical and chemical transformations which toxicants are subject to in water and sediments, their distribution and mobility. The most widely distributed groups of inorganic and organic pollutants and their toxicity mechanisms. The study of problems of prediction methods and environmental effects, risk assessment and regulatory aspects of the toxicology of aquatic ecosystems, and the practical problems of their vulnerability.

Practical instruction

Practical instruction follows the theoretical part of the course.

Weekly teaching load				Other:
Lectures: 2 (30)	Exercises:	Other forms of teaching: 2 (30)	Student research:	