Level: Master

Course title: Toxicology of Aquatic Ecosystems

Status: elective

ECTS: 5

Requirements: none

Learning objectives

Deepening students' knowledge about the mechanisms of toxic effects of pollutants on aquatic organisms and ecosystems, methods for monitoring pollutants and their effects, predicting environmental effects and risk assessment and risk management.

Learning outcomes

After completing the course, students know how to explain in detail the cycles of toxicants in aquatic ecosystems, describe the methods and problems in predicting environmental effects, risk assessment and regulatory aspects of the toxicology of aquatic ecosystems. Students can work independently and in teams to analyse situations in which there is pollution.

Syllabus

Theoretical instruction

Adoption, bioaccumulation, detoxification and excretion of toxic components by aquatic organisms. Studying the potential harmful effects of contaminants at different levels of biological organization from sub-cellular to ecosystem level. The study of physical and chemical transformations of toxicants in water and sediments, their distribution and mobility. The most widely distributed groups of inorganic and organic pollutants and their mechanism of toxicity. The study of problems and methods for predicting ecological 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 instruction.

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