

Level: bachelor				
Course title: Toxicological Chemistry				
Status: elective				
ECTS: 5				
Requirements: none				
Learning objectives Students will be taught about the basic influence of toxic substances, basics of risk assessment and evaluation, as well as the basics of regulatory aspects of toxicological chemistry.				
Learning outcomes <ul style="list-style-type: none"> • Students will be able to explain mechanisms of reactions and effects of organic and inorganic toxic substances • Students will be able to explain the basics of risk assessment • Student will be able to explain availability of toxic substances in environment and to interpret result of simple acute toxicity test • Student will be able to choose and apply known analytical technique used to determine level of pollutants in environmental or tissue samples 				
Syllabus <i>Theoretical instruction</i> Toxicity testing and risk assessment. Toxicokinetics. Toxicodynamics and basics of cell toxicology. Occurrence and transport of toxic substances in environment. Monitoring of working and living environment quality, risk assessment. Toxic inorganic compounds and their effects. Toxic organic compounds and their effects. Exposure and handling of pesticides, food additives. Toxic natural compounds. Management of toxic compounds. <i>Practical instruction</i> Student learns how to analyze pollutants, how to determine toxicity and availability of toxic compounds: Calculations of maximum allowable levels of toxicants. Toxicity testing and data analysis. Coefficient octanol/water- determination. Basics of inorganic xenobiotics analysis. Basics of organic xenobiotic analysis. Application of model and calculation of risk assessment of sediments based on chemical characterization.				
Weekly teaching load				Other: -
Lectures: 2	Exercises: 2	Other forms of teaching: -	Student research: -	