

Level: master			
Course title: Analytics of Organic Pollutants			
Status: elective			
ECTS: 6			
Requirements: none			
Learning objectives The goal of the course is to expand theoretical and practical knowledge and understanding in the field of analytical chemistry of organic pollutants of air, water and soil. Students will be trained in modern and adequate procedure for the removal and degradation of persistent organic pollutants and intermediates from the environment using appropriate analytical techniques.			
Learning outcomes Students should be able to: <ul style="list-style-type: none"> ➤ explain the impact of persistent organic pollutants in the environment, ➤ suggest a modern and adequate procedure for the removal of persistent organic pollutants (pesticides, pharmaceuticals, dyes, phenols, polycyclic aromatic hydrocarbons) from the environment, ➤ apply acquired knowledge of chromatographic techniques and methods of determining total organic carbon in solving unknown analytical problems during the decomposition process of organic pollutants, ➤ apply acquired knowledge in qualitative and quantitative analysis of a variety of organic pollutants and products that arise during the process of their decomposition, and ➤ clearly and accurately analyze and interpret the experimental results obtained by using appropriate analytical techniques. 			
Syllabus <i>Theoretical instruction</i> Organic pollutants in general: types of organic pollutants. Sources of pollution. Persistent organic pollutants. Structure, sources, properties, stability, solubility, toxicity, resistance to degradation, evaporation, bioaccumulation of persistent organic pollutants. Pesticides, polycyclic aromatic hydrocarbons, mineral oils, dyes, phenols, soaps and detergents. Petroleum and related products. <i>Practical instruction</i> The application of liquid and gas chromatography for the qualitative and quantitative analysis of a variety of organic pollutants.			
Weekly teaching load			Other:
Lectures: 2	Exercises: 2	Other forms of teaching: 1	