

<b>Level:</b> SH				
<b>Course title:</b> Advanced Course of Bioanalytical Chemistry				
<b>Status:</b> elective				
<b>ECTS:</b> 5				
<b>Requirements:</b> none				
<b>Learning objectives</b> Providing insight into the courses of development of bioanalytical chemistry. Introducing students to select specific methods of bioanalytical chemistry and to apply those in solving complex analytical problems.				
<b>Learning outcomes</b> Master the specialized knowledge which will help to solve the specific problems in bioanalytical chemistry using modern instrumental techniques.				
<b>Syllabus</b> <i>Theoretical instruction.</i> Biomolecules in analytical chemistry. Biomarkers. New materials in bioanalytical chemistry. Contemporary aspects of the mass spectrometry in bioanalytical chemistry. Contemporary aspects of the methods of separation in bioanalytical chemistry. Contemporary spectroscopic methods in bioanalytical chemistry. Molecular recognition in bioanalytical chemistry. Amplification and sequencing. The directions of development of biosensors. Digital bioanalysis and microfluidics. Selected complex examples of the application of bioanalytical chemistry. Validation and uncertainty assessment of bioanalytical methods. The directions in development of bioanalytical chemistry.  <i>Practical instruction.</i> Comparing the performance of different bioanalytical techniques for the characterization and determination of the selected analytes. Bioanalytical determination in the presence of a complex matrix. Bioanalysis using flow systems.				
<b>Weekly teaching load</b>				Other:
Lectures: 2	Exercises: /	Other forms of teaching: 2	Student research:	