

<b>Level:</b> bachelor				
<b>Course title:</b> Pharmaceutical Chemistry (IB-404)				
<b>Status:</b> elective				
<b>ECTS:</b> 6				
<b>Requirements:</b> none				
<b>Learning objectives</b> Understanding the commercial pharmacologically active molecules using modern methods of organic chemistry and their structural characterization. Introduce students to the biological mechanism of action of the selected drugs and water-soluble vitamins.				
<b>Learning outcomes</b> Overcome the necessary knowledge on methods of synthesis, pharmacological effects and mechanism of biological action of selected drugs.				
<b>Syllabus</b> <i>Theoretical instruction</i> Chemical synthesis, pharmacological effects and mechanisms of biological action following types of drugs: drugs that act on the heart, antibacterial drugs, antidepressants, drugs for the treatment of gastric ulcers and allergic conditions. Important objectives of this course relate to the introduction of basic representative water-soluble naturally available vitamins in terms of their structure, physical-chemical properties and biological roles. In addition, part of the course is dedicated to the introduction of synthetic techniques suitable for work on a large scale. Also part of this course is devoted to acquiring knowledge about the factors that influence the resistance to drugs. One of the important tasks of this course is to introduce students to the structure and purity determination of synthesized compounds using NMR techniques. Introducing the main principles and features of this technique is planned to train students for rapid identification of the basic structural characteristics.  <i>Practical instruction</i>  Chemical processing and purification of intermediates in the multi-step synthesis of biologically active molecules, and their spectroscopic characterization.				
<b>Weekly teaching load</b>				Other:
Lectures: 2	Exercises: 3	Other forms of teaching: 1	Student research:	