

<b>Course code</b>	<b>IRL101</b>		
<b>Course title</b>	<b>RESEARCH AND DEVELOPMENT OF NEW DRUGS</b>		
<b>General information</b>			
Study programme	Graduate study „Drug research and development“, Graduate study „Medical chemistry“	Academic year	
Lecturer	Prof. Dr. Sc. Radan Spaventi		
Status			<b>Required</b>
ECTS system			<b>5</b>
<b>Course objectives</b>			
A general overview of research and development (R&D) process of new drugs in the innovative pharmaceutical companies, as well as in academia, will be explained. Drug discovery methods and usual milestones in the process will be detailed. Types of pharma companies (innovative and generic) will be described, as well as differences between them.			
<b>Course description</b>			
Students will be given the basic information on pharmaceutical market and trends, leading disease areas, pharmacy vs. hospital market, types of pharmaceutical companies (big pharma, generic companies, biotech, and virtual companies). The difference between active pharmaceutical ingredient and pharmaceutical product, as well as between different types of products will be covered: new chemical entities (NCEs), generics, biological drugs and vaccines, ethical and OTC products, commodity drugs, niche products etc. Students will learn about the main R&D steps, especially in drug discovery (hit generation, lead optimization, candidate selection, pre-clinical development, proof of concept, clinical trials).			
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