

Course name:	Modern Research Methods And Techniques			
Name of School	Doctoral School of the Medical University of Silesia in Katowice			
Year I	Course status	<i>obligatory</i>	Language of the cours	<i>English</i>
Form of classes	Number of hours	Methods of evaluation	ECTS	
<i>lectures</i>	-	Grade credit	3	
<i>exercises</i>	-			
<i>seminars</i>	30			
<i>together</i>	30			
Course coordinator	<i>Dr hab. n. med. Elzbieta Świętochowska, prof. SUM</i>			
Name of Department	Department of Medical and Molecular Biology The Faculty of Medical Sciences in Zabrze			
Course objectives	The aim of the course is to present the most frequent, significant and modernist methods and techniques used in biomedical research			
Prerequisites	master's degree			

LEARNING OUTCOMES

Category	Description of the outcome	Relationship to the outcomes for the programme
knowledge	1. The student knows and understands basic principles of methods and techniques used in biomedical research	<i>W_1, PS_WG</i>
	2. The student knows and understands differences between the results obtained with the use of particular research methods and techniques	<i>W_1, PS8_WG</i>
	3. The student describes available modern research techniques, is aware of their possibilities and limitations	<i>W_1, PS8_WG</i>
skills	4. The student selects the appropriate research model and method to solve selected scientific issues.	<i>U_1, PS8_UW</i>
	5. The student appropriately interprets the results obtained by various research methods and techniques.	<i>U_1, PS8_UW</i>
	6. The student is able to communicate on specialist topics to the extent that enables active participation in the international scientific environment	<i>U_1, PS8_UW</i>
social competencies	7. The student is aware of the research methods limitations.	<i>K_1, PS8_KK</i>
	8. The student can explain and convey the basic principles of biomedical research methods.	<i>K_1, PS8_KK</i>
	9. The student is able to establish scientific cooperation, and student can critically assess achievements in the field of medical sciences.	<i>K_1, PS8_KK</i>

CURRICULUM CONTENT

Theoretical basis of the use of selected research methods, activities, operations, allowing to carry out scientific research. Learning about types of research techniques. Demonstrating the important differences between a research method and a research technique. Explaining the issue : What does it mean that a research technique must be subordinate to a research method?

Research methods, techniques and tools. How to select a suitable research technique for your thesis? The 2 most important principles- preparation of individual presentations. Overview of selected modern research methods and techniques- microRNA, in-situ methods, microblots. The role of meta-analysis in modern science.

VERIFICATION OF LEARNING OUTCOMS

<i>Method for the validation of learning outcomes</i>	<i>Discussion, preparation of a presentation, oral verification of the topics conducted in class</i>
<i>Form and conditions of completing the course</i>	<p><i>Form and conditions of passing the course (tu nie jestem pewna, oficjalnie chyba jako "obtaining credit" ale nie wiem)</i></p> <p><i>A condition for passing is the attendance at all classes (or making up absences) and completing and passing the performed tasks.</i></p>
<i>LITERATURE ON THE SUBJECT</i>	
<i>Primary literature</i>	<i>A detailed list of literature will be provided by the lecturer during the course</i>
<i>Supporting literature</i>	<i>Literature downloaded from the indicated scientific databases during the conducted seminars.</i>

