

**A COURSE SYLLABUS – DOCTORAL SCHOOL  
REGARDING THE QUALIFICATION CYCLE FROM 2022 TO 2026**

<b>GENERAL INFORMATION ABOUT COURSE</b>				
Course title		<b>Doctoral laboratory</b>		
Name of the unit running the course		Doctoral School at University of Rzeszów		
Type of course ( <i>obligatory, optional</i> )		Obligatory		
Year and semester of studies		I-IV year/I-VIII semester		
Discipline		Health Sciences		
Language of Course		Polish		
Name of Course coordinator		Hab. Agnieszka Guzik, Assistant professor		
Name of Course lecturer		Hab. Agnieszka Guzik, Assistant professor		
Prerequisites		Before starting the course, a doctoral school student has the knowledge, skills and competences from the completed level 7 of the Polish Qualification Framework.		
<b>BRIEF DESCRIPTION OF COURSE (100-200 words)</b>				
The aim of the doctoral laboratory is to prepare a doctoral student for planning and conducting scientific research, and to equip him/her with skills and competences required for using the specialised methodology related to the research performed, to enable the preparation of the doctoral dissertation.				
<b>COURSE LEARNING OUTCOMES AND METHODS OF EVALUATING LEARNING OUTCOMES</b>				
Learning outcome	The description of the learning outcome defined for the course	Relation to the degree programme outcomes (symbol)	Learning Format (Lectures, classes,...)	Method of assessment of learning outcomes (e.g. test, oral exam, written exam, project,...)
Knowledge (no.)	(Knows and understands)			
1.	To the extent enabling a revision of the existing paradigms – global achievements, covering theoretical foundations as well as general issues and selected specific issues -appropriate for a scientific or artistic discipline	P8S_WG1	Laboratory classes / Tutorials	Monitoring of the doctoral student's work, preparation of the draft for the doctoral dissertation, discussion - semesters I and II
2.	Trends in the advancements and the latest discoveries in the selected scientific discipline, current scientific achievements, both in Poland and globally, in research related to a given discipline.	P8S_WG2	Laboratory classes / Tutorials	Monitoring of the doctoral student's work, preparation of the draft for the doctoral dissertation, discussion - semesters I and II
3.	Conceptual framework of a given discipline (also in the foreign language presenting the greatest impact), and of the related disciplines.	P8S_WG3	Laboratory classes / Tutorials	Monitoring of the doctoral student's work, preparation of the draft for the doctoral

				dissertation, discussion - semesters I and II
4.	Research methodology, including the principles of research planning and research project implementation, using interdisciplinary research techniques and tools.	P8S_WG4	Laboratory classes / Tutorials	Monitoring of the doctoral student's work, defining the research method for the doctoral dissertation, discussion - semesters I and II
<b>Skills (no.)</b>	<b>(Able to)</b>			
1.	Use knowledge from various fields of science or art for the creative identification and innovative solving of complex problems or performing research tasks, in particular: - define the purpose and subject of research, formulate a research hypothesis, - develop methods, techniques and research tools and use them creatively, - make conclusions on the basis of scientific research	P8S_UW1	Laboratory classes / Tutorials	Monitoring of the doctoral student's work, drafting the research-related part of the doctoral dissertation, preparation of the research project, preparation of publications, activity related to conferences -semester II-VIII
2.	Use scientific literature to identify and solve research problems as well as issues related to innovative activity, and apply adequate techniques to contribute novel concepts and solutions.	P8S_UW2	Laboratory classes / Tutorials	Monitoring of the doctoral student's work, drafting the research-related part of the doctoral dissertation, preparation of the research project, preparation of publications, activity related to conferences -semester II-VIII
3.	Perform a critical analysis and evaluation of the results of	P8S_UW3	Laboratory classes / Tutorials	Monitoring of the doctoral student's work,

	scientific research, expert activities and other creative works and their contribution to the development of knowledge.					drafting the research-related part of the doctoral dissertation, preparation of the research project, preparation of publications, activity related to conferences -semester II-VIII
<b>Social competence (no.)</b>	<b>(Ready to)</b>					
1.	Critical evaluation of the achievements within a given scientific or artistic discipline.	P8S_KK1		Laboratory classes / Tutorials		Monitoring of the doctoral student's work, activity related to conferences – semesters II-VII
<b>LEARNING FORMAT – NUMBER OF HOURS</b>						
Semester (no.)	Lectures	Seminars	Lab classes	Internships	others	ECTS
I-VIII						24
<b>METHODS OF INSTRUCTION</b>						
Methods based on observation, method of literature analysis and review, conducting research, discussion, individual work.						
<b>COURSE CONTENT</b>						
<p>Critical analysis of scientific research results.</p> <p>Using scientific literature to identify and solve research problems.</p> <p>Drawing up detailed assumptions for a research project.</p> <p>Preparation for independent work which involves planning and conducting scientific research.</p> <p>Determining the minimum sample size.</p> <p>Improving the ability to choose the right techniques, methods and research tools.</p> <p>Recruitment of participants for the study.</p> <p>Randomization process.</p> <p>Conducting pilot studies.</p> <p>Conducting the actual research.</p> <p>Database preparation.</p> <p>Analysis of the obtained findings.</p> <p>Hypothesis verification.</p> <p>Preparation for the dissemination of research findings.</p> <p>Preparation of scientific publications.</p> <p>The final effect of the course is reflected by the preparation of the doctoral dissertation.</p>						
<b>COURSE ASSESSMENT CRITERIA</b>						
The student successfully completes the course if he/she effectively performs the specific practical work, and presents detailed assumptions of the research project, partial reports on the conducted research, database, as well as analysis of the results of the research. The assessment takes into account the doctoral student's progress in activities leading to the learning outcomes defined in the syllabus for the course, i.e. documents confirming various forms of scientific activity (including abstracts, certificates of participation in conferences, publications).						
<b>TOTAL PhD STUDENT WORKLOAD REQUIRED TO ACHIEVE THE INTENDED LEARNING</b>						

<b>OUTCOMES – NUMBER OF HOURS AND ECTS CREDITS</b>	
Activity	Number of hours
Scheduled course contact hours	240 (30 hours in each semester for 4 years)
Other contact hours involving the teacher (consultation hours, examinations)	16 (2 hours in each semester for 4 years)
Non-contact hours – student`s own work (preparation for classes or examinations, project, etc.)	320 (40 hours in each semester for 4 years)
<b>Total number of hours</b>	576
<b>Total number of ECTS credits</b>	24
<b>INSTRUCTIONAL MATERIALS</b>	
Compulsory literature:	<ol style="list-style-type: none"> <li>1. Radomski D., Grzanka A. Metodologia badan naukowych w medycynie. Poznań, Wydawnictwo Naukowe Uniwersytetu Medycznego, 2011.</li> <li>2. Dwiliński L.: Podstawy naukowych badań. Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa 2009.</li> </ol>
Complementary literature:	<ol style="list-style-type: none"> <li>1. Boncler M., Różalski M., Watała C. Badania i publikacje w naukach biomedycznych Tom 1, Alfa-Medica Press 2011</li> <li>2. Boncler M., Watała C., Różalski M. Badania i publikacje w naukach biomedycznych Tom 2, Alfa-Medica Press 2011</li> <li>3. Jędrychowski W.: Zasady planowania i prowadzenia badań naukowych. Wyd. Uniwersytetu Jagiellońskiego, Kraków 2004.</li> </ol>

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Date and signature of the Course lecturer

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Approved by the Head of the Department or an authorised person