

A COURSE SYLLABUS – DOCTORAL SCHOOL
REGARDING THE QUALIFICATION CYCLE FROM 2023 TO 2027 .

GENERAL INFORMATION ABOUT COURSE				
Course title		Doctoral Laboratory		
Name of the unit running the course		Doctoral School at the University of Rzeszów		
Type of course (<i>obligatory, optional</i>)		Obligatory		
Year and semester of studies		Year I-IV / Semester I-VIII		
Discipline		Health Sciences		
Language of Course		Polish		
Name of Course coordinator		Dr. Hab. N. Health Sciences, Agnieszka Guzik, Prof. UR		
Name of Course lecturer		Dr. Hab. N. Health Sciences, Agnieszka Guzik, Prof. UR		
Prerequisites		Before beginning the course, a doctoral student at the doctoral school possesses the knowledge, skills, and social competencies resulting from completed education at level 7 of the Polish Qualifications Framework.		
BRIEF DESCRIPTION OF COURSE (100-200 words)				
The doctoral workshop aims to prepare the doctoral student to plan and conduct scientific research, equip the doctoral student with skills and competencies enabling the use of specialized methodology related to the research work performed, and enabling the preparation of a doctoral dissertation.				
COURSE LEARNING OUTCOMES AND METHODS OF EVALUATING LEARNING OUTCOMES				
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 a degree that allows for the revision of existing paradigms, the graduate is familiar with global scientific achievements, encompassing theoretical foundations, general issues, and selected specific topics relevant to the discipline of health sciences and related disciplines.	P8S-WG1	Laboratories/ Conversation	Observation of a doctoral student's work, development of a doctoral dissertation project, discussion – semesters I and II
2	The graduate is knowledgeable about the direction of development and the latest discoveries in the chosen discipline of health sciences, and is familiar with current scientific achievements, including global achievements, in research in the field of health sciences and related disciplines.	P8S-WG2	Laboratories/ Conversation	Observation of a doctoral student's work, development of a doctoral dissertation project, discussion – semesters I and II

3	The graduate knows and understands the conceptual framework of the discipline of health sciences and related disciplines (including in the primary foreign language).	P8S-WG3	Laboratories/ Conversation	Observation of a doctoral student's work, development of a doctoral dissertation project, discussion – semesters I and II
4	Understands research methodology, including the principles of research planning and implementation using interdisciplinary techniques and research tools.	P8S-WG4	Laboratories/ Conversation	Observation of a doctoral student's work, development of a doctoral dissertation project, discussion – semesters I and II
Skills (no.)	(Able to)			
1	Can use interdisciplinary knowledge to creatively identify and innovatively solve complex problems or perform research tasks, in particular: – Can define the purpose and subject of research and formulate a research hypothesis, – Can develop research methods, techniques, and tools, and apply them creatively, – Can draw conclusions based on research.	P8S-UW1	Laboratories/ Conversation	Observation of a doctoral student's work, development of the research part of the doctoral dissertation, preparation of a research project, preparation of a publication, conference activity – semesters II-VIII
2	Can use scientific literature to identify and solve research problems and problems related to innovation, and can utilize appropriate tools to create new elements of this body of work.	P8S-UW2	Laboratories/ Conversation	Observation of a doctoral student's work, development of the research part of the doctoral dissertation, preparation of a research project, preparation of a publication, conference activity – semesters II-VIII
3	Critically analyze and evaluate the results of scientific research, expert activities, and other scientific work, and assess their contribution to the advancement of knowledge.	P8S-UW3	Laboratories/ Conversation	Observation of a doctoral student's work, development of the research part of the doctoral dissertation, preparation of a research project, preparation of a publication, conference activity – semesters II-VIII
Social competence (no.)	(Ready to)			

1	Critically evaluate achievements within the discipline of health sciences and related disciplines.	P8S-KK1	Laboratories/ Conversation	Observation of a doctoral student's work, development of the research part of the doctoral dissertation, preparation of a research project, preparation of a publication, conference activity – semesters II-VIII
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LEARNING FORMAT – NUMBER OF HOURS

Semester (no.)	Lectures	Seminars	Lab classes	Internships	others	ECTS
I-VIII	-	-	Laboratories/ Conversation 8 x 30 hrs. – 240 hrs.	-	-	24

METHODS OF INSTRUCTION

Methods based on observation, method of analysis and criticism of literature, conducting research, discussion, individual work.

COURSE CONTENT

Program content covered in semesters I to VIII:

Critical analysis of research results.
Using scientific literature to identify and solve research problems.
Developing detailed research project assumptions.
Preparing for independent work in planning and conducting research.
Determining the minimum sample size.
Developing skills in selecting appropriate research techniques, methods, and tools.
Selection of participants for the study.
Conducting randomization.
Conducting pilot studies.
Conducting the main study.
Preparing a database.
Analysis of the obtained research results.
Verifying hypotheses.
Preparing for the dissemination of research results.
Preparing scientific publications.
The final outcome of the work is the preparation of a doctoral dissertation.

COURSE ASSESSMENT CRITERIA

Grading after each semester is based on the completion of specific practical work, presentation of detailed research project assumptions, partial research reports, databases, and analysis of individual research results. Assessment of the doctoral student's progress in activities related to the implementation of the learning outcomes planned in the syllabus for the course, including documents confirming various forms of research activity (including abstracts, conference certificates, publications).
Possible semester grades are: 2.0, 3.0, 3.5, 4.0, 4.5, 5.0.

TOTAL PhD STUDENT WORKLOAD REQUIRED TO ACHIEVE THE INTENDED LEARNING OUTCOMES – NUMBER OF HOURS AND ECTS CREDITS	
Activity	Number of hours
Scheduled course contact hours	240 hours (30 hours each semester for 4 years)
Other contact hours involving the teacher (consultation hours, examinations)	16 hours (2 hours each semester for 4 years)
Non-contact hours – student`s own work (preparation for classes or examinations, project, etc.)	464 hours (58-40 hours each semester for 4 years)
Total number of hours	720 hours
Total number of ECTS credits	24
INSTRUCTIONAL MATERIALS	
Compulsory literature:	<ol style="list-style-type: none"> 1. Radomski D., Grzanka A. Metodologia badan naukowych w medycynie. Poznań, Wydawnictwo Naukowe Uniwersytetu Medycznego, 2011. 2. Dwiliński L.: Podstawy naukowych badań. Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa 2009.
Complementary literature:	<ol style="list-style-type: none"> 1. Boncler M., Różalski M., Watała C. Badania i publikacje w naukach biomedycznych Tom 1, Alfa-Medica Press 2011 2. Boncler M., Watała C., Różalski M. Badania i publikacje w naukach biomedycznych Tom 2, Alfa-Medica Press 2011 3. Jędrychowski W.: Zasady planowania i prowadzenia badań naukowych. Wyd. Uniwersytetu Jagiellońskiego, Kraków 2004.

**(1 ECTS CREDIT CORRESPONDES TO 25 – 30 HOURS OF THE TOTAL WORKLOAD OF THE DOCTORAL STUDENT NEEDED TO ACHIEVE THE INTENDED RESULTS)*

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Date and signature of the instructor

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Approval by the Head of Unit or authorized person