

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

GENERAL INFORMATION ABOUT COURSE				
Course title	PhD seminar			
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	semestr I-IV			
Discipline	nutrition and food technology			
Language of Course	polish/english			
Name of Course coordinator	Prof. dr hab. Izabela Sadowska-Bartosz			
Name of Course lecturer	Prof. dr hab. Izabela Sadowska-Bartosz			
Prerequisites	Basic knowledge of food biochemistry, biophysics, food technology			
BRIEF DESCRIPTION OF COURSE (100-200 words)				
<p>The aim of the doctoral seminar is to prepare the doctoral student by supervisor to independently conduct scientific research and edit scientific manuscripts. Moreover, the doctoral seminar should prepare the doctoral student to formulate research hypotheses, perceive and verbalize scientific problems. The specific goal is to: acquire the ability to conduct a scientific discussion, raise the level of inference in the field of a selected scientific field, develop the ability to communicate with scientists outside their discipline, acquire knowledge and skills necessary in the correct preparation of a doctoral dissertation.</p> <p>Within the first two years of study, it is advisable to discuss the results of the pilot / actual studies.</p>				
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 the extent enabling the revision of the existing paradigms-a global achievement, including theoretical foundations and issues general and selected specific issues - appropriate for a scientific or artistic discipline	P8S-WG/1	Sem.	Project - implementation of the plan research
2	Main development trends in scientific or artistic disciplines in which education takes place	P8S-WG/2	Sem.	Project - implementation of the plan research
3	Scientific research methodology	P8S-WG/3	Sem.	Project - implementation of the plan research
4	Principles of disseminating the results of scientific activity, also in the mode of open access	P8S-WG/4	Sem.	Project - implementation of the plan research
5	Basic principles of knowledge transfer to the economic and social sphere as well as	P8S-WK/3	Sem.	Project - implementation of the plan

	commercialization of the results of scientific activity and know-how related to these results			research
Skills (no.)	(Able to)			
1	Use knowledge from various fields of science or art for 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 -UW/1	Sem.	Project - implementation of the plan research
2	Perform a critical analysis and evaluation of the results of scientific research, expert activities and other creative works and their contribution to the development of knowledge	P8S-UW/2	Sem.	Project - implementation of the plan research
3	Transfer the results of scientific activity to the economic and social sphere	P8S-UW/3	Sem.	Project - implementation of the plan research
4	Communicate on specialist topics to a degree enabling active participation in the international scientific environment	P8S-UK/1	Sem.	Project - implementation of the plan research, publications scientific
5	Communicate on specialist topics to a degree enabling active participation in the international scientific environment	P8S-UK/2	Sem.	Project - implementation of the plan research
6	Initiate a debate	P8S-UK/3	Sem.	Project - implementation of the plan research
7	Participate in the scientific discourse	P8S-UK/4	Sem.	Project - implementation of the plan research
8	Plan and implement individual and team research projects, also in an international environment	P8S-UO	Sem.	Project - implementation of the plan research
9	Plan and act for your own development as well as inspire and organize the development of other people	P8S-UU/1	Sem.	Project - implementation of the plan research

Social competence (no.)	(Ready to)			
1	Critical evaluation of the achievements within a given scientific or artistic discipline	P8S-KK/1	Sem.	Project - implementation of the plan research
2	Critical evaluation of one's own contribution to the development of a given scientific or artistic discipline	P8S-KK/2	Sem.	Project - implementation of the plan research
3	Recognize the importance of knowledge in solving cognitive and practical problems	P8S-KK/3	Sem.	Project - implementation of the plan research
4	Maintaining and developing the ethos of research and creative communities, including: - independently conducting research activities - respecting the principle of public ownership of the results of scientific activity, taking into account the principles of intellectual property protection	P8S-KR	Sem.	Project - implementation of the plan research

LEARNING FORMAT – NUMBER OF HOURS

Semester (no.)	Lectures	Seminars	Lab classes	Internships	others	ECTS
I-IV	-	60	-	-	-	8

METHODS OF INSTRUCTION

Seminar classes:

- 1) Assessment of the progress of the research work constituting the basis for the doctoral dissertation;
- 2) Developing detailed knowledge in the area of research constituting the basis of a doctoral dissertation
- 3) Developing the general knowledge of doctoral students in the discipline of food and nutrition technology
- 4) Teaching practice - oral presentation, evaluation of other doctoral students' presentations, participation in the discussion as a speaker and listener

Discussion with the promoter about good manners in science; methodology for preparing a doctoral dissertation in the field of food and nutrition technology, work plan and methods of its implementation, and respect for copyright; interpretation of results (15 semester hours).

COURSE CONTENT

Seminar classes:

The program content is closely related to the area of the doctoral student's research work.

The seminar covers issues related to the implementation of research topics in the field of food technology and human nutrition.

1. Defining the topic of work, subject and goals of own research.
2. Development of an outline of the concept of a doctoral dissertation (problems and hypotheses, selection of research methods).
3. Construction of the theoretical part of the work - selection of literature.
4. Substantive preparation for the practical conduct of pilot studies.
5. Conducting the proper research.
6. Development of own research results.
7. Interpretation of the obtained research results and formulation of final conclusions.

COURSE ASSESSMENT CRITERIA

The pass mark is an active participation in the seminar consisting in asking questions and conducting a substantive discussion on the presentation of the research results presented during the seminar

**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	60/4 semesters
Other contact hours involving the teacher (consultation hours, examinations)	60/4 semesters
Non-contact hours – student's own work (preparation for classes or examinations, project, etc.)	60/4 semesters
Total number of hours	180/4 semesters
Total number of ECTS credits	8

INSTRUCTIONAL MATERIALS

Compulsory literature:	<ul style="list-style-type: none"> - M. Mitek, M. Słowiński (red). Wybrane zagadnienia z technologii żywności. SGGW 2006. - T. Fortuna, D. Gałkowska, S. Pietrzyk, J. Rożnowski, R. Socha. Wybrane zagadnienia z chemii żywności. Wydawnictwo Uniwersytetu Rolniczego w Krakowie, 2012 - M. Bączkiewicz, T. Fortuna, L. Juszcak, J. Sobolewska-Zielińska. Podstawy analizy i oceny jakości żywności. Wydawnictwo Uniwersytetu Rolniczego w Krakowie, 2012. - Borja A., 2014. 11 steps to structuring a science paper editors will take seriously. https://www.elsevier.com/connect/11-stepsto-structuring-a-science-paper-editors-will-take-seriously - Bamji MS, Krishnaswamy K, Brahmam GNV (2009). Textbook of Human Nutrition, 3rd Edition. Oxford and IBH Publishing Co. Pvt. Ltd. - Food Oxidants and Antioxidants: Chemical Biological and Functional Properties. Edited by G. Bartosz. Taylor & Francis Group, 2016
Complementary literature:	<p>The following books are not required, but may be helpful:</p> <ul style="list-style-type: none"> - Seals DR, Tanaka H. Manuscript peer review: a helpful checklist for students and novice referees. Adv Physiol Educ. 2000 Jun; 23(1):52-8. PubMed PMID:10902527. - Blackwell, J. 2011. A Scientific Approach to Scientific Writing, Springer, New York [electronic resource]. <p>Scientific journals in Polish and a foreign language in the field of food technology and human nutrition, food analysis and biotechnology.</p>

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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