A COURSE SYLLABUS – DOCTORAL SCHOOL

REGARDING THE QUALIFICATION CYCLE FROM 2022 TO 2026

GENERAL INFORMATION ABOUT COURSE	
Course title	**Doctoral Seminar**
Name of the unit running the course	Doctoral School at the University of Rzeszów
Type of course *(obligatory, optional)*	Obligatory
Year and semester of studies	semesters from I to VII, education cycle from 2022 to 2026
Discipline	food and nutrition technology
Language of Course	Polish
Name of Course coordinator	prof. dr hab. Izabela Sadowska-Bartosz
Name of Course lecturer	prof. dr hab. Izabela Sadowska-Bartosz
Prerequisites	Knowledge of food biochemistry, biophysics, food technology food.

BRIEF DESCRIPTION OF COURSE
(100-200 words)

The doctoral seminar is aimed at preparing the doctoral student (under the substantive supervision of the supervisor) to independently conduct scientific research, 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, to raise the level of inference in the chosen scientific field, to develop the ability to communicate with scientists outside their discipline, to acquire the knowledge and skills necessary for the proper development of a doctoral dissertation. Within the first two years of study, it is advisable to discuss the results of pilot/professional studies.

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 that it is possible to revise existing paradigms, it is familiar with the global achievements, including theoretical foundations and general issues and selected specific issues for the scientific discipline of food and nutrition technology and related disciplines.	P8S_WG1	seminar	project /implementation of research plan
2	The main development trends of the scientific discipline in which the training takes place.	P8S_WG2	seminar	project /implementation of research plan
3	Has knowledge of the nomenclature used in the scientific discipline of food technology and nutrition and related disciplines in Polish and a foreign language leading for them.	P8S_WG3	seminar	project /implementation of research plan
Skills (no.)	**(Able to)**			

1	Use knowledge from various fields of science to creatively identify and innovatively solve complex problems or perform tasks of a research nature, and in particular: - can define the purpose and object of scientific research, formulate a research hypothesis, - develop methods, techniques and research tools and creatively apply them, make conclusions on the basis of scientific research conducted.	P8S_UW1	seminar	project /implementation of research plan
2	He is able to use the national and world scientific literature and conduct discussions on the topics of the arising research and innovation problems. He is able to use the acquired knowledge to solve the research problems encountered and also to create his own research workshop and scientific achievements.	P8S_UW2	seminar	project /implementation of research plan
3	Perform critical analysis and evaluate the results of scientific research, expert activities expert and other works of a creative nature and their contribution to the development of knowledge.	P8S_UW3	seminar	project /implementation of research plan
4	Communicate on specialized topics to a degree that enables active participation in the international scientific and professional environment using a foreign language at the B2 level of the ECTS.	P8S_UK6	seminar	project /implementation of research plan
Social competence (no.)	**(Ready to)**			
1	Critically evaluate achievements within the scientific discipline of food and nutrition technology and related disciplines.	P8S_KK1	seminar	project /implementation of research plan
2	Recognize the importance of knowledge in solving problems cognitive and practical problems.	P8S_KK3	seminar	project /implementation of research plan

LEARNING FORMAT – NUMBER OF HOURS

Semester (no.)	Lectures	Seminars	Lab classes	Internships	others	ECTS
I - VII	-	7 x 15 hrs. – 105 hrs.	-	-	-	14 ECTS

METHODS OF INSTRUCTION

Seminar classes:

1) Evaluating the progress of the research work forming the basis of the dissertation;
2) Development of detailed knowledge in the area of research forming the basis of the dissertation
3) Development of general knowledge of doctoral students in the discipline of food and nutrition technology
4) Teaching practice - oral presentation, evaluation of presentations by other doctoral students, participation in discussions as a speaker and listener
Discussion with the supervisor on good manners in science; methodology for preparing a doctoral dissertation in food technology and nutrition, the dissertation plan and methods of its implementation and respect for copyright; interpretation of results (15 hours per semester).

COURSE CONTENT

The program content is closely related to the area of research work of the doctoral student, implementation in the period from I to VII.
The seminar includes issues related to the implementation of research topics in the field of food technology and human nutrition.
1. definition of the topic of the dissertation , the subject and objectives of own research.
2. Development of an outline of the concept of the dissertation (problems and hypotheses, selection of research methods).
3. construction of the theoretical part of the dissertation - selection of literature.
4. substantive preparation for practical implementation of pilot studies.
5. Conducting the research proper.
6. Development of the results of own research.
Interpretation of the obtained research results and formulation of final conclusions.

COURSE ASSESSMENT CRITERIA

The condition for passing with a grade is active participation in the seminar consisting of asking questions and leading a substantive discussion of the presentation of research results presented during the seminar.
Possible semester grades are: 2.0, 3.0, 3.5, 4.0, 4.5, 5.0.

- Determination of the topic of the dissertation, collection of literature on the subject, development of results resulting from laboratory work (pilot study),
- development of results resulting from laboratory work (pilot studies), development of an outline of the concept of the dissertation, preparation of an individual research plan, co-teaching,
- development of a scientific paper, progress in the implementation of the research plan, active participation in a scientific conference,
- preparation of a scientific paper, progress in the implementation of the research plan, co-teaching, co-teaching,

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	15 hrs./7 semester – 105 hrs.
Other contact hours involving the teacher (consultation hours, examinations)	5 hrs./7 semester – 35 hrs.
Non-contact hours – student`s own work (preparation for classes or examinations, project, etc.)	40 hrs./7 semester – 280 hrs.
Total number of hours	420 hrs.
Total number of ECTS credits*	14

INSTRUCTIONAL MATERIALS	
Compulsory literature:	Basic literature: - M. Mitek, M. Slowinski (eds). Selected issues in food technology. SGGW 2006. - T. Fortuna, D. Galkowska, S. Pietrzyk, J. Rożnowski, R. Socha. Selected issues from food chemistry. Food. Publishing house of the Agricultural University in Cracow, 2012 - M. Bączkowicz, T. Fortuna, L. Juszczak, J. Sobolewska-Zielińska. Basics of analysis and evaluation quality of food. Publishing House of the Agricultural University in Cracow, 2012 - Food Oxidants and Antioxidants: Chemical Biological and Functional Properties. Edited by G. Bartosz. Taylor & Francis Group, 2016
Complementary literature:	- January Weiner: Techniques for writing and presenting natural science papers. PWN Scientific Publishers, 2018 - 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]. - Scientific journals in Polish and foreign languages in the fields of food technology and human nutrition, food analysis, and biotechnology.

*(1 ECTS CREDIT CORRESPONDS TO 25 - 30 HOURS OF THE TOTAL WORKLOAD OF A DOCTORAL STUDENT, NEEDED TO ACHIEVE THE ESTABLISHED EFFECTS).

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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