

**A COURSE SYLLABUS – DOCTORAL SCHOOL  
REGARDING THE QUALIFICATION CYCLE FROM 2019 TO 2023**

<b>GENERAL INFORMATION ABOUT COURSE</b>				
Course title	Doctoral 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	Cycle from 2019 TO 2023			
Discipline	Food Technology and human nutrition			
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	not required			
<b>BRIEF DESCRIPTION OF COURSE (100-200 words)</b>				
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 forming 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 (30 semester hours).				
<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,...)
<b>Knowledge (no.)</b>	Knows and understands			
1	- To the extent enabling the revision of the existing paradigms - world achievements, covering theoretical foundations and general issues and selected specific issues - food technology and human nutrition appropriate for the discipline;	<b>P8S-WG/1</b>	seminars	Observation during classes, projects, checking
2	- The main development trends in the discipline of human nutrition technology, in which education takes place;	<b>P8S-WG/2</b>	seminars	Observation during classes, projects, checking
3	- Research methodology;	<b>P8S-WG/3</b>	seminars	Observation during classes, projects, checking
4	- Principles of disseminating the results of scientific activity, also in the mode of open access;	<b>P8S-WG/4</b>	seminars	Observation during classes,

				projects, checking
5	- Basic principles of knowledge transfer to the economic and social sphere as well as commercialization of the results of scientific activity and know-how related to these results.	P8S-WK/3	seminars	Observation during classes, projects, checking
<b>Skills (no.)</b>	Can:			
1	- Use knowledge from various fields of science 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	seminars, practical classes	Observation during classes, projects, checking
2	- Make 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	seminars, practical classes	Observation during classes, projects, checking
3	- Transfer the results of scientific activity to the economic and social sphere;	P8S-UW/3	seminars	Observation during classes, projects, checking
4	- Communicate on specialist topics to the extent that allows active participation in the international scientific environment;	P8S-UK/1	seminars, practical classes	Observation during classes, projects, checking
5	- Disseminate the results of scientific activity, also in popular forms;	P8S-UK/2	seminars, practical classes	Observation during classes, projects, checking
6	- Initiate a debate;	P8S-UK/3	seminars	Observation during classes, projects, checking
7	- Participate in the scientific discourse;	P8S-UK/4	seminars	Observation during classes, projects, checking
8	- Plan and implement individual	P8S-UO	seminars	Observation

	and team research projects, also in an international environment;			during classes, projects, checking
9	- Independently plan and act for his/her own development as well as inspire and organize the development of other people;	P8S-UU/1	seminars	Observation during classes, projects, checking
<b>Social competence (no.)</b>	Is ready to:			
1	- Critically assess achievements in food and nutrition technology;	P8S-KK/1	seminars	Observation during classes, projects, checking
2	- Critically evaluate your own contribution to the development of food and nutrition technology;	P8S-KK/2	seminars	Observation during classes, projects, checking
3	- Recognize the importance of knowledge in solving cognitive and practical problems;	P8S-KK/3	seminars	Observation during classes, projects, checking
4	- Maintain and develop 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	seminars	Observation during classes, projects, checking

#### LEARNING FORMAT – NUMBER OF HOURS

Semester (no.)	Lectures	Seminars	Lab classes	Internships	others	ECTS
1	-	v	-	--	-	
2	-	v	-	-	-	
3	-	v	-	-	-	
4	-	v	-	-	-	
5	-	v	-	-	-	
6	-	v	-	-	-	
7	-	v	-	-	-	
8	-	v	-	-	-	

#### METHODS OF INSTRUCTION

*E.G, LECTURE: A PROBLEM-SOLVING LECTURE/A LECTURE SUPPORTED BY A MULTIMEDIA PRESENTATION/ DISTANCE LEARNING CLASSES: TEXT ANALYSIS AND DISCUSSION/PROJECT WORK (RESEARCH PROJECT, IMPLEMENTATION PROJECT, PRACTICAL PROJECT)/ GROUP WORK (PROBLEM SOLVING, CASE STUDY, DISCUSSION)/DIDACTIC GAMES/ DISTANCE LEARNING LABORATORY CLASSES: DESIGNING AND CONDUCTING EXPERIMENTS)*

Seminars: a problem-solving seminar/a seminar supported by a multimedia presentation/ distance learning  
 Classes: text analysis and discussion/project work (research project, implementation project, practical project)/  
 Laboratory classes: designing and conducting experiments).

### COURSE CONTENT

#### 1. Lectures/ Seminars:

The content is related to the area of the PhD student's research work.

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

#### 2. Seminars / Lab classes/ others:

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

### COURSE ASSESSMENT CRITERIA

Observation during classes, projects, checking.

### 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	30 hours / semester
Other contact hours involving the teacher (consultation hours, examinations)	30 hours / semester
Non-contact hours – student's own work (preparation for classes or examinations, project, etc.)	20 hours / semester
<b>Total number of hours</b>	<b>80 hours / semester</b>
<b>Total number of ECTS credits</b>	

### INSTRUCTIONAL MATERIALS

Compulsory literature:	<ul style="list-style-type: none"> <li>- M. Mitek, M. Słowiński (red). Wybrane zagadnienia z technologii żywności. SGGW 2006.</li> <li>- T. Fortuna, D. Gałkowska, S. Pietrzyk, J. Rożnowski, R. Socha. Wybrane zagadnienia z chemii żywności. Wydawnictwo Uniwersytetu Rolniczego w Krakowie, 2012</li> <li>- M. Bączkiewicz, T. Fortuna, L. Juszczak, J. Sobolewska-Zielińska. Podstawy analizy i oceny jakości żywności. Wydawnictwo Uniwersytetu Rolniczego w Krakowie, 2012.</li> <li>- Borja A., 2014. 11 steps to structuring a science paper editors will take seriously. <a href="https://www.elsevier.com/connect/11-stepsto-structuring-a-science-paper-editors-will-take-seriously">https://www.elsevier.com/connect/11-stepsto-structuring-a-science-paper-editors-will-take-seriously</a></li> <li>- Bamji MS, Krishnaswamy K, Brahmam GNV (2009). Textbook of Human Nutrition, 3<sup>rd</sup> Edition. Oxford and IBH Publishing Co. Pvt. Ltd.</li> <li>- Food Oxidants and Antioxidants: Chemical Biological and Functional Properties. Edited by G. Bartosz. Taylor &amp; Francis Group, 2016</li> </ul>
Complementary literature:	<p>The following books are not required, but may be helpful:</p> <ul style="list-style-type: none"> <li>- 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.</li> <li>- Blackwell, J. 2011. A Scientific Approach to Scientific Writing, Springer, New York [electronic resource].</li> </ul>

	Scientific journals in the field of food technology and human nutrition, food analysis and biotechnology.
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