

**A COURSE SYLLABUS – DOCTORAL SCHOOL**  
**REGARDING THE QUALIFICATION CYCLE FROM 2021 TO 2025**

<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	II / III and II / IV			
Discipline	Food and Nutrition Technology			
Language of Course	Polish			
Name of Course coordinator	Dr hab. Eng. Grzegorz Zagała, prof. UR			
Name of Course lecturer	Dr hab. Eng. Grzegorz Zagała, prof. UR			
Prerequisites	In-depth knowledge of food science and human nutrition. Ability to work in food analyzes, theoretical and practical foundations with functional drinks.			
<b>BRIEF DESCRIPTION OF COURSE</b> (100-200 words)				
<p>The subject is aimed at acquiring by the doctoral student knowledge in the field of searching and interpreting the global achievements in the field of food technology and nutrition, with particular emphasis on the subject of own research related to functional drinks, their preservation, fortification and storage. Interpretation of hypotheses put forward by other authors, their discussion and application to own research topics. Developing the ability to work in a laboratory, creating your own research hypotheses, arranging research methodologies and translating conclusions from the results of your own experimental work into the form of presentation and as publication works, including popular science. The ability to disseminate your own knowledge and the results of your own work to the sphere of contact between science and economy through their presentations as part of scientific discourses and industry meetings, including exhibitions, fairs and international conferences as well as internship trips. The ability to substantive and purposeful communication at the interface between science and everyday life, with a synthetic and appropriate for the needs of the recipient presentation of own research results along with their interpretation.</p>				
<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>	Know and understand			
1 (3rd and 4th semester)	scientific research methodology on the basis of laboratory tests in the field of mineral additives to functional drinks and their durability	P8S_WG/3	classes	Forum discussion
2 (3rd and 4th semester)	the rules of disseminating the results of scientific activity, also in the open access mode by publishing own research results in open access journals	P8S_WG/4	classes	Forum discussion
<b>Skills (no.)</b>	Can			

1 (3 semester)	Plan and act for your own development as well as inspire and organize the development of other people	P8S_UU/1	classes	Preparation and participation in the planning and organization of an international conference
2 (semester 3)	Initiate a debate	P8S_UK/3	classes	Discussion at the conference forum
3 (3rd and 4th semester)	Plan and implement individual and team research projects, also in an international environment	P8S_UO	classes	Discussion on the international forum during the internship
<b>Social competence (no.)</b>	Is ready to			
1 (3 semester)	Critical evaluation of one's own contribution to the development of a given scientific discipline	P8S_KK/2	classes	Preparation of a multimedia presentation combined with a discussion
2 (3rd and 4th semester)	Initiating activities for the public interest	P8S_KO/2	classes	Preparation of presentations at fairs, exhibitions, shows

#### LEARNING FORMAT – NUMBER OF HOURS

Semester (no.)	Lectures	Seminars	Lab classes	Internships	others	ECTS
1		30				0 0
2		30				

#### METHODS OF INSTRUCTION

Semester III: Multimedia presentation (to be selected by a doctoral student as a speaker) combined with a discussion. Discussion within the framework of scientific problems prepared by the doctoral student in the discipline of food technology and nutrition, activity in scientific discussion and the ability to solve a theoretical problem, preparation of a scientific publication by the doctoral student, participation in international conferences, internships and trade fairs  
 Semester IV: Multimedia presentation (to be selected by a doctoral student as a speaker) combined with a discussion. Discussion within the framework of scientific problems prepared by the doctoral student in the discipline of food technology and nutrition, activity in scientific discussion and the ability to solve a theoretical problem, preparation of a scientific publication by the doctoral student, participation in international conferences, internships and trade fairs

## COURSE CONTENT

Seminars:

3rd semester:

1. Preparation of research methodology
2. Preparation and design of a test stand for testing mineral additives for functional drinks
3. Designing a stand for durability extension tests
4. Preparation of scientific presentations
5. Undertaking scientific discussions

4th semester:

1. Research methodology in the field of functional drinks storage
2. Study of preservatives
3. Principles and patterns of work in an international environment
4. Development of original research and creative works
5. Principles of work at trade shows and demonstration fairs in the field of food technology

## COURSE ASSESSMENT CRITERIA

Self-presentation of a paper; Participation in discussions at fairs, exhibitions and conferences, including international ones; Participation in an international internship Approval by the promoter of the publication related to the doctoral dissertation;

## 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+30
Other contact hours involving the teacher (consultation hours, examinations)	
Non-contact hours – student`s own work (preparation for classes or examinations, project, etc.)	300
<b>Total number of hours</b>	<b>360</b>
<b>Total number of ECTS credits</b>	<b>0</b>

## INSTRUCTIONAL MATERIALS

Compulsory literature:	<ol style="list-style-type: none"><li>1. GENERAL FOOD TECHNOLOGY / EDITED BY ELŻBIETA DŁUŻEWSKA AND KRZYSZTOF LESZCZYŃSKI, 2013, WARSAW: SGGW PUBLISHING HOUSE</li><li>2. HUMAN NUTRITION, FOOD AND NUTRITION INSTITUTE (WARSAW). PUBLISHER</li><li>3. SELECTED PROCESSES IN FOOD TECHNOLOGY / ELŻBIETA BILLER, AGNIESZKA WIERZBICKA</li><li>4. APANOWICZ J., METHODOLOGICAL DETERMINANTS OF SCIENTIFIC WORK: DOCTORAL DISSERTATIONS, HABILITATION THESES, WARSAW 2005</li></ol>
Complementary literature:	SCIENTIFIC ARTICLES RELATED TO THE DOCTORAL INTERESTS PROMOTED BY THE PROMOTER

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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