

A COURSE SYLLABUS – DOCTORAL SCHOOL

REGARDING THE QUALIFICATION CYCLE FROM 2019 TO 2023

REGARDING THE QUALIFICATION CYCLE FROM 2020 TO 2024

GENERAL INFORMATION ABOUT COURSE				
Course title		Production of bioactive food		
Name of the unit running the course		Doctoral School at University of Rzeszów		
Type of course (<i>obligatory, optional</i>)		Optional compulsory (interdisciplinary) to choose from		
Year and semester of studies		Year II, winter semester		
Discipline		Food and Nutrition Technology, Agriculture and Horticulture, Health Sciences		
Language of Course		Polish language		
Name of Course coordinator		Prof. dr hab. inż. Grażyna Jaworska		
Name of Course lecturer		Prof. dr hab. inż. Grażyna Jaworska		
Prerequisites		In-depth knowledge of the fundamental dilemmas of modern civilization and the methodology of conducting scientific research		
BRIEF DESCRIPTION OF COURSE (100-200 words)				
<p>The aim of the course is to get acquainted with the scientific foundations of the development, production and marketing of healthy food, with particular emphasis on food used in the prevention of various civilization diseases, including cardiovascular diseases, celiac disease, diabetes, obesity. The role of biologically active ingredients in shaping the quality of health-promoting products. Presentation of the directions of scientific research related to the improvement of the functional properties of food and scientific achievements of various world centers regarding the impact of biologically active compounds present in food on the functioning of the human body in the context of developing new health-promoting products with a targeted effect on the human body. Critical analysis of published scientific research on the impact of bioactive food on the human body in terms of the practical use of knowledge for the development of the health-promoting products market.</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.)	Know			
ŻP-W/1	Knows the world achievements covering the theoretical basic and selected detailed issues as well as the main development trends regarding bioactive food	P8S-WG/1 P8S-WG/2	Lectures, seminars	Power Point presentation, Design
Skills (no.)	Can			
ŻP-U/1	Can make to perform research tasks: define the purpose and subject of research, develop research techniques and methods, make conclusion of scientific research	P8S-UW/1	Lectures, seminars	Power Point presentation, Design
ŻP-U/2	Can make a critical analysis of published scientific research and evaluate their contribution to the development of knowledge on bioactive food	P8S-UW/2	Lectures, seminars	Power Point presentation, Design
ŻP-U/3	He can disseminate the results of scientific research, also in a popular form	P8S-UK/2	Lectures, seminars	Power Point presentation, Design

ŽP-U/4	He can initiate a debate and conduct a scientific discussion as well as communicate in a foreign language at the B2 level to a degree enabling participation in the international scientific community in the field of topics related to the production of bioactive food and its importance in the modern world.	P8S-UK/1, P8S-UK/3, P8S-UK/4, P8S-UK/5	Seminars	Participation in the discussion
ŽP-U/5	She plans the time of classes and implements them with the use of modern tools and methods, including IT technologies	P8S-UU/2	Seminars	Power Point presentation, Design
Social competence (no.)	It is ready to			
ŽP – KK/1	Recognition of the importance of knowledge incl. in the field of food and nutrition technology, agriculture, health sciences, dietetics and other medical sciences in solving cognitive and practical problems regarding the production of bioactive food and its impact on consumer health.	P8S-KK/3	Lectures, seminars	Project
ŽP-KK/2	Critically evaluate the achievements in the discipline of food and nutrition	P8S-KK/1	Lectures, seminars	Project
ŽP-KO/2	Initiating activities for the public interest	P8S-KO/2	Lectures, seminars	Project

LEARNING FORMAT – NUMBER OF HOURS

Semester (no.)	Lectures	Seminars	Lab classes	Internships	others	ECTS
II	5	10	-	-	-	0

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).

COURSE CONTENT

1. Lectures/ Seminars:

1. Characteristics of bioactive food. Pro-health food categories.
2. Biologically active compounds in bioactive food. Influence of selected biologically active compounds on the functioning of the human body.
3. Super food - its role in popularizing the concept of healthy food.
4. Selected aspects of food production used in the prevention of diseases (including gluten-free food, food for people suffering from phenylketonuria, food for diabetics, low-sodium food, food for slimming)

2. Seminars / Lab classes/ others:

1. Principles of developing a bioactive product design based on databases of scientific literature.
2. Development of the project concept - scientific discussion
3. Preparation of a bioactive product design based on scientific research premises.
4. Presentation of the project and scientific discussion on the project.
5. Trends in the production of bioactive food and the future of scientific research on pro-health food. Presentation of a Power Point presentation prepared on the basis of a study of scientific literature. Scientific discussion.

COURSE ASSESSMENT CRITERIA

Active participation in classes
The ability to undertake discussions and active participation in scientific discussion
The ability to solve the problem using the knowledge obtained from the databases of scientific literature on the basis of the submitted and presented project
Analysis of the scientific literature on a given topic - presentation of a Power Point presentation.

**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
Other contact hours involving the teacher (consultation hours, examinations)	3
Non-contact hours – student's own work (preparation for classes or examinations, project, etc.)	45
Total number of hours	63
Total number of ECTS credits	0

INSTRUCTIONAL MATERIALS

Compulsory literature:	Goldber I. (ed.) 2012. Founctional Foods. Desingner Foods, Springer – Science+Business Media, B.V. Pharmafoods, Nutraceuticals. WESTSTRATE J.A., VAN POPPEL G., . VERSCHUREN P. M 2002. FUNCTIONAL FOODS, TRENDS AND FUTURE, BRITISH JOURNAL OF NUTRITION 88 (SUPPL.) S233-235
Complementary literature:	Original creative works in the field of bioactive food production related to the subject of the project and the assigned scientific topic related to pro-health food.