A COURSE SYLLABUS – DOCTORAL SCHOOL

REGARDING THE QUALIFICATION CYCLE FROM 2021/2022 TO 2024/2025.

GENERAL INFORMATION ABOUT COURSE	
Course title	**Seminar doctoral**
Name of the unit running the course	Doctoral School at University of Rzeszów
Type of course *(obligatory, optional)*	obligatory
Year and semester of studies	I, II,III, sem I-VI
Discipline	Food and nutrition technology
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 food science and human nutrition. Ability to work in a food analysis laboratory.

BRIEF DESCRIPTION OF COURSE
(100-200 words)

The aim of the course is to show trends in the scientific development of the food and nutrition technology discipline and to prepare for a critical evaluation of scientific research conducted in this discipline. The basis for the ability to critically evaluate scientific research is a thorough knowledge of the methodology and conducted scientific research, along with the organization of a scientific workshop and the methodology of developing scientific results. As part of the course, issues related to the interpretation of research results and their positioning against the background of world literature will be discussed and implemented. The classes will allow students to acquire the skills to transfer knowledge and research results to the economy and the social sphere, and to acquire the ability to initiate and conduct a scientific discussion, which will contribute to the growth of scientific awareness and creative independence as well as the ethos of scientific work. The acquired knowledge and skills will prepare them to solve cognitive and practical problems in accordance with the needs of the economy and society.

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**			
S-W/1	Based on the world scientific achievements that allow confrontation with other fields of knowledge, the existing paradigms regarding knowledge in the field of food and human nutrition.	**P8S-WG/1**	Exercises, seminars	Participation in the discussion
S-W/2	Detailed issues and development trends related to the discipline of food and nutrition technology to the extent that allows for a revision of the existing paradigms based on global scientific achievements and knows and understands solving theoretical problems in the field of food science.	**P8S-WG/1, P8S-WG/2**	Exercises, seminars	Presentation in Power Point, Communication to the conference, scientific publication, Presentation in Power Point
S-W/3	The methodology of scientific	**P8S-WG/3**	Exercises, seminars	Presentation in

	research on raw materials and food products, including health-promoting products, as well as the general methodology of research related to the impact of these products on human health.			Power Point, Conference announcement, scientific publication,
S-W/4	The rules and forms of disseminating the results of scientific research, including scientific discussion and the transfer of knowledge obtained as a result of scientific activity and know-how to the economy, also knows the rules of transferring knowledge about food and nutrition to the social circulation.	**P8S-WG/4, P8S-WK/3**	Exercises, seminars	Power Point presentation, Participation in the discussion
Skills (no.)	**Can**			
S-U/1		**P8S-UW/1**	Exercises, seminars	Presentation in Power Point, Conference announcement, scientific publication,
S-U/2		**P8S-UW/1, P8S-UW/2**	Exercises, seminars	Presentation in Power Point, Conference announcement, scientific publication,
S-U/3		**P8S-UW/2**	Exercises, seminars	Participation in the discussion
S-U/4		**P8S-UW/3, P8S-UK/2**	Exercises, seminars	Presentation in Power Point, popular science publication
S-U/5		**P8S-UK/1, P8S-UK/3, P8S-UK/4**	Exercises, seminars	Participation in the discussion
S-U/6		**P8S-UO**	Exercises, seminars	Presentation in Power Point, Conference announcement, scientific publication,
S-U/7		**P8S-UU/1**	Exercises, seminars	Participation in the discussion
Social competence (no.)	**It is ready to**			
S-K/1	Critically evaluates the achievements in the discipline of food technology and nutrition and the contribution	**P8S-KK/1, P8S-KK/2**	Exercises, seminars	Participation in the discussion

	of own achievements to the development of the discipline of food and nutrition technology.			
S-K/2	Recognition of the importance of the acquired knowledge in solving theoretical and practical problems in the field of food science and human nutrition.	**P8S-KK/3**	Exercises, seminars	Presentation in Power Point, Conference announcement, scientific publication,
S-K/3	Maintaining and developing the ethos of research communities, including conducting scientific activities in an independent manner and taking into account the principles of intellectual property protection and respecting the principles of public ownership of research results.	**P8S-KR**	Exercises, seminars	Participation in the discussion

LEARNING FORMAT – NUMBER OF HOURS

Semester (no.)	Lectures	Seminars	Lab classes	Internships	others	ECTS
I		30				0
II		30				0
III		30				0
IV		30				0
V		30				0
VI		30				0

METHODS OF INSTRUCTION

SCIENTIFIC DISCUSSION, MULTIMEDIA PRESENTATIONS, STUDY OF SCIENTIFIC LITERATURE, PREPARATION AND PRESENTATION OF THE RESEARCH GOAL, RESEARCH METHODS AND RESEARCH RESULTS, WRITTEN WORK.

COURSE CONTENT

1. **Seminars:**

Semester I and II:

1. Principles of developing a doctoral dissertation in the light of the Act on Higher Education.
2. Doctoral thesis as a research task in the discipline of food and nutrition technology
3. Preparation for taking up the topic of the doctoral dissertation - a study of the source literature
4. Principles of preparing scientific presentations
5. The ability to undertake scientific discussions
6. Principles of preparing research results for dissemination
7. Principles of constructing research works
8. Principles of developing monographic articles
9. Principles of developing original creative works
10. Principles of formulating the topic and concept of research work.

Semester III and IV:

1. Preparation of a presentation for a scientific conference in Polish and English - defining the aim of the work, rules for presenting material and research methods, presenting research results, formulating research conclusions.
2. Preparation of the review work in Polish. Analysis of the prepared work.
3. Principles of selection of bibliography in reviews.
4. Principles of preparation of abstracts in reviews.

5. Preparation for the national internship.
6. Ethical principles of work in research teams.
7. Preparation of a scientific publication in Polish. Analysis of the prepared work.

Semester V and VI:

1. Preparation of a research workshop - rules for the development of new analytical methods.
2. Development of a research method.
3. Preparation of a research paper in English - rules.
4. Principles of preparation of work for a scientific publishing house.
5. Research results and their interpretation.
6. Preparation of research results for publication.
7. Discussion of research results.
8. Comparing the results of own research with the source literature.
9. Analysis of the prepared work in English.
10. Preparation of reviews of scientific papers.

COURSE ASSESSMENT CRITERIA

I semester - credit
- forms and content of the doctoral student's multimedia presentation
- skills and activity in scientific discussion
- the ability to solve a theoretical problem

II semester - credit
- forms and content of the doctoral student's multimedia presentation
- a publication prepared by a doctoral student for a scientific monograph or a scientific journal in Polish
- skills and activity in scientific discussion
- initial formulation of the topic and concept of the doctoral dissertation
- the ability to solve a theoretical or practical problem

III semester - credit
- two presentations (in Polish and English) and their presentation at the seminar
- writing and presenting a review work in Polish

IV semester - credit
- domestic internship report (at least 5 days)
- writing and presenting a scientific publication in Polish

V semester - credit
- development of a new research method and its implementation
- preparation of research results for publication

VI semester - credit
- writing and presenting publications in English
- review of an academic paper

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	180
Other contact hours involving the teacher (consultation hours, examinations)	90
Non-contact hours – student`s own work (preparation for classes or examinations, project, etc.)	1500
Total number of hours	1770
Total number of ECTS credits	0

INSTRUCTIONAL MATERIALS	
Compulsory literature:	**APANOWICZ J., METODOLOGICZNE UWARUNKOWANIA PRACY NAUKOWEJ: PRACE DOKTORSKIE, PRACE HABILITACYJNE, WARSZAWA 2005;** **GAMBARELLI G., ŁUCKI Z., JAK PRZYGOTOWAĆ PRACĘ DYPLOMOWĄ LUB DOKTORSKĄ, KRAKÓW 1995;**
Complementary literature:	Original creative works in the field of food and nutrition technology, especially related to the topic of the doctoral dissertation.