A COURSE SYLLABUS – DOCTORAL SCHOOL
regarding the qualification cycle from 2022/2023 to 2025/2026

GENERAL INFORMATION ABOUT COURSE	
Course title	***OPTIONAL SPECIALISED SUBJECT:*** ***New generation food – opportunities and threats.***
Name of the unit running the course	Doctoral School at University of Rzeszów
Type of course *(obligatory, optional)*	compulsory - optional specialist
Year and semester of studies	year IV, semester VII
Discipline	**food and nutrition technology**
Language of Course	Polish language/English language
Name of Course coordinator	**Prof. Małgorzata Dżugan, PhD, Eng.**
Name of Course lecturer	**Prof. Małgorzata Dżugan, PhD, Eng.**
Prerequisites	In-depth knowledge of food chemistry and general food technology. Knowledge of English at B2 CEFR level, with a focus on specialist vocabulary.

BRIEF DESCRIPTION OF COURSE
(100-200 words)

OPTIONAL SPECIALISED SUBJECT: New generation foods – opportunities and threats
The aim of the subject is to organise knowledge about the use of new generation foods ('novel foods') in the nutrition of modern consumers. Examples of innovative food produced using modern technologies and new products traditionally consumed outside the EU will be presented. Issues related to the classification of novel foods, applicable legal regulations regarding safety assessment prior to placing them on the EU market, and the manner of placing these products on the market and labelling them will be presented. The opportunities and barriers to the development of the novel food market in terms of environmental protection and solving the global problem of malnutrition will be analysed, with particular emphasis on the need to shape appropriate consumer attitudes and behaviours towards novel foods (food neophobia and entoveganism).

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, has knowledge			
P8S_WG1	Has advanced theoretical knowledge of new generation foods, is familiar with the current state and main development trends in the novel food segment.	**P8S_WG**	Seminar	exam/discussion
P8S_WG2	Understands the need to change people's eating habits, identifies barriers to the development of the food sector in the area of novel foods.	**P8S_WG**	Seminar	exam/discussion
P8S_WG3	Knows and communicates the terminology used in the discipline	**P8S_WG**	Seminar	Exam/disussion

	of food technology and nutrition in their native language and English.			
P8S_WK1	Has knowledge of the impact of the development of the novel food segment on building new consumer attitudes and preventing malnutrition in different populations.	**P8S_WK**	Seminar	exam
Skills (no.)	can			
P8S_UW1	Is able to set ambitious research goals related to the assessment of the safety of new-generation foods, identifies and selects appropriate research tools, and draws constructive conclusions based on the research results obtained.	**P8S_UW**	Seminar	Exam/discussion
P8S_UW2	Based on available global professional literature is able to solve research, scientific and technological problems related to the design of innovative food and is familiar with the legal regulations concerning its introduction to the EU market.	**P8S_UW**	Seminar	exam
P8S_UW3	Is able to use their interdisciplinary knowledge and practical experience to analyse and evaluate scientific achievements, formulating a critical opinion on this basis.	**P8S_UW**	Seminar	exam, discussion
P8S_UK6	Is able to use online legal regulations and instructional materials concerning the introduction of novel food products to the EU market.	**P8S_UK**	Seminar	exam,
Social competence (no.)	is ready to			
P8S_KK3	Is ready to participate in substantive scientific discussions and consciously uses their knowledge of the scientific discipline of food technology and nutrition and related disciplines to solve cognitive and practical problems.	**P8S_KK**	Seminar	exam, discussion

Semester (no.)	Lectures	Seminar	Conversatory/ Lab classes	Internships	others	ECTS

VII	**-**	**15 hrs.**	**-**	**-**	**-**	**2**

METHODS OF INSTRUCTION

- SEMINARS;
- CLASSES WITH MULTIMEDIA PRESENTATIONS;
- RESEARCH PROJECT;
- WRITTEN ASSIGNMENT;
- DISCUSSION.

COURSE CONTENT

Seminar:

1. Nutritional classification of new generation foods: novel foods, attributive foods, foods for special purposes. Legal regulations in force in the EU, novel food catalogue.
2. Nutritional benefits and risks associated with the consumption of specific types of novel foods, legal regulations – Novel food safety.
3. Analysis of consumer attitudes towards new generation foods – Food neophobia and entoveganism.
4. Design and analysis of enriched products from the functional food segment. Laboratory capabilities for assessing the degree of bioactivity enhancement of the products obtained.
5. Health safety assessment of products from the 'novel food' segment. Analysis of bioactivity and potential contaminant residues of a selected product from the novel food segment.

COURSE ASSESSMENT CRITERIA

The examination takes place after each semester of the course (semester 2, semester 4, semester 6, semester 7).

Requirements for passing the course:
- preparation of written papers on assigned topics and defence of the presented position during discussions;
- active and regular participation in classes;
- ability to lead discussions and draw constructive conclusions;

The doctoral student prepares a paper on a topic indicated by the teacher from the scope of issues related to the subject and carries out a research project on 'The introduction of novel foods to the EU market on a selected example' with a short substantive description.

Very good grade:
- substantive activity and engagement during classes,
- visible ability to lead discussions and draw constructive conclusions,
- very high substantive value of written work;
- attendance at all classes;
- active use of the recommended literature and instructional materials, expanded and deepened on one's own.

Good plus grade:
- substantive activity during classes;
- high substantive value of written work;
- attendance at at least 4/5 of the total number of classes;
- visible satisfactory ability to lead discussions and draw conclusions;
- active use of the recommended literature and instructional materials.

Good grade:
- satisfactory substantive activity during classes;
- satisfactory substantive value of written work;
- attendance at least 4/5 of the total number of classes;
- moderate ability to lead discussions and draw conclusions;
- satisfactory use of the recommended literature and instructional materials.

Pass with distinction:
- moderate level of substantive activity during classes

- relatively poor substantive value of written work;
- attendance at least 3/5 of the total number of classes;
- moderately poor ability to lead discussions and draw conclusions;
- moderate use of the recommended literature and instructional materials.

Satisfactory grade:
- low level of activity during classes
- poor substantive value of written work;
- attendance at least 3/5 of the total number of classes;
- poor ability to lead discussions and draw conclusions;
- sporadic use of the recommended literature and instructional materials.

Fail:
- lack of activity during classes;
- unacceptable substantive value of written work;
- lack of ability to lead discussions and draw conclusions;
- absence from more than 3/5 of the total number of classes;
- lack of use of the recommended literature and instructional materials.

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)	**1**
Non-contact hours – student`s own work (preparation for classes or examinations, project, etc.)	**40**
Total number of hours	**56**
Total number of ECTS credits	**2**

INSTRUCTIONAL MATERIALS

Compulsory literature:	• Nowa żywność https://www.gov.pl/web/gis/nowa-zywnosc--novel-food • Rozporządzenie Parlamentu Europejskiego i Rady (UE) 2015/2283 w sprawie nowej żywności z dnia 25 listopada 2015 r. • Unijny katalog nowej zywnosci https://ec.europa.eu/food/food-feed-portal/screen/novel-food-catalogue/search • Wniosek o zezwolenie na nową żywność https://food.ec.europa.eu/food-safety/novel-food/authorisations_en • Pucek M., Żywność nowej generacji - funkcjonalna, wygodna, transgeniczna, CDR Brwinów 2017. Zywnosc_nowej_generacji.pdf (cdr.gov.pl) • Siddiqui, S.A.; Zannou, O.; Karim, I.; Kasmiati; Awad, N.M.H.; Gołaszewski, J.; Heinz, V.; Smetana, S. Avoiding Food Neophobia and Increasing Consumer Acceptance of New Food Trends—A Decade of Research. *Sustainability* **2022**, *14*, 10391. https://doi.org/10.3390/su141610391 • Czopor O., Dżugan M. (2024) Owady jadalne jako żywność przyszłości - korzyści i potencjalne zagrożenia, Nowe trendy w gospodarce żywnościowej i żywieniu człowieka. Red. Rudy M., Wydawnictwo Uniwersytetu Rzeszowskiego, Rzeszów 2024, ISBN 978-83-972269
Complementary literature:	• Coulthard H., Aldridge V., Fox g., Food neophobia and the evaluation of novel foods in adults; the sensory, emotional, association (SEA) model of the decision to taste a novel food,Appetite,Volume 168,2022,105764, https://doi.org/10.1016/j.appet.2021.105764.

	• Sokołowski L.M., Nowa żywność a współczesne wyzwania żywnościowe – wybrane aspekty prawne. PPR 2018,1,22,123-132. • Dąbrowska A., Babicz- Zielińska E., Zachowania konsumentów w stosunku do żywności, Hygeia Public Health 2011, 46(1): 39-46. • Babicz- Zielińska E.; Postawy konsumentów wobec Nowej Żywności; Zeszyty naukowe AM w Gdyni, 2010, 65.

*(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