Appendix No. 1.5 to the Resolution No. 61/2025
of the Rector of the University of Rzeszów

SYLLABUS

REGARDING THE QUALIFICATION CYCLE FROM2025/2026 TO 2028/2029

ACADEMIC YEAR 2028/2029

1. BASIC COURSE/MODULE INFORMATION

Course/Module title	**Nutraceuticals and fortified food**
Course/Module code *	
Faculty (name of the unit offering the field of study)	Faculty of Technology and Life Sciences
Name of the unit running the course	Faculty of Technology and Life Sciences Institute of Food Technology and Nutrition
Field of study	product development manager
Qualification level	first stage
Profile	general academic
Study mode	stationary
Year and semester of studies	4th year, 7th semester
Course type	directional to choose – Directional elective in English
Language of instruction	English
Coordinator	Magdalena Buniowska-Olejnik, Ph.D Eng.
Course instructor	Magdalena Buniowska-Olejnik, Ph.D Eng.

* - as agreed at the faculty

1.1. Learning format – number of hours and ECTS credits

Semester (no.)	Lectures	Classes	Colloquia	Lab classes	Seminars	Practical classes	Internships	others	**ECTS credits**
7	15								**2**

1.2. Course delivery methods

- conducted in a traditional way

1.3. Course/Module assessment: pass with degree

2. PREREQUISITES

CHEMISTRY

3. Objectives, Learning Outcomes, Course Content, and Instructional Methods

3.1. Course/Module objectives

O1	This course is designed to provide students with an overview of nutraceuticals and fortified foods, including their definitions, classification, and regulatory requirements.
O2	The course will address the market trends, consumer preferences, and ethical considerations related to the development and marketing of nutraceuticals and fortified foods.

3.2. Course/Module Learning Outcomes

Learning Outcome	The description of the learning outcome defined for the course/module	Relation to the degree programme outcomes
LO_01	Student knows to define nutraceuticals and fortified foods and classify them based on their ingredients, functions, and regulatory status.	K_W05
LO_02	knows to analyze the market trends, consumer preferences, and ethical considerations related to the development and marketing of nutraceuticals and fortified foods.	K_K04
LO_03	knows and understands in an advanced way the quality of nutraceuticals and fortified products during storage	K_W02
LO_04	knows a foreign language in the field of food science at B2 level	K_U13

3.3. Course content

A. Lectures

Content outline
Introduction to Nutraceuticals and Fortified Foods
Nutraceuticals and Disease Prevention
Fortified Foods and Micronutrient Deficiencies
Nutraceuticals and Adverse Effects
Bioavailability and Efficacy of Nutraceuticals and Fortified Foods

3.4. Methods of Instruction

Lecture: a lecture supported by a multimedia presentation, discussion.

4. Assessment techniques and criteria

4.1 Methods of evaluating learning outcomes

Learning outcome	Methods of assessment of learning outcomes (e.g. test, oral exam, written exam, project, report, observation during classes)	Learning format (lectures, classes,...)
LO_01-LO_04	test, activity during discussion	lectures

4.2 Course assessment criteria

Lecture: test. The positive assessment is determined by the number of points obtained (>50% of the maximum number of points): Grade 5.0 > 94% ; Grade 4.5, 90-94%; Grade 4.0 80-89%; Grade 3.5, 70-79%; Grade 3.0 60-69% correct answers The condition for passing the course is the achievement of all assumed learning outcomes.

5. Total student workload needed 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)	2
Non-contact hours - student's own work (preparation for classes or examinations, projects, etc.)	33
Total number of hours	50
Total number of ECTS credits	**2**

* One ECTS point corresponds to 25-30 hours of total student workload

6. Internships related to the course/module

Number of hours	not applicable
Internship regulations and procedures	not applicable

7. Instructional materials

Compulsory literature: 1.Nutraceuticals and Functional Foods: Introduction and Meaning by Brijesh K. Tiwari, Nigel P. Brunton, and Charles S. Brennan 2.Nutraceuticals in Health and Disease Prevention edited by Klaus Kramer and Peter R. Cheeke 3. Fortified Foods: Sources, Health Benefits and Adverse Effects by Ingrid M. Surono and Yew-Teik Cheong
Complementary literature: 1.Safety and regulatory considerations for nutraceuticals and fortified foods. In Nutraceuticals and Functional Foods in Human Health and Disease Prevention, edited by D. Bagchi and S. Nair. Boca Raton: CRC Press, 2016.

Approved by the Head of the Department or an authorised person