

# SYLLABUS

REGARDING THE QUALIFICATION CYCLE 2024/2025-2025/2026

Academic Year 2025/2026

## 1. BASIC COURSE/MODULE INFORMATION

Course/Module title	<b>Food additives</b>
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 Department of Food Chemistry and Toxicology
Field of study	Food Technology and Human Nutrition
Qualification level	2 <sup>nd</sup>
Profile	General academic
Study mode	full-time studies
Year and semester of studies	Year II, semester 3
Course type	Elective
Language of instruction	English
Coordinator	Michał Miłek, PhD Eng.
Course instructor	Michał Miłek, PhD 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
3	15								1

### 1.2. Course delivery methods

- conducted in a traditional way

- classes carried out with the use of distance learning methods and techniques

### 1.3. Course/Module assessment (exam, pass with a grade, pass without a grade)

- pass without a grade

## 2. PREREQUISITES

Completed courses: food chemistry, food biochemistry, food toxicology, general food technology.

### 3. OBJECTIVES, LEARNING OUTCOMES, COURSE CONTENT, AND INSTRUCTIONAL METHODS

#### 3.1. Course/Module objectives

O <sub>1</sub>	Gaining knowledge on the division and labeling of additional substances and the regulations governing their use.
O <sub>2</sub>	Acquiring the ability to identify additives in the product and to determine the risk of excessive daily intake.

#### 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	has an extended knowledge of the functions of the basic groups of food additives and their influence on changes in food	K_Wo3
LO_02	knows the current legal regulations regarding the use of food additives, including those obtained by genetic modification	K_Wo6
LO_03	is able to apply statistical methods to verify data on the toxicology of food additives	K_Uo6

#### 3.3 Course content

##### A. Lectures

Content outline
Definition and classification of food additives, labeling of additives according to the EU. Legal regulations concerning the use of food additives in the EU and according to WHO.
Health value of food additives - toxicological reservations, conditions and limitations of use. Allergenic additives.
Additives to prevent food spoilage: preservatives, antioxidants, acidity regulators. Sodium benzoate - use, health effects.
Sensory additives: dyes, aromas, flavor enhancers and sweeteners. Stability of synthetic and natural dyes.
Texture-shaping additives: emulsifying, thickening, clarifying, glazing agents. Polysaccharide hydrocolloids.
Label as a source of information about introduced additives, list quantum satis. Identification of additives present in the product based on the label.
Enriching food with nutrients, direct and indirect methods, fortified food, importance in the prevention of civilization diseases.

#### 3.4 Methods of Instruction

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	test	L
LO-02	test	L
LO-03	test	L

#### 4.2 Course assessment criteria

Lecture: activity in discussion, final test

The condition for completing the course is achieving all the 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	15/0,60
Other contact hours involving the teacher (consultation hours, examinations)	participation in consultations 1/0,04
Non-contact hours - student's own work (preparation for classes or examinations, projects, etc.)	preparation for classes 10/0,40
Total number of hours	26
Total number of ECTS credits	1

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

#### 6. Internships related to the course/module

Number of hours	
Internship regulations and procedures	

#### 7. Instructional materials

Compulsory literature: 1. Saltmarsh M. Essential Guide to Food Additives. Wyd. RSC Publishing, 2013 2. Karunaratne D. N. (ed.), Food Additives, IntechOpen, 2017, <a href="https://www.intechopen.com/books/food-additives">https://www.intechopen.com/books/food-additives</a>
Complementary literature: 1. Mišek M., Marcinčakova D., Kolesarova M., Legathova D., Džugan M. (2022): The Effect of Adding Spices to Green Walnut Tinctures on Their Polyphenolic Profile, Antioxidant Capacity and Action on Renal Cells, Applied Sciences, 12, 3669

2. Dżugan M., Pizoń A., Tomczyk M., Kapusta I. (2019): A New Black Elderberry Dye Enriched in Antioxidants Designed for Healthy Sweets Production, *Antioxidants* 8(8), 257
3. Dżugan M., Tomczyk M., Szymański P., Grabek-Lejko D., Miłek M., (2024): The Influence of Selected Herb Additives on the Organoleptic and Antioxidant Properties and Storage Stability of Frozen Homemade Tofu. *Applied Sciences* 14 (15): 6801

Articles from scientific journals in English.

Approved by the Head of the Department or an authorised person