

SYLLABUS

REGARDING THE QUALIFICATION CYCLE FROM 2021/2022 TO 2022/2023

Academic Year 2022/2023

1. BASIC COURSE/MODULE INFORMATION

Course/Module title	GMO in food
Course/Module code *	
Faculty (name of the unit offering the field of study)	College of Natural Science
Name of the unit running the course	College of Natural Science Institute of Food Technology and Nutrition
Field of study	Food technology and human nutrition
Qualification level	2 nd stage
Profile	academic
Study mode	stationary
Year and semester of studies	2 nd year, 3 th semester
Course type	directly
Language of instruction	English
Coordinator	Maciej Kluz PhD
Course instructor	Maciej Kluz PhD

* - 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	9								1

1.2. Course delivery methods

- conducted in a traditional way
- involving distance education methods and techniques

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

pass with a grade

2. PREREQUISITES

Food chemistry, Food microbiology

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

3.1. Course/Module objectives

C1	To acquaint students with the field of food biotechnology.
C2	Providing basic knowledge in the field of modern biotechnological processes applicable in the food industry.
C3	Providing knowledge about specific technologies of food preparation in molecular cuisine.

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	It defines individual bioprocesses taking place in GMO.	K_Wo6
LO_02	Recognizes microorganisms of biotechnological importance in GMO food production.	K_Wo6

3-3 Course content

A. Lectures

Content outline
The importance of food biotechnology.
Prospects for the development of food biotechnology.
Molecular methods in the production of GMO food.
GMO food safety.
Examples of GMOs in food. GMO products approved for the food market.
Legal acts related to GMOs.

3.4 Methods of Instruction

lecture/a lecture supported by a multimedia presentation

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	pass with a grade	L
LO_02	pass with a grade	L

4.2 Course assessment criteria

THE CONDITION OF GRADUATING THE COURSE IS THE ACHIEVEMENT OF ALL ASSUMED LEARNING OUTCOMES. THE NUMBER OF POINTS RECEIVED (> 50% OF THE MAXIMUM NUMBER OF POINTS):) DST 51 - 65%, DST PLUS 66 - 75%, DB 76 - 85%, DB PLUS 86 - 95%, BDD 96-100 %

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)	1
Non-contact hours - student's own work (preparation for classes or examinations, projects, etc.)	10
Total number of hours	26
Total number of ECTS credits	1

6. Internships related to the course/module

Number of hours	
Internship regulations and procedures	

7. Instructional materials

Compulsory literature: Microalgae Biotechnology for Food, Health and High Value Products, Editors Asrafal AlamJing-Liang XuZhongming Wang, Springer Nature Singapore Pte Ltd. 2020
Complementary literature: Genetic Control of Biosynthesis and Transport of Riboflavin and Flavin Nucleotides and Construction of Robust Biotechnological Producers† Charles A. Abbas and Andriy A. Sibirny, MICROBIOLOGY AND MOLECULAR BIOLOGY REVIEWS, June 2011, p. 321–360 Vol. 75, No. 2, 1092-2172/11/\$12.00 doi:10.1128/MMBR.00030-10

Approved by the Head of the Department or an authorised person