Course Syllabus

Academic year: 2024/2025

I. General Information

Course name	Biotechnology at a glance
Programme	general university courses
Level of studies (BA, BSc, MA, MSc, long-cycle MA)	MA, long-cycle MA
Form of studies (full-time, part-time)	full-time
Discipline	Biological sciences
Language of instruction	English

Course coordinator	Dr hab. Inż. Andrea Baier

Type of class *(use only the types mentioned below)*	Number of teaching hours	Semester	ECTS Points
Tutorial	30	II	2

Course pre-requisites	knowledge of English at the B2 level Basic knowledge in biology

II. Course Objectives

C1- perfecting communicative skills in a foreign language at an academic level, relating to the field of study

C2- Acquainting knowledge in biotechnology related to our daily life

III. Course learning outcomes with reference to The Polish Qualifications Framework

Symbol	Description of course learning outcome	Reference to The Polish Qualifications Framework
KNOWLEDGE		
Un_ZJO_W_01	understands foreign language utterances, including specialist terminology related to the field of study	P7S_WG1
SKILLS		
Un_ZJO_U_01	is capable of fluent oral and written communication in a foreign language, including the use of specialist terminology related to the field of study	P7S_UW3
Un_ZJO_U_02	actively participates in discussions in a foreign language on general topics and those related to the field of study, understands complex utterances and refers to presented arguments	P7S_UK1

Un_ZJO_U_03	uses a wide range of literature in a foreign language, including specialist literature relevant to the field of study	P7S_UW1
SOCIAL COMPETENCIES		
Un_ZJO_K_01	recognises the importance of knowledge and skills in a foreign language and the culture of the country whose language they are learning for their professional development and functioning in society	P7S_KK2

IV. Course Content

1. History of biotechnology
2. Microorganisms – small hard-working helpers in biotechnology
3. Food biotechnology (fermentation processes)
4. Enzymes in household and industry – making processes faster
5. Genetic engineering (PCR and cloning strategies)
6. Fungi and their products (vitamins, amino acids, antibiotics)
7. Viruses, antibodies, vaccines
8. Environmental biotechnology
9. Plant biotechnology and GMO
10. Transgenic animals
11. Medical biotechnology (drug development)
12. Analytical biotechnology
13. Biotechnology – today and future perspectives

V. Didactic methods used and forms of assessment of learning outcomes

Symbol	Didactic methods *(choose from the list)*	Forms of assessment *(choose from the list)*	Documentation type *(choose from the list)*
KNOWLEDGE			
Un_ZJO_W_01	conversational lecture	Written test	Evaluated test
SKILLS			
Un_ZJO_U_01	conversational lecture	Written test	Evaluated test
Un_ZJO_U_02	discussion	Observation	Observation report
Un_ZJO_U_03	conversation lecture	presentation	Presentation rating card
SOCIAL COMPETENCIES			
Un_ZJO_K_01	discussion	observation	Observation report

VI. Grading criteria, weighting factors.....

- written test – 60%
- presentation – 30%
- discussion – 10%

Dergee	**Degree criteria**	
Very good (5)	the student realizes the assumed learning outcomes to a very good degree	Student demonstrates knowledge of the content of education at the level of 96-100 %
More than good (4,5)	the student realizes the	Student demonstrates knowledge of the

	assumed learning outcomes to a more than good degree	content of education at the level of 86-95 %
good (4)	the student realizes the assumed learning outcomes to a good degree	Student demonstrates knowledge of the content of education at the level of 75-85%
Good enough (3,5)	the student realizes the assumed learning outcomes to a good enough degree	Student demonstrates knowledge of the content of education at the level of 66-75%
sufficient (3)	the student realizes the assumed learning outcomes to a sufficient degree	Student demonstrates knowledge of the content of education at the level of 51-65%
unsufficient (2)	the student realizes the assumed learning outcomes to an unsufficient degree	Student demonstrates knowledge of the content of education at the level of 51%

VII. Student workload

Form of activity	Number of hours
Number of contact hours (with the teacher)	**30**
Number of hours of individual student work	**30**

VIII. Literature

Basic literature
Renneberg, R., Loroch, V. Biotechnology for beginners, Spektrum, 2016
Additional literature