

1.	Field of study	Biotechnology
2.	Academic year of entry	2018/2019 (winter term)
3.	Level of qualifications/degree	first-cycle studies
4.	Degree profile	general academic
5.	Mode of study	full-time

Module: Biotechnology in practice

Module code: 1BT_35

1. Number of the ECTS credits: 2

2. Learning outcomes of the module			
code	description	learning outcomes of the programme	level of competence (scale 1-5)
1BT_35_1	Student mentions of examples and describes usage of technical and technological biotechnological aspects	1BT_W15	5
1BT_35_2	Student knows the basic of project and making modification of industrial processes	1BT_W18	4
1BT_35_3	Students is able to isolation and characterization of biological material	1BT_U07	5
1BT_35_4	Student determines theoretical and practical conditions of biotechnological processes usage	1BT_U01 1BT_U06	4 4
1BT_35_5	Student follows biotechnological processes in practice	1BT_U01 1BT_U06	4 4
1BT_35_6	Student projects and constructs essay of task scientific problems as a written or oral presentation with proper documentation in polish	1BT_U10	5
1BT_35_7	Student demonstrates the ability for team work.	1BT_U11	4
1BT_35_8	Student reveals intention to constant actualization of knowledge connected with biotechnological processes and student makes objective self-evaluation of own work	1BT_K06 1BT_K09	4 3

3. Module description	
Description	The module provides broadened knowledge about enzymes used in biotechnology. The course focuses also on application of biotechnological processes used in industry. The module shows biotechnological methods in environment protection, medicine, cosmetology and food industry. The course focuses on usage modern technology. Module available only at the semester 6.

Prerequisites	Basic knowledge of chemistry, biochemistry, genetic and microbiology.
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4. Assessment of the learning outcomes of the module

code	type	description	learning outcomes of the module
2BT_26_w1	Continuous assessment of practical skills	Evaluation of following the rules in biotechnological laboratory, evaluation of planning of biotechnological processes, the ability to discussion and analyses of the results, drawing conclusions	1BT_35_1, 1BT_35_3, 1BT_35_5, 1BT_35_7, 1BT_35_8
2BT_26_w2	Laboratory report	Preparation of written laboratory report presenting the basic bioprocesses used in industry.	1BT_35_1, 1BT_35_2, 1BT_35_4, 1BT_35_6, 1BT_35_7, 1BT_35_8

5. Forms of teaching

code	form of teaching			required hours of student's own work		assessment of the learning outcomes of the module
	type	description (including teaching methods)	number of hours	description	number of hours	
1BT_35_fs_1	laboratory classes	Excursions to selected industrial company used bioprocesses Consultation: Individual work with the students in order to prepare a report from the laboratory classes.	30	Theoretical preparation to active participation and discussion during industrial company visiting using recommended literature.	20	2BT_26_w1, 2BT_26_w2