GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Basic biotechology, PG_00038535		
Field of study	Chemical Technology		
Date of commencement of studies	February 2024	Academic year of realisation of subject	2024/2025
Education level	second-cycle studies	Subject group	Obligatory subject group in the field of study
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	1	Language of instruction	Polish
Semester of study	2	ECTS credits	3.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Pharmaceutical Technology and Biochemistry -> Faculty of Chemistry		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Piotr Szweda	
	Teachers	dr hab. inż. Piotr Szweda dr inż. Karolina Matejczuk	

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	30.0	0.0	15.0	0.0	0.0	45

E-learning hours included: 0.0

Learning activity and number of study hours

Learning activity	Participation in didactic classes included in study plan	Participation in consultation hours	Self-study	SUM
Number of study hours	45	5.0	25.0	75

Subject objectives

Presenting students the possibilities of application och achievemnets of biotechnology in medicine, environment protection and agriculture.

Learning outcomes

Course outcome	Subject outcome	Method of verification
K7_U08	The student has systematic knowledge of the possibilities of using biotechnology in various branches of industry, medicine and environmental protection. The student is able to assess the positive and negative consequences of using achievements in the field of biotechnology and related sciences.	[SU2] Assessment of ability to analyse information
K7_W07	The student knows the basic biotechnological processes used in industry to obtain specific food products, medicinal products or biochemicals.	[SW1] Assessment of factual knowledge

Subject contents

Historical view

Subject and scope of biotechnology

Basic knowledge in the field of cell biology and the genetics of microorganisms

The use of biotechnology in environmental protection

Receiving biofuels

GM crops

Biometalurgy and bioremediation

Obtaining selected bioproducts: organic acids, enzymes, biopolymers, biopesticides, medicines

Prerequisites and co-requisites

Basic knowledge in the field of microbiology, biochemistry and organic chemistry.

<table>
<tr><td>Assessment methods and criteria</td><td colspan="3"><table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>labs</td><td>60.0%</td><td>20.0%</td></tr>
<tr><td>lecture</td><td>60.0%</td><td>80.0%</td></tr>
</table></td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td colspan="2">Podstawy biotechnologii przemysłowej, (BednarskiW., Fiedurko J., red.) WNT Warszawa 2007.Chmiel A., Biotechnologia, PWN Warszawa, 1991.</td></tr>
<tr><td>Supplementary literature</td><td colspan="2">Biotechnologia żywności, (Bednarski W., Reps A. red.) WNT Warszawa, 2001;

Podstawy biologii komórki, PWN Warszawa, 2005</td></tr>
<tr><td>eResources addresses</td><td colspan="2">Adresy na platformie eNauczanie:</td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="3">Differences in cell structure of eukaryotes and prokaryotes

Explain the concept of BZT5

Benefits and risks of growing GMOs

Preparation, construction and advantages and disadvantages of biopolymers / biopesticides</td></tr>
<tr><td>Work placement</td><td colspan="3">Not applicable</td></tr>
</table>

Document generated electronically. Does not require a seal or signature.