University of Gdańsk

Subject card

Subject name and code	Introduction to biochemistry, PG_00147020		
Field of study	Genetics and Experimental Biology		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2027/2028
Education level	Bachelor's studies	Subject group	Obligatory subject group in the field of study Subject group related to scientific research in the field of study
Mode of study	full-time studies	Mode of delivery	at the university
Year of study	2	Language of instruction	Polish
Semester of study	3	ECTS credits	2.0
Learning profile	academic	Assessment form	credit
Conducting unit	Department of General and Medical Biochemistry -> Faculty of Biology -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	prof. dr hab. Ewa Laskowska	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	30.0	0.0	0.0	0.0	30

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	30	4.0	16.0	50

Subject objectives

The aim of the recitation is to expand students' knowledge of topics discussed during the "Introduction to Biochemistry" lectures, with particular emphasis on the regulation of metabolic pathways, lipid and amino acid metabolism.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[GBEL3_W01] A graduate has an advanced knowledge and understanding of: the structure and properties of the main types of biological macromolecules; the molecular mechanisms of basic metabolic pathways and genetic information flow; the sources of genetic variation in organisms and the mechanisms of evolution. They can explain the principles of inheritance, the differences in structure and function between prokaryotic and eukaryotic cells, as well as the structure and functional relationships at the cellular and tissue levels.	Describes the structure and properties of basic types of biological macromolecules and basic metabolic pathways.	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion [SW5] implementation of a problem task
[GBEL3_U09] The graduate is able to: plan their education and learn in an independent and focused manner.	Is able to learn in an independent and directed way.	[SU1] oral statement/conversation/ discussion [SU4] test/exam - oral or written [SU5] implementation of a problem task
[GBEL3_U01] The graduate is able to: independently perform practical tasks in the biological and related sciences, formulate research problems, analyse their results and draw conclusions.	Is able to independently perform practical tasks in the field of biological sciences, formulate research problems, analyze their results and draw conclusions.	[SU1] oral statement/conversation/ discussion [SU4] test/exam - oral or written

<table>
<tr><td>Subject contents</td><td colspan="3">Structure and function of macromolecules (proteins, nucleic acids, carbohydrates, lipids); liver metabolism; acid-base disorders.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td colspan="3">Knowledge of the structure of basic inorganic and organic compounds, chemical bonds, mechanisms of basic chemical reactions, energetics of chemical reactions, hydrophobic interactions, acids and bases, pH, units of measurement, concentration units of solutions.</td></tr>
<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>Problem tasks solving</td><td>0.0%</td><td>30.0%</td></tr>
<tr><td>Students involvement in the discussion</td><td>0.0%</td><td>30.0%</td></tr>
<tr><td>Test</td><td>51.0%</td><td>40.0%</td></tr>
</table></td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td colspan="2">Berg J. M., Tymoczko J. L., Stryer L. Biochemistry. Freeman WH.</td></tr>
<tr><td>Supplementary literature</td><td colspan="2">Publications selected by the lecturer</td></tr>
<tr><td>eResources addresses</td><td colspan="2"></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="3"></td></tr>
<tr><td>Work placement</td><td colspan="3">Not applicable</td></tr>
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