

Subject card

Subject name and code	General biochemistry, PG_00196825						
Field of study	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			3.0		
Learning profile	academic	Assessment form			exam		
Conducting unit	Department of General and Medical Biochemistry -> Faculty of Biology -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. Joanna Skórko-Glonek				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	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	41.0	75		
Subject objectives	<p>1. Learning about the structure and functions of macromolecules (proteins, nucleic acids, carbohydrates, lipids) and small-molecule compounds found in the cell.</p> <p>2. Understanding basic biochemical processes.</p>						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[BIOLL3_U12] The graduate is able to use Polish and foreign languages specific to biology in a way that is understandable and accessible to both specialists and non-specialists		- in discussion can use the Polish language specialist for biochemistry in a clear and accessible way (B_U12)		[SU1] oral statement/conversation/discussion [SU4] test/exam - oral or written		
	[BIOLL3_W02] The graduate knows and understands at an advanced level the structure and properties of biological macromolecules, molecular mechanisms of basal metabolic pathways and the flow of genetic information, as well as the sources of variation in organisms; the rules of inheritance		- describes the structure, properties and functions of macromolecules (proteins, nucleic acids, carbohydrates, lipids) and small-molecule compounds found in the cell; knows the molecular mechanisms of metabolic processes that occur in living organisms (B_W02)		[SW4] test/exam - oral or written		
Subject contents	Structure and function of biological macromolecules. Basic metabolic pathways (glycolysis, citric acid cycle, oxidative phosphorylation, gluconeogenesis, glycogen metabolism, structure and metabolism of fatty acids, photosynthesis, macromolecule biosynthesis) and their regulation, taking into account the specificity of the organism (bacteria, plants, animals).						

Prerequisites and co-requisites	Completed courses during which the student learned the basics of inorganic and organic chemistry. Knowledge of the structure of basic inorganic and organic compounds, isomerism, chemical bonds, mechanisms of basic chemical reactions, energetics of chemical reactions, hydrophobic interactions, acids and bases, pH, measurement units, solution concentration units.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Multiple choice test with open questions	51.0%	100.0%
Recommended reading	Basic literature	1. Berg J. M., Stryer L., Tymoczko J. L., Gatto GJ. 2019. Biochemistry, edition 8th or newer 2. John Tymoczko; Jeremy M. Berg; Gregory J. Gatto Jr.; Lubert Stryer. 2019. Biochemistry: a short course	
	Supplementary literature	Brown T. A. 2006. Genomes 3 3rd Edition. Garland Science Bruce Alberts, Dennis Bray, Karen Hopkin, Alexander D Johnson, Julian Lewis, Martin Raff, Keith Roberts, Peter Walter. 2014. Essential Cell Biology. Garland Science	
	eResources addresses		
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

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