

Subject card

Subject name and code	Animal and human physiology, PG_00154402						
Field of study	Biology						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2026/2027		
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	Faculty of Biology -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Jolanta Orzeł-Gryglewska				
	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	1. Learning about basic life processes, in particular the mechanisms of their regulation and integration in animal and human organisms.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[BIOLL3_W16] The graduate knows and understands the relationship between the achievements of the chosen field of science and discipline of natural sciences and the possibilities of their use in socio-economic life, taking into account the sustainable use of biodiversity		The student explains the relationship between the achievements of physiology and neurobiology and the possibilities of their use in medicine and health prevention.		[SW4] test/exam - oral or written		
	[BIOLL3_W03] The graduate knows the structure and functional relationships at the cellular, tissue, organ and organismal levels		The student describes the physiological processes occurring in the animal and human body, including the mechanisms of their regulation at the cellular, organ and organismal level.		[SW4] test/exam - oral or written		
	[BIOLL3_W02] The graduate knows the structure and properties of biological macromolecules, the molecular mechanisms of basal metabolic pathways and genetic information flow and the sources of variation in organisms; the rules of inheritance		The student demonstrates the relationship between the intensity of specific physiological processes in animals and the adaptation of the body to changing environmental conditions		[SW4] test/exam - oral or written		

Subject contents	Basics of physiology of the central nervous system - physiology of movement and sensation. Features of excitable tissue, physiology of striated and smooth muscles, types of its contractions. Reflex as a basic functional unit of the central nervous system. Classification of reflex reactions and levels of integration (spinal, subcortical, cortical). Physiology of vegetative functions: regulation of blood circulation and heart function. Basics of the physiology of breathing and physical exercise. The structure and role of blood. Central adaptive reactions and stress. Physiology of the digestive system, digestive processes. Body fluids and water and mineral management, homeostasis, excretion and kidney functions. Hormonal regulation of vegetative activities.		
Prerequisites and co-requisites	Basic knowledge of human anatomy. It is necessary to pass exercises before taking the exam.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	written exam, multiple choice test, 1.5 hours	51.0%	100.0%
Recommended reading	Basic literature	Lewandowska D., Orzeł-Gryglewska J., Jurkowlaniec E. 2019. Fizjologia zwierząt i człowieka, Wydawnictwo Uniwersytetu Gdańskiego. Ganong W. F., 2007. Fizjologia. Wydawnictwo Lekarskie PZWL, Warszawa. Felten D.L. Józefowicz R. 2007. Atlas neuroanatomii i neurofizjologii Nettera. Urban & Partner, Wrocław. Konturek S. J. 2007. Fizjologia człowieka. Podręcznik dla studentów medycyny. Elsevier Urban & Partner, Wrocław.	
	Supplementary literature	Traczyk W., Trzebski A. 2015. Fizjologia człowieka z elementami fizjologii stosowanej i klinicznej. PZWL, Warszawa.	
	eResources addresses		
Example issues/ example questions/ tasks being completed	resting and action potential features of the reflex reaction centers and tracts of the spinal cord heart cycle, ECG analysis lung volume and capacity phases of gastric juice secretion nephron structure and function activity of hypothalamic thermoregulation centers		
Work placement	Not applicable		

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