University of Gdańsk

Subject card

Subject name and code	Animal and human physiology, PG_00203386						
Field of study	Medical Biology						
Date of commencement of studies	October 2026		Academic year of realisation of subject	2026/2027			
Education level	Bachelor's 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	academic		Assessment form	exam			
Conducting unit	Laboratory of Neurobiology -> Department of Animal and Human Physiology -> Faculty of Biology -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor	dr Ziemowit Ciepielewski					
	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	to get acquainted with the basic life processes, and in particular with the mechanisms of their regulation and integration in animal and human organisms.						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[BIOLMEDL3_W11] has advanced knowledge of methods for assessing health status, as well as the symptoms and causes of selected disorders and pathological changes; understands the basics of a healthy lifestyle and is able to explain and promote them	student has a basic knowledge of health assessment methods and the symptoms and causes of selected disorders and lesions	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion
[BIOLMEDL3_W06] at an advanced level: describes, explains and compares systemic control mechanisms in animal and human organisms (including onto- and phylogenetic points of view) and the neurobiological and genetic basis of different disorders	student describes, explains and compares systemic control mechanisms in animal and human organisms and the physiological basis of their disorders	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion
[BIOLMEDL3_W03] has an advanced knowledge and understanding of the structure of the animal or human organism, the processes and functional relationships at the cellular, tissue, organ and organismal levels, and explains their relationship to behavior and adaptation of the organism to changing environmental conditions	student describes the physiological processes occurring in animal and human organisms taking into account the mechanisms of their regulation at the cellular, organ and organismal levels and demonstrates the relationship of these physiological processes to the adaptation of organisms to changing environmental conditions	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion
[BIOLMEDL3_W07] has advanced knowledge of medical biology and is familiar with the health sciences terminology	student knows the terminology of health sciences in physiology and pathophysiology	[SW4] test/exam - oral or written
[BIOLMEDL3_U14] is able to prioritize and organize the work of a small team and work effectively as part of a team	student is able to prioritize and organize the work of a small team and work effectively as part of a team	[SU8] observation of student's independent or team work
[BIOLMEDL3_U01] uses basic apparatus and research tools and, maintaining the correct sequence of operations, performs simple physical, biological or chemical observations and measurements in laboratory work in the biological or medical sciences	student uses basic apparatus and typical laboratory equipment to record physiological processes, maintaining the correct order of activities	[SU4] test/exam - oral or written [SU8] observation of student's independent or team work
[BIOLMEDL3_U05] synthesises data from different sources and draws appropriate conclusions from them	student synthesizes data from various sources and draws conclusions based on it	[SU1] oral statement/conversation/ discussion [SU4] test/exam - oral or written
[BIOLMEDL3_K01] understands the need for lifelong learning and to update his/her knowledge of medical biology and related disciplines	student understands the need for lifelong learning and updating knowledge in medical biology and related disciplines	[SK1] oral statement/conversation/ discussion [SK4] test/exam - oral or written [SK8] observation of student's independent or team work

Subject contents

Fundamentals of physiology of the central nervous system - physiology of movement and sensation. Features of excitable tissue, physiology of striated and smooth muscles, types of contractions. Reflex as the basic functional unit of the central nervous system. Classification of reflex reactions and levels of integration. Physiology of vegetative activities: regulation of blood circulation and heart rate. Basics of physiology of respiration and exercise. Structure and role of blood. Central adaptive reactions and stress. Physiology of the digestive system, digestive processes. Body fluids and water-mineral metabolism, homeostasis, excretion and renal function. Hormonal regulation of vegetative activities.

Prerequisites and co-requisites

Basic knowledge of human anatomy

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
test/written or oral exam	51.0%	100.0%

Recommended reading	Basic literature	**A. Literature required for final course credit (passing the exam):** **A.1. used during the classes** Lewandowska D., Orzeł-Gryglewska J., Jurkowlaniec E. 2019 Animal and human physiology. University of Gdansk Publishing House **A.2. studied independently by the student** 1. Ganong W. F., 2007. Physiology. PZWL Medical Publishing, Warsaw 2. Konturek S. J. 2007. Human physiology. Textbook for medical students. Elsevier Urban & Partner, Wrocław
	Supplementary literature	**B. Supplementary literature** 1 Sadowski B. 2005. Biological mechanisms of human and animal behavior. PWN, Warsaw. 2. Brodal Per 2004. The central nervous system. Structure and function. Oxford University Press. 3. Konturek S. J. Netter's Atlas of Human Physiology. 2005. Urban & Partner Medical Publishing House, Wroclaw.
	eResources addresses	
Example issues/ example questions/ tasks being completed	1. Blood function2.Sensory-motor coupling3. Physiology of physical exercise	
Work placement	Not applicable	

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