

Subject card

Subject name and code	Animal and human physiology, PG_00154237						
Field of study	Medical Biology						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2025/2026		
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	1		Language of instruction		Polish		
Semester of study	2		ECTS credits		3.0		
Learning profile	academic		Assessment form		credit		
Conducting unit	Department of Animal and Human Physiology -> Faculty of Biology -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Jolanta Orzeł-Gryglewska				
	Teachers		mgr Paweł Berezka				
			mgr Natalia Piekarczyk				
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	30.0	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. Practical acquaintance with basic physiological phenomena, methods of their study and demonstration with respect for the principles of bioethics. 2. To acquire the competence of laboratory group work and the ability to deepen and transfer knowledge independently.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[BIOLMEDL3_W06] 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	[SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report [SW3] text preparation/written work
	[BIOLMEDL3_W03] knows 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	[SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report [SW3] text preparation/written 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 sequence of operations in laboratory work	[SU6] demonstration of practical skills
	[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	[SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report [SW3] text preparation/written work
	[BIOLMEDL3_U05] synthesises data from different sources and draws appropriate conclusions from them	student synthesizes data from a variety of sources and draws conclusions on this basis, especially when preparing a report and presentation	[SU2] presentation/project/paper/ report
	[BIOLMEDL3_W11] posiada zaawansowaną wiedzę dotyczącą metod oceny stanu zdrowia oraz objawów i przyczyn wybranych zaburzeń i zmian chorobowych oraz zna podstawy zdrowego trybu życia, potrafi je uzasadnić i promować	student has advanced knowledge of clinical and medical examination methods, as well as symptoms and causes of selected disorders and lesions	[SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report [SW3] text preparation/written work
	[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 animal and human physiology and related disciplines	[SK1] oral statement/conversation/ discussion
	[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, especially when performing experiments on animals, making a report and presentation	[SU2] presentation/project/paper/ report [SU6] demonstration of practical skills [SU8] observation of student's independent or team work
Subject contents	Learning methods of recording and visualizing physiological processes in animals and humans. Observation of muscle contractions, signs of muscle fatigue. Basics of electrophysiology. Features of reflex activity. Functions of the brainstem and symptoms of its damage. Recording of ECG and blood pressure. Exercise testing in humans. Red and white blood cell system, determination of blood groups. Hemostasis and mechanisms of blood coagulation. Familiarization with the methodology of selected clinical tests and medical laboratory techniques.		
Prerequisites and co-requisites	Basic knowledge of human anatomy		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	tests/colloquia	51.0%	55.0%
	report	51.0%	15.0%
	presentation/essay	51.0%	10.0%
	entrance checks	51.0%	20.0%

Recommended reading	Basic literature	A. Literature required for final course credit (passing the laboratory exercises): 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 Ganong W. F., 2007. Physiology. PZWL Medical Publishing , Warsaw Konturek S. J. 2007. Human physiology. Textbook for medical students. Elsevier Urban & Partner, Wrocław
	Supplementary literature	B. Supplementary literature Sadowski B. 2005. Biological mechanisms of human and animal behavior. PWN, Warsaw. Brodal Per 2004. The central nervous system. Structure and function. Oxford University Press. Konturek S. J. Netter's Atlas of human physiology. 2005. Urban & Partner Medical Publishing House, Wrocław.
	eResources addresses	
Example issues/ example questions/ tasks being completed	1. Stages of blood clotting. 2.Heart cycle. 3.The prioprioreceptive reflex.	
Work placement	Not applicable	

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