

Subject card

Subject name and code	Animal and human physiology, PG_00203423						
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 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 Ziemowit Ciepielewski				
	Teachers						
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	<p>1. Practical acquaintance with basic physiological phenomena, methods of their study and demonstration with respect for the principles of bioethics.</p> <p>2. To acquire the competence of laboratory group work and the ability to deepen and transfer knowledge independently.</p>						

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 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_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	[SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report [SW3] text preparation/written work
	[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	[SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report [SW3] text preparation/written work
	[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_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
	[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_U05] synthesises data from different sources and draws appropriate conclusions from them	student synthesises 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_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
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
	entrance checks	51.0%	20.0%
	presentation/essay	51.0%	10.0%
	report	51.0%	15.0%
	tests/colloquia	51.0%	55.0%

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

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