University of Gdańsk

Subject card

Subject name and code	Animal and human physiology, PG_00198317						
Field of study	Genetics and Experimental 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 Optional subject group			
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	2.0			
Learning profile	academic		Assessment form	credit			
Conducting unit							
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	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		5.0	15.0	50	
Subject objectives	1. Learning about basic life processes, in particular the mechanisms of their regulation and integration in animal and human organisms. 2. Practical acquaintance with basic physiological phenomena, methods of their research and demonstration, respecting the principles of bioethics. 3. Acquiring laboratory group work competences and the ability to independently deepen and transfer knowledge.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[GBEL3_K05] The graduate is prepared to: responsibility for their own and others' safety at work	The student feels responsible for the safety of his own work and that of other people in the physiology laboratory.	[SK8] observation of student's independent or team work
	[GBEL3_K08] The graduate is prepared to: takes responsibility for equipment/materials entrusted to it and respects the work of others.	the student feels responsible for the equipment/materials entrusted to him for physiology exercises and respects the work of other people	[SK8] observation of student's independent or team work
	[GBEL3_U03] The graduate is able to: use research apparatus and tools and, following the correct sequence of operations, carry out simple physical, biological or chemical observations and measurements in laboratory work in the biological sciences.	The student is able to use research equipment and tools and, maintaining the correct sequence of activities, performs simple observations and measurements in the physiology laboratory.	[SU8] observation of student's independent or team work
	[GBEL3_U04] The graduate is able to: read scientific texts in English and Polish with comprehension, synthesise the knowledge they contain, prepare well-documented papers on biological problems and on the commercialisation of research.	the student is able to read and understand scientific texts in English and Polish, synthesizes the knowledge contained therein, prepares well-documented studies of physiological problems and problems related to the commercialization of research	[SU1] oral statement/conversation/ discussion [SU2] presentation/project/paper/ report [SU3] text preparation/written work
	[GBEL3_U07] The graduate is able to: work as part of a team and organise work in accordance with the principles of occupational health and safety and ergonomics.	A student in the physiology laboratory is able to work in a team and organize work while maintaining the principles of occupational health and safety and work ergonomics	[SU8] observation of student's independent or team work
	[GBEL3_W03] A graduate has an advanced knowledge and understanding of: molecular mechanisms of genetic information transfer and gene expression and the molecular and genetic basis of human physiology and disease, including infectious diseases.	The student describes the physiological processes occurring in the animal and human body, taking into account the mechanisms of their regulation at the cellular, organ and organismal level, and demonstrates the relationship of these physiological processes with the adaptation of organisms to changing environmental conditions. Describes, explains and compares systemic control mechanisms in animals and humans as well as the physiological basis of their disorders. Knows the terminology of health sciences in the field of physiology and pathophysiology	[SW3] text preparation/written work [SW5] implementation of a problem task
	[GBEL3_W05] A graduate has an advanced knowledge and understanding of: principles for planning research based on the achievements of biological sciences and related disciplines and the possibility of putting their results into practice, principles for the operation of equipment and apparatus used in molecular genetics research, and the principle of interpreting biological phenomena and processes based on empirical data in research work and practical action, taking into account the sustainable use of biodiversity.	The student knows the principles of planning physiological research, the possibilities of using their results in practice, the principles of operation of equipment and apparatus used in research in the field of physiology, and the principle of interpreting biological phenomena and processes based on empirical data, taking into account the sustainable use of biological diversity.	[SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report
Subject contents	Learning methods for recording and visualizing physiological processes in animals and humans. Observation of muscle spasms, symptoms of muscle fatigue. Basics of electrophysiology. Features of reflex activity. Brain stem functions and symptoms of its damage. ECG and blood pressure recording. Exercise tests in humans. Red- and white-cell system, determination of blood groups. Hemostasis and blood coagulation mechanisms. Familiarization with the methodology of selected clinical tests and medical laboratory techniques.		
Prerequisites and co-requisites	It is necessary to pass exercises in this subject before taking the exam.		

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	tests/colloquia	51.0%	55.0%
	"entrance" tests	51.0%	20.0%
	reports	51.0%	15.0%
	presentations/essays	51.0%	10.0%
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 Konturek S. J. 2007. Fizjologia człowieka. Podręcznik dla studentów medycyny. Elsevier Urban & Partner, Wrocław	
	Supplementary literature	Sadowski B. 2005. Biologiczne mechanizmy zachowania się ludzi i zwierząt. PWN, Warszawa. Brodal Per 2004. The central nervous system. Structure and function. Oxford University Press. Konturek S. J. Atlas fizjologii człowieka Nettera. 2005. Wydawnictwo Medyczne Urban & Partner, Wrocław Traczyk W., Trzebski A. 2015. Fizjologia człowieka z elementami fizjologii stosowanej i klinicznej. PZWL, Warszawa.	
	eResources addresses		
Example issues/ example questions/ tasks being completed	neuron action potential blood pressure measurement ECG examination Blood count analysis. Determining blood groups.		
Work placement	Not applicable		

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