University of Gdańsk

Subject card

Subject name and code	Animal and human physiology, PG_00196829		
Field of study	Biology		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2027/2028
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 a 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 and uderstands at an advanced level the 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 and uderstands at an advanced level the structure and properties of biological macromolecules, molecular mechanisms of basal metabolic pathways and the flow of genetic information, as well as 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

<table>
<tr><td>Subject contents</td><td>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.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>Basic knowledge of human anatomy.

It is necessary to pass exercises before taking the exam.</td></tr>
<tr><td>Assessment methods and criteria</td><td><table><tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr><tr><td>written exam, multiple choice test, 1.5 hours</td><td>51.0%</td><td>100.0%</td></tr></table></td></tr>
<tr><td>Recommended reading</td><td><table><tr><td>Basic literature</td><td>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.</td></tr><tr><td>Supplementary literature</td><td>Traczyk W., Trzebski A. 2015. Fizjologia człowieka z elementami fizjologii stosowanej i klinicznej. PZWL, Warszawa.</td></tr><tr><td>eResources addresses</td><td></td></tr></table></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td>resting and action potentialfeatures of the reflex reactioncenters and tracts of the spinal cordheart cycle, ECG analysislung volume and capacityphases of gastric juice secretionnephron structure and functionactivity of hypothalamic thermoregulation centers</td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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