University of Gdańsk

Subject card

Subject name and code	Animal and human physiology, PG_00196828		
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	2.0
Learning profile	academic	Assessment form	credit
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	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	6.0	14.0	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
[BIOLL3_U07] The graduate is able to independently search for and use available sources of biological information, including electronic sources	The student independently searches for and uses available sources of biological information, including electronic sources, especially when preparing presentations and "entry tickets".	[SU2] presentation/project/paper/ report
[BIOLL3_U02] The graduate is able to make observations individually and in teams, and carry out basic physical, biological and chemical measurements in the field or laboratory	The student maintains the correct sequence of activities in laboratory work, observes physiological processes and performs basic measurements in the field of medical analytics in the laboratory.	[SU6] demonstration of practical skills [SU8] observation of student's independent or team work
[BIOLL3_U01] The graduate is able to use basic apparatus and research tools and follow the correct sequence of operations in laboratory and field work	- The student uses equipment for recording physiological functions and typical laboratory equipment and maintains the correct sequence of activities in laboratory work	[SU6] demonstration of practical skills [SU8] observation of student's independent or team work
[BIOLL3_K03] The graduate is able to organise the work of a small team and work effectively as part of a team	The student is able to organize the work of a small team and demonstrates the ability to work effectively in a team when preparing a preparation, carrying out an experiment, drawing conclusions and preparing a report.	[SK8] observation of student's independent or team work
[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 connections between the achievements of physiology and neurobiology and the possibilities of their use in medicine and health prevention.	[SW1] oral statement/ conversation/discussion
[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.	[SW1] oral statement/ conversation/discussion [SW3] text preparation/written work
[BIOLL3_W04] The graduate knows and understands at an advanced level the course of physiological processes and their relationship to the adaptation of the organism to changing environmental conditions	The student demonstrates the relationship between the intensity of specific physiological processes in animals and the adaptation of the body to changing environmental conditions	[SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report [SW3] text preparation/written work
[BIOLL3_K07] The graduate is prepared to apply the principles of bioethics consciously	The student consciously applies the principles of bioethics in experiments on living vertebrates.	[SK1] oral statement/conversation/ discussion

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. Neurological reflexes in humans. 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 mechanisms blood clotting. 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/exit tests	51.0%	20.0%
tests/colloquia	51.0%	55.0%
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. 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
Supplementary literature	Traczyk W., Trzebski A. 2015. Fizjologia człowieka z elementami fizjologii stosowanej i klinicznej. PZWL, Warszawa.
eResources addresses	

Example issues/ example questions/ tasks being completed	Types of muscle contractions. Preparation and analysis of an ECG recording. Blood pressure measurement. Measurement of lung volume and capacity. Blood count. Blood clotting. Blood groups.
Work placement	Not applicable

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