

**Subject card**

<b>Subject name and code</b>	The biological basis of human behavior, PG_00146092						
<b>Field of study</b>	Biology						
<b>Date of commencement of studies</b>	October 2026	<b>Academic year of realisation of subject</b>			2028/2029		
<b>Education level</b>	Bachelor's studies	<b>Subject group</b>			Obligatory subject group in the field of study Optional subject group		
<b>Mode of study</b>	full-time studies	<b>Mode of delivery</b>			at the university		
<b>Year of study</b>	3	<b>Language of instruction</b>			Polish		
<b>Semester of study</b>	6	<b>ECTS credits</b>			1.0		
<b>Learning profile</b>	academic	<b>Assessment form</b>			credit		
<b>Conducting unit</b>	Laboratory of Neurophysiology and Neurochemistry -> Department of Animal and Human Physiology -> Faculty of Biology -> Rector						
<b>Name and surname of lecturer (lecturers)</b>	<b>Subject supervisor</b>		dr Grażyna Jerzemowska				
	<b>Teachers</b>						
<b>Lesson types</b>	<b>Lesson type</b>	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	<b>Number of study hours</b>	15.0	0.0	0.0	0.0	0.0	15
	E-learning hours included: 0.0						
<b>Learning activity and number of study hours</b>	<b>Learning activity</b>	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	<b>Number of study hours</b>	15		2.0		8.0	25
<b>Subject objectives</b>	Understanding the neurobiological mechanisms of the basis and regulation of human behavior.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[BIOLL3_W10] The graduate is familiar with the development and current state of knowledge and the latest trends in biology, as well as their relationship with other natural disciplines	[11932] [BIOLL3_W10] The student knows the current state of knowledge and the latest trends in neurobiology and behavior, and has learned their relationship with other natural and medical sciences.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/report
	[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	[11922] [BIOLL3_W04] Understands the course of basic physiological processes and their relationship with the organism's adaptation to changing environmental conditions.	[SW4] test/exam - oral or written
	[BIOLL3_K01] The graduate is prepared to evaluate his/her own knowledge, understand the need for continuous learning and development, and is open to new ideas	[11909] [BIOLL3_K01] Has a deep awareness of their knowledge level regarding the basics of animal and human behavior and understands the need to update knowledge in the field of neurobiology and behavior.	[SK2] presentation/project/paper/report
	[BIOLL3_K07] The graduate is prepared to apply the principles of bioethics consciously	[11516] [BIOLL3_K07] Understands the need for conscious application of bioethical principles, honesty, and integrity in scientific work.	[SK2] presentation/project/paper/report
	[BIOLL3_K08] The graduate is ready to be honest, reliable and apply the principles of savoir-vivre in academic and professional work	[11901] [BIOLL3_K08] Understands the need for conscious application of bioethical principles, honesty, and integrity in scientific work.	[SK2] presentation/project/paper/report
	[BIOLL3_U06] The graduate can read with comprehension scientific biological texts in Polish and simple texts in English	[11899] [BIOLL3_U06] Reads and comprehends simple scientific biological texts in Polish and simple texts in English related to specific issues in neurobiology and behavior.	[SU2] presentation/project/paper/report [SU4] test/exam - oral or written
	[BIOLL3_U07] The graduate should be able to independently search for and use available sources of biological information, including electronic sources	[11900] [BIOLL3_U07] Independently searches for and uses available biological information sources, including electronic ones, especially when preparing multimedia presentations and studying for exams, and draws appropriate conclusions about behavior based on them.	[SU2] presentation/project/paper/report [SU4] test/exam - oral or written
	[BIOLL3_U12] The graduates will be able to use Polish and foreign languages specific to biology in a way that is understandable and accessible to both specialists and non-specialists	[12235] [BIOLL3_U12] Can use specialized Polish language in neurobiology in a clear and accessible manner and learns in a directed way.	[SU2] presentation/project/paper/report [SU4] test/exam - oral or written
	[BIOLL3_W03] The graduate knows the structure and functional relationships at the cellular, tissue, organ and organismal levels	[11921] [BIOLL3_W03] The student defines the structure and relationships of the main neurotransmitter systems in the brain and can link them to behavior.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/report
	[BIOLL3_W14] The graduate knows the theoretical basis of experimental methods and the most important techniques of the biological sciences	[11938] [BIOLL3_W14] Has a deep awareness of their knowledge level regarding the basics of animal and human behavior and knows the main research methods.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/report
<b>Subject contents</b>	The concept and terminology of behavior, behaviorism, and issues of the psyche-brain relationship. The neurochemical and structural basis of the reaction of the fundamental importance for the survival of the individual and the maintenance of the species (drive and emotion). The main neurotransmitter systems of the brain and their role in behavior. Central and peripheral regulation of eating behavior, thirst, appetitive-defensive, sexual, and parental. Developmental neurobiology and addictions. Brain plasticity. Mechanisms of conditioning and learning. Memory.		
<b>Prerequisites and co-requisites</b>	Basic knowledge of human physiology and anatomy.		

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Presentation/project as an additional final work, assessed by percentage index ("Regulations of UG Studies"),	51.0%	20.0%
	Test with open and task questions and figures to describe, assessed by percentage index ("Regulations of UG Studies")	51.0%	80.0%
Recommended reading	Basic literature	(1) B. Sadowski Biologiczne mechanizmy zachowania się ludzi i zwierząt PWN, 2005; (2) Górka T., Grabowska A., Zagrodzka J. (red.) Mózg a zachowanie. Wydawnictwo Naukowe PWN, Warszawa; 1997; (3) D. Lewandowska, J. Orzeł-Gryglewska Fizjologia zwierząt i człowieka przewodnik do ćwiczeń, Wydawnictwo UG, 2009; (4) Longstaff A. Neurobiologia. Wydawnictwo Naukowe PWN, Warszawa, 2002.	
	Supplementary literature	(1) Narkiewicz O., Moryś J. Neuroanatomia czynnościowa i kliniczna. Wydawnictwo Naukowe PZWL, Warszawa, 2013; (2) Per Brodal. The central nervous system. Structure and function. Oxford University Press (4-th Edition), 2010; (3) Robert W. Sussman. The biological basis of human behavior. A critical Review (2-nd Edition). Advances in Human Evolution Series. 1999; (3) Geoffrey Grant Pope. The biological bases of human behavior, William Paterson University, USA, 2000, (4) current scientific literature: congress materials and articles in specialist journals recommended by the lecturer,	
	eResources addresses		
Example issues/ example questions/ tasks being completed	1) Discussion of the mechanisms of peripheral and central regulation of eating behavior and thirst, (2) Discussion of the mechanisms of peripheral and central regulation of appetitive, defensive, sexual, and parental behavior, (3) Discussion of the causes and developmental mechanisms of the most common CNS disorders.		
Work placement	Not applicable		

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