

**Subject card**

<b>Subject name and code</b>	Neurobiology of Addictions, PG_00203446						
<b>Field of study</b>	Medical 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 Subject group related to scientific research in the field of study		
<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>			3.0		
<b>Learning profile</b>	academic	<b>Assessment form</b>			credit		
<b>Conducting unit</b>	Laboratory of Neurobiology -> Department of Animal and Human Physiology -> Faculty of Biology -> Rector						
<b>Name and surname of lecturer (lecturers)</b>	<b>Subject supervisor</b>		dr Wojciech Glac				
	<b>Teachers</b>						
<b>Lesson types</b>	<b>Lesson type</b>	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	<b>Number of study hours</b>	0.0	30.0	0.0	0.0	0.0	30
	E-learning hours included: 0.0						
<b>Learning activity and number of study hours</b>	<b>Learning activity</b>	<b>Participation in didactic classes included in study plan</b>		<b>Participation in consultation hours</b>		<b>Self-study</b>	<b>SUM</b>
	<b>Number of study hours</b>	30		5.0		40.0	75
<b>Subject objectives</b>	understanding the mechanisms leading to pharmacological and behavioral addiction and the basis of individual differences in susceptibility to addiction; learning the properties, mechanisms of action and effects of the most popular addictive substances; ability to recognize addiction and symptoms of taking addictive substances						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[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	* understands the physiological processes occurring in response to the intake (administration) of various types of addictive substances and their relationship with the addiction process and understands the neural mechanism of addiction (BM_W05, BM_W06)	[SW3] text preparation/written work
	[BIOLMEDL3_W05] has an advanced knowledge of the structure, properties and functions of human cells, tissues and organs; human physiological and biochemical processes and mechanisms of disease pathophysiology	knows the structure and functions of the brain in terms of the neuronal mechanism of addiction (BM_W05)	[SW4] test/exam - oral or written [SW3] text preparation/written work
	[BIOLMEDL3_K04] is able to form opinions about individuals and social groups in a professional context	* is able to formulate opinions about individual people and social groups in the context of susceptibility to addiction and the effects of addiction, and also assess the psychophysical condition of an addicted person in various phases of addiction while maintaining ethical principles (B_K03)	[SK1] oral statement/conversation/discussion [SK5] implementation of a problem task
	[BIOLMEDL3_U07] is able to identify problems corresponding to the needs of an individual and a social group and to undertake basic diagnostic, preventive and educational activities appropriate to the profession of medical biologist	can prepare a well-documented issue on the neurobiological basis of addiction and addiction prevention (BM_U07)	[SU3] text preparation/written work [SU5] implementation of a problem task
[BIOLMEDL3_U05] synthesises data from different sources and draws appropriate conclusions from them	synthesizes data from various sources in order to determine the degree of harmfulness, addictive potential of substances and the individual's susceptibility to developing addiction (B_U05)	[SU3] text preparation/written work [SU5] implementation of a problem task	
Subject contents	<ul style="list-style-type: none"> <li>the definitions of addiction;</li> <li>psychological and physical addictions;</li> <li>behavioral and pharmacological addictions;</li> <li>neurobiological mechanism of addiction;</li> <li>theories on the development of addiction;</li> <li>mechanisms of action and effects of the main pharmacological groups of addictive drugs - stimulants, depressants and psychedelics - including: amphetamine, cocaine, caffeine, nicotine, alcohol, barbiturates, benzodiazepines, opioids, LSD, psilocybin, MDMA, ketamine, phencyclidine, cannabinoids and others;</li> <li>individual differences in susceptibility to addiction and the effects of taking addictive substances;</li> <li>treatment of addiction</li> </ul>		
Prerequisites and co-requisites	basic knowledge about the structure and functioning of the central nervous system		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	problem tasks	51.0%	40.0%
	discussion	51.0%	10.0%
	case study	51.0%	20.0%
	quizzes	51.0%	30.0%
Recommended reading	Basic literature	<ul style="list-style-type: none"> <li>Bijak i Lasoń (red.), Neuropsychofarmakologia: dziś i jutro, Instytut Farmakologii Klinicznej PAN, Wydawnictwo Państwowy Zakład Wydawnictw Lekarskich, Kraków, 2000</li> <li>Szukalski, Narkotyki kompendium wiedzy o środkach uzależniających, Instytut Psychiatrii i Neurologii, Warszawa, 2005</li> <li>Longstaff, Neurobiologia, PWN, Warszawa, 2002</li> </ul>	
	Supplementary literature	articles in specialist scientific journals (provided by teacher)	
	eResources addresses		
Example issues/example questions/tasks being completed	<ul style="list-style-type: none"> <li>test - indicate substances that are physically addictive (indicate all correct answers)</li> <li>problem work - create a synthetic theory of addiction based on various theories</li> <li>case study - based on the described story, indicate and justify what substances the described has taken, and why fatal overdose occurred</li> <li>discussion - topic: therapeutic potential of psychedelics</li> </ul>		
Work placement	Not applicable		

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