University of Gdańsk

Subject card

Subject name and code	Biological basis of addiction - lecture, PG_00132768		
Field of study	Criminology		
Date of commencement of studies	October 2025	Academic year of realisation of subject	2025/2026
Education level	Master's studies	Subject group	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	1.0
Learning profile	academic	Assessment form	credit
Conducting unit	Laboratory of Neurobiology -> Department of Animal and Human Physiology -> Faculty of Biology -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	dr Wojciech Glac	
	Teachers	dr Wojciech Glac	

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	20.0	0.0	0.0	0.0	0.0	20

E-learning hours included: 0.0

eNauczanie source addresses:

Moodle ID: 13522 Biologiczne podłoże uzależnień / Podstawy fizjologii stresu (2026)
https://mdl.ug.edu.pl/course/view.php?id=13522

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	20	0.0	5.0	25

Subject objectives

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, and the effects of addiction and psychoactive drugs on antisocial behavior.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[KRYMMU2_WG05] Has an in-depth knowledge of methods and tools, including data and information extraction techniques, specific to criminology and forensic science	Demonstrates knowledge of tools and techniques for acquiring knowledge and analyzing data related to the impact of addiction and psychoactive substances on human behavior, including in the context of criminology.	[SW4] test/exam - oral or written [SW5] implementation of a problem task
[KRYMMU2_WG01] Has an in-depth knowledge of the nature of legal and related penal sciences, their place in the system of sciences and their interrelationships	Demonstrates advanced knowledge of addiction and its biological basis, as well as the effects of psychoactive substances on the human body, as part of a broader understanding of human nature and the biological foundations of behavior, including antisocial behavior.	[SW4] test/exam - oral or written [SW5] implementation of a problem task
[KRYMMU2_KK01] Is aware of the level of his knowledge and skills, and understands the need for lifelong learning	Is able to assess their own knowledge of the biological basis of addiction based on feedback and to identify directions for further development.	[SK1] oral statement/conversation/ discussion [SK5] implementation of a problem task

<table>
<tr><td>Subject contents</td><td>• the definitions of addiction;
• psychological and physical addictions;
• behavioral and pharmacological addictions;
• neurobiological mechanism of addiction;
• theories on the development of addiction;
• 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, cannabinols and others;
• individual differences in susceptibility to addiction and the effects of taking addictive substances;
• effects of addiction and psychoactive drugs on antisocial behavior;
• treatment of addiction</td></tr>
<tr><td>Prerequisites and co-requisites</td><td></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>quizzes</td><td>51.0%</td><td>30.0%</td></tr>
<tr><td>problem-based tasks / case studies</td><td>51.0%</td><td>50.0%</td></tr>
<tr><td>discussions</td><td>51.0%</td><td>20.0%</td></tr>
</table></td></tr>
<tr><td>Recommended reading</td><td><table>
<tr><td>Basic literature</td><td>• Bijak i Lasoń (red.), Neuropsychofarmakologia: dziś i jutro, Instytut Farmakologii Klinicznej PAN, Wydawnictwo Palotyn, Kraków, 2000
• Szukalski, Narkotyki kompendium wiedzy o środkach uzależniających, Instytut Psychiatrii i Neurologii, Warszawa, 2005</td></tr>
<tr><td>Supplementary literature</td><td>• Longstaff, Neurobiologia, PWN, Warszawa, 2002
• articles in specialist scientific journals (provided by teacher)</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
</table></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td>• test - indicate substances that are physically addictive (indicate all correct answers)
• problem-based task - create a synthetic theory of addiction based on various theories
• case study - based on the described story, indicate and justify what substances the described has taken, and why criminal behavior occurred
• discussion - topic: therapeutic potential of psychedelics</td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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