University of Gdańsk

Subject card

Subject name and code	Neurodietetics, PG_00207341		
Field of study	Biology		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2026/2027
Education level	Master's studies	Subject group	Obligatory subject group in the field of study Optional subject group 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	1	Language of instruction	Polish
Semester of study	2	ECTS credits	2.0
Learning profile	academic	Assessment form	credit
Conducting unit			
Name and surname of lecturer (lecturers)	Subject supervisor	dr Ziemowit Ciepielewski	
	Teachers		

Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	30.0	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	5.0	15.0	50

Subject objectives	1. Familiarising students with the neurobiological and neurohormonal basis of nutritional issues 2. Understanding the processes of communication and information flow between the nervous and digestive systems and how they are regulated for the proper development and functioning of the human body. 3. Determining the role of receptor and neurohormonal systems in shaping behaviours related to food intake 4. Learning about the effects of selected psychoactive substances on food intake 5. The impact of food additives on neurotransmission 6. The impact of diet on cognitive functions

Learning outcomes

Course outcome	Subject outcome	Method of verification
[BIOLMU2_W05] has an in-depth knowledge and understanding of the dynamic development of the biological sciences and is well versed in new research trends and disciplines	graduates are well versed in the latest trends in food and nutrition sciences	[SW4] test/exam - oral or written
[BIOLMU2_W04] has in-depth knowledge of the chosen specialization in the biological sciences	graduates are proficient in the field of nutrition	[SW4] test/exam - oral or written
[BIOLMU2_W03] has thorough knowledge and understanding of research problems at the border of biological sciences that require the use of advanced tools	The graduate knows and understands issues in interdisciplinary sciences, including neuroendocrinology, dietetics, psychoneuroendocrinology and biomedical nutritional sciences	[SW4] test/exam - oral or written
[BIOLMU2_W01] has a deep knowledge and understanding of natural phenomena and processes at various levels of complexity	The graduate knows and understands the basis of the processes and mechanisms underlying the functioning of the digestive, endocrine and nervous systems in the field of dietetics.	[SW4] test/exam - oral or written
[BIOLMU2_U07] is able to critically compare biological information from various sources and draw justified conclusions on this basis	the graduate verifies the information	[SU1] oral statement/conversation/ discussion [SU2] presentation/project/paper/ report
[BIOLMU2_U02] is able to proficiently use the scientific literature of the biological speciality studied	the graduate utilises scientific literature in the field of dietetics	[SU2] presentation/project/paper/ report [SU4] test/exam - oral or written
[BIOLMU2_U01] is able to select and apply research techniques and tools appropriate to the problems of the studied speciality of biological sciences	graduates are familiar with research methods used in nutritional sciences	[SU2] presentation/project/paper/ report
[BIOLMU2_K05] is ready to use recognized sources of scientific and popular information in the field of biological sciences in order to deepen his/her knowledge	graduates use scientific information sources and scientific databases	[SK1] oral statement/conversation/ discussion [SK2] presentation/project/paper/ report
[BIOLMU2_K01] shows initiative and is ready to act independently and feels the need for lifelong learning	the graduate works independently	[SK1] oral statement/conversation/ discussion [SK2] presentation/project/paper/ report

Subject contents

Anatomy and innervation of the digestive system. Neurohormonal systems (axes) influencing feeding behaviour. The brain-gut axis. The influence of various dietary components, such as macro- and micronutrients, vitamins, proteins, carbohydrates, fats, dietary supplements, synthetic hormones, and food additives on neurotransmission, neurochemistry, behaviour, and cognitive functions. Ways in which nutritional dysfunctions and disorders can lead to neurological symptoms, including pain, cognitive dysfunction, paraesthesia, gastrointestinal disorders, memory loss, inattention, impulsivity, and central fatigue; as well as psychological symptoms such as depression, anxiety, post-traumatic stress disorder, and difficulty concentrating.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
	51.0%	25.0%
	51.0%	75.0%

Recommended reading	Basic literature	A. Literature required for final course completion (passing the examination): A.1. used during classes J. Mann & S.Truswell Essentials of human nutrition, Oxford Press, 5th edition, 2017 Talitha Best, Louise Dye Nutrition for Brain Health and Cognitive Performance 1st Edition CRC Press, 2015 ISBN 9781466570023 Ruth Leyse-Wallace Nutrition and Mental Health 1st Edition CRC Press, 2013 ISBN 9781439863350 A.2. Studied independently by the student. Publications provided by the course instructor. B. Supplementary reading: academic articles in Polish and English recommended by the course instructors.
	Supplementary literature	A.2. Studied independently by the student. Publications provided by the course instructor. B. Supplementary reading: academic articles in Polish and English recommended by the course instructors.
	eResources addresses	
Example issues/ example questions/ tasks being completed	1. Brain diet 2. Eating disorders: bulimia, anorexia, orthorexia, etc. 3. Neurohormonal basis of food intake 4. Neuropsychiatric aspects of obesity	
Work placement	Not applicable	

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