University of Gdańsk

Subject card

Subject name and code	Fundamentals of Chronobiology, PG_00154181		
Field of study	Podstawy chronobiologii (Wykład)		
Date of commencement of studies	October 2023	Academic year of realisation of subject	2024/2025
Education level	Master's studies	Subject group	
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	1.0
Learning profile	academic	Assessment form	credit
Conducting unit	Pracownia Fizjologii Behawioru i Stresu -> Department of Animal and Human Physiology -> Faculty of Biology -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	dr Emilia Leszkowicz	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	0.0	0.0	0.0	0.0	15

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	15	2.0	8.0	25

Subject objectives

Learning the basics of the mechanisms of regulation of biological rhythms.Knowledge of the functioning of the biological clock at the systemic and cellular level.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[BIOLMU2_K07] the graduate is ready to systematically update biological knowledge and information on its practical applications	The student is able to update biological knowledge in the field of chronobiology.	[SK8] obserwacja samodzielnej lub zespołowej pracy studenta
[BIOLMU2_U07] the graduate is able to critically confront biological information from a variety of sources and, on this basis, draw valid conclusions	The student is able to critically evaluate information on chronobiology from various sources and draw justified conclusions.	[SU8] obserwacja samodzielnej lub zespołowej pracy studenta
[BIOLMU2_K01] the graduate is ready to take initiative and act independently and feels the need for lifelong learning	The student is able to take initiatives and is independent in action, and also has a sense of the need for lifelong learning	[SK8] obserwacja samodzielnej lub zespołowej pracy studenta
[BIOLMU2_U03] the graduate can critically analyse and select biological information, especially from electronic sources	The student is able to critically analyze and select information regarding chronobiology, especially from electronic sources.	[SU8] obserwacja samodzielnej lub zespołowej pracy studenta
[BIOLMU2_W05] the graduate understands the dynamic development of the biological sciences and is familiar with new research directions and disciplines	The student knows and understands the dynamic development of chronobiology and new related fields	[SW4] test/egzamin - ustny lub pisemny
[BIOLMU2_W01] the graduate has an in-depth knowledge and understanding of natural phenomena and processes at different levels of complexity	The student knows and understands phenomena and processes related to chronobiology at various levels of complexity.	[SW4] test/egzamin - ustny lub pisemny

Subject contents	The biological clock and the basics of its operation. Types of biological rhythms. Central structures related to circadian rhythms. The relationship of the hypothalamus with secretory activity. The role of the pineal gland in the regulation of biological rhythms. Melatonin as a clock and calendar of the body. Chronobiology of the sleep-wake rhythm. Consequences of circadian rhythm dysregulation.	
Prerequisites and co-requisites		
Assessment methods and criteria		

Subject passing criteria	Passing threshold	Percentage of the final grade
	51.0%	100.0%

Recommended reading	Basic literature	Konturek S. 2007. Rytmika funkcji fizjologicznych. Fizjologia człowieka. Elsevier Urban & Partner. Sadowski B. 2005. Biologiczne mechanizmy zachowania się ludzi i zwierząt. PWN, Warszawa. or similar items available in the UG library
	Supplementary literature	Jurkowlaniec E., 2017. Zaburzenia rytmów biologicznych pod wpływem zanieczyszczenia światłem wybrane fizjologiczne aspekty niedoboru melatoniny oraz witaminy D. Polish Journal for Sustainable Development, 21 (2), 4757.
	eResources addresses	
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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