

Subject card

Subject name and code	Cell biology, PG_00154218						
Field of study	Medical Biology						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2025/2026		
Education level	Bachelor's studies		Subject group		Obligatory subject group in the field of study 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	1		ECTS credits		2.0		
Learning profile	academic		Assessment form				
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. Małgorzata Kozieradzka-Kiszkurno				
	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		33.0	50
Subject objectives	1. Understanding the basics of functioning of organisms at the cell level. 2. Understanding the structure of prokaryotic and eukaryotic cells. 3. Ability to analyze the relationship between the structure of cellular structures and their functions.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[BIOLMEDL3_K07] Is responsible for the equipment/materials entrusted to him and his own work and respects the work of others	The graduate is aware of responsibility for the entrusted equipment (e.g. light microscope, permanent preparations) and his/her work, as well as respecting the work of others.	[SK8] observation of student's independent or team work
	[BIOLMEDL3_W16] explains the theoretical basis of experimental methods and lists the most important techniques of biological sciences that can be applied to medical biology and diagnostics	- The graduate explains the theoretical basis of cytobiological methods and lists the most important techniques used in cell biology that may be used in medical biology and diagnostics.	[SW4] test/exam - oral or written
	[BIOLMEDL3_U01] uses basic apparatus and research tools and, maintaining the correct sequence of operations, performs simple physical, biological or chemical observations and measurements in laboratory work in the biological or medical sciences	- The graduate is aware of the use of basic equipment and tools used in research on plant and animal cells.	[SU1] oral statement/conversation/discussion [SU4] test/exam - oral or written [SU8] observation of student's independent or team work
	[BIOLMEDL3_W03] knows the structure of the animal or human organism, the processes and functional relationships at the cellular, tissue, organ and organismal levels, and explains their relationship to behavior and adaptation of the organism to changing environmental conditions	- The graduate understands the importance of individual compartments in the functioning of cells and explains their role in the adaptation of cells to changing environmental conditions or the function performed in the organism.	[SW4] test/exam - oral or written
	[BIOLMEDL3_W01] explains the differences in the structure and function of a prokaryotic and eukaryotic cell	The graduate can explain the differences in the structure and functioning of prokaryotic and eukaryotic cells and present the basic features of cell structure and function.	[SW4] test/exam - oral or written
Subject contents	Learning techniques and research methods used in cell biology. The phenomenon of life. Levels of organization of life (molecular, organismal, species and population). Organization of cells in prokaryotic and eukaryotic organisms. The structure and functioning of individual cell compartments. Genetic material of prokaryotic and eukaryotic cells. Cell cycle and its regulation. Programmed cell death in physiological conditions and disease states.		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Test	51.0%	100.0%
Recommended reading	Basic literature Alberts B. i wsp. Podstawy biologii komórki. 2005, PWN Warszawa Alberts B, Heald R, Johnson A, Morgan D, Raff M. Molecular Biology of the Cell. 2022, Norton & Company Bowes B.G, Mauseth J.D Plant Structure. 2008, Jones & Bartlett Learning Hancock JT (2016) Cell Signalling Oxford University Press Kilarski, W. Strukturalne podstawy biologii komórki. 2003, Wyd. Naukowe PWN Klyszejko-Stefanowicz L. Cytobiochemia. 2002, Wyd. Naukowe PWN Wojtaszek P., Michejda J., Ratajczak, Biologia komórki roślinnej. T.1 Struktura, T.2 Funkcja.2009, Wyd. Naukowe PWN Woźny A. i in. [red.] 2001. Podstawy biologii komórki roślinnej, Wyd. Naukowe UAM, Poznań		

	Supplementary literature	Noguchi T, Kawano S, Tsukaya H, Matsunaga S, Sakai A, Karahara I, Hayashi Y. Atlas of Plant Cell Structure. 2014, Springer Tokyo Heidelberg New York Dordrecht London (książka on-line) Alberts B. (red.), Johnson A, Lewis J, et al. Wstęp do biologii molekularnej. 2002, New York: Garland Science (książka on-line) Litwin JA. Podstawy technik mikroskopowych. Wydawnictwo Uniwersytetu Jagiellońskiego, 1999, Kraków Mauseth J.D. Botany: An Introduction to Plant Biology. 2016, Jones & Bartlett Learning
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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