

Subject card

Subject name and code	Essential biology, PG_00211072						
Field of study	Medical Biology						
Date of commencement of studies	October 2026		Academic year of realisation of subject		2026/2027		
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		credit		
Conducting unit	Laboratory of Molecular Evolution and Bioinformatics -> Department of Evolutionary Genetics and Biosystematics -> Faculty of Biology -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Aleksandra Naczk				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	15.0	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		3.0		32.0	50
Subject objectives	1. to learn the fundamentals of the structure, biology and classification of living organisms; 2. to understand the biological processes determining life at different levels of its organisation; 3. to understand the functions and importance of different groups of organisms in nature; 4. to understand the interdependence of interactions between organisms and their environment and between these organisms and each other; 5. to be able to recognise and classify different groups of organisms.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[BIOLMEDL3_U10] learns independently and in a focused manner, and is able to set priorities and organise the work of a small team, as well as work effectively within a team	- is able to prioritise and organise the work of a small team and work effectively work in a team	[SU1] oral statement/conversation/discussion [SU2] presentation/project/paper/report [SU5] implementation of a problem task
	[BIOLMEDL3_U04] synthesises data from different sources and draws appropriate conclusions from them	- can use specialist literature, select information, draw conclusions and express himself/herself on a given subject in the field of biological sciences	[SU1] oral statement/conversation/discussion [SU2] presentation/project/paper/report [SU5] implementation of a problem task
	[BIOLMEDL3_W03] has an advanced knowledge and understanding of the characteristics, systematics and evolution of selected groups of organisms, taking into account their molecular basis, and describes the fundamental concepts and mechanisms of evolution; furthermore, the student describes, explains and compares, at an advanced level, the systemic regulatory mechanisms in animal and human organisms (including from an ontogenetic and phylogenetic perspective) and understands the neurobiological and genetic basis of disorders	- presents the characteristics, systematics and evolution of selected groups of organisms	[SW1] oral statement/conversation/discussion [SW2] presentation/project/paper/report [SW3] text preparation/written work
	[BIOLMEDL3_W02] has an advanced knowledge and understanding of the structure of the animal or human body, processes and functional relationships at the cellular, tissue, organ and organismal levels, as well as physiological and biochemical processes at an advanced level, and the mechanisms of the pathophysiology of diseases, and explains their relationship with behaviour and the organism's	- explains the basic concepts of biology, demonstrates the structure and functional relationships at cellular, tissue, organ and organismal level	[SW1] oral statement/conversation/discussion [SW2] presentation/project/paper/report [SW3] text preparation/written work
	[BIOLMEDL3_W01] has an advanced knowledge and understanding of the differences in the structure and function of prokaryotic and eukaryotic cells, the structure and properties of the various types of biological macromolecules, the molecular mechanisms of basic metabolic pathways and the flow of genetic information, and the sources of variation in organisms; explains the laws of inheritance	- explains the basic concepts of biology, demonstrates the structure and functional relationships at cellular, tissue, organ and organismal level	[SW1] oral statement/conversation/discussion [SW2] presentation/project/paper/report [SW3] text preparation/written work
Subject contents	Exercise topics: - an overview of the most important systematic groups of organisms with respect to differentiated body plans - basics of the division of living organisms into taxa.		
Prerequisites and co-requisites	Knowledge of basic biology, within the scope of secondary school.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	presentation	51.0%	25.0%
	written colloquium	51.0%	50.0%
	worksheets	51.0%	25.0%

Recommended reading	Basic literature	Futuyma DJ. 2005. Ewolucja. Wydawnictwo Uniwersytetu Warszawskiego. Biologia Campbella. 2016. Opracowanie zbiorowe. Dom Wydawniczy Rebis. Botanika t.2. 2005. Szweykowska A, Szweykowski J. PWN. Zoologia t. 1-3. 2013. Czesław Błaszak. PWN. Zoologia. Różnorodność i pokrewieństwa zwierząt. 2015. Weiner J. Wydawnictwo Uniwersytetu Warszawskiego.
	Supplementary literature	Kunicki-Goldfinger W.J.H. (2001): Życie bakterii. Wydawnictwo Naukowe PWN, Warszawa Kopcewicz J., Lewak S. (red.) (2007): Fizjologia roślin. Wydawnictwo Naukowe PWN, Warszawa Schmidt-Nielsen K. (2008): Fizjologia zwierząt. Adaptacja do środowiska. Wydawnictwo Naukowe PWN, Warszawa Weiner J. (2012): Życie i ewolucja biosfery. Podręcznik ekologii ogólnej. Wydawnictwo Naukowe PWN, Warszawa Jura C. (2007): Bezkręgowce. Wydawnictwo Naukowe PWN, Warszawa Szweykowska A., Szweykowski J. (2008): Botanika. Wydawnictwo Naukowe PWN, Warszawa Szarski H. (2012): Historia zwierząt kręgowych. Wydawnictwo Naukowe PWN, Warszawa
	eResources addresses	
Example issues/ example questions/ tasks being completed	Why does the emergence of seeds represent such an important evolutionary advance? What features make ferns considered to be more highly evolved plants than bryophytes? Identify the originality of gametangioangamy and somatogamy as modes of sexual reproduction in fungi. How can it be explained that sponges are pre-tissue bilayers? How is the dorsal strut formed and what is its function in Chordata?	
Work placement	Not applicable	

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