

Subject card

Subject name and code	Mechanisms of evolution, PG_00132651						
Field of study	Biology						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2027/2028		
Education level	Bachelor's studies		Subject group		Obligatory subject group in the field of study		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	3		Language of instruction		Polish		
Semester of study	5		ECTS credits		1.0		
Learning profile	academic		Assessment form		credit		
Conducting unit	Laboratory of Biosystematics and Ecology of Aquatic Invertebrates -> Department of Evolutionary Genetics and Biosystematics -> Faculty of Biology -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. Tadeusz Namiotko				
	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		2.0		8.0	25
Subject objectives	1 To understand the pathways and mechanisms of evolution. 2. Ability to use this knowledge to explain the causes and extent of biodiversity.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[BIOLL3_W10] The graduate is familiar with the development and current state of knowledge and the latest trends in biology, as well as their relationship with other natural disciplines		The graduate will be able to assess the development, current state of knowledge and critically evaluate the latest hypotheses of evolutionary biology, explain why it is the central theory of biology and indicate its relationship to other natural sciences.		[SW1] oral statement/conversation/discussion		
	[BIOLL3_W06] The graduate will know the characteristics, systematics and understand the evolution of selected groups of organisms including molecular basis and basic concepts and mechanisms of evolution		The graduate will describe the basic concepts and mechanisms of evolution and explain the causes of biodiversity using selected examples of plants and animals		[SW1] oral statement/conversation/discussion		
	[BIOLL3_U07] The graduate should be able to independently search for and use available sources of biological information, including electronic sources		The graduate will find by themself and use reliable sources of information on evolutionary biology, including electronic sources.		[SU1] oral statement/conversation/discussion		
Subject contents	The concept of natural selection, genetic drift and sexual selection. Natural selection as a factor responsible for adaptive change. Evolution of quantitative traits. Concepts of species. Adaptive radiations, evolutionary trends and rates of evolutionary change. Evolution of biodiversity, mass extinctions. Selected topics on the major transitions in evolution, key periods in the history of life on Earth and the origin of some higher taxa.						
Prerequisites and co-requisites							

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	conversation/discussion	51.0%	100.0%
Recommended reading	Basic literature	Futuyma D.J., Kirkpatrick M. 2017. Evolution. Oxford Univ. Press. articles on evolutionary biology (e.g. from current and archive issues of Scientific American and from electronic sources)	
	Supplementary literature	articles on evolutionary biology (e.g. from current and archive issues of Scientific American and from electronic sources)	
	eResources addresses		
	Example issues/ example questions/ tasks being completed		
Work placement	Not applicable		

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