

Subject card

Subject name and code	Contemporary methods in animal taxonomy, PG_00207470						
Field of study	Biology						
Date of commencement of studies	October 2026		Academic year of realisation of subject		2028/2029		
Education level	Bachelor's studies		Subject group		Obligatory subject group in the field of study Optional subject group		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	3		Language of instruction		Polish		
Semester of study	6		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	0.0	15.0	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		1.0		9.0	25
Subject objectives	Introducing students to the issues of contemporary research methods in animal taxonomy. Learning the basic techniques and stages of analysis of morphological and molecular data.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[BIOLL3_W07] knows the development of biology as a science, its connections with other disciplines and the principles of using biological knowledge in the economy and social life, including ways that are entrepreneurial		
	[BIOLL3_W05] has advanced knowledge of experimental methods, laboratory and field techniques, and the principles of planning and conducting biological research		
	[BIOLL3_U02] is able to use statistical methods, IT tools and data analysis techniques to describe biological phenomena, as well as synthesize information from various sources and formulate correct conclusions based on them		
	[BIOLL3_U01] is able to use basic research techniques and tools appropriate for the biological sciences and perform physical, chemical and biological observations and measurements in the laboratory and in the field, individually and in a team, while organizing her/his work appropriately and in a maintained way		
	[BIOLL3_K02] is ready to take care for her/his own safety and that of others, identifying threats and taking appropriate action, as well as use verified equipment and materials responsibly, ensuring their proper use		
Subject contents	Introducing to the basic stages of taxonomic research. Selected methods of phenetic analysis of morphological data. Introducing to basic molecular methods used in animal taxonomy along with statistical methods of sequence data. Basics of phylogenetic inference.		
Prerequisites and co-requisites	Formal requirements: none Entry requirements: none		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	completing sets of tasks	51.0%	100.0%
	attendance	100.0%	0.0%
Recommended reading	Basic literature	Brown T. A. 2001. Genomes. PWN Scientific Publishing House, Warsaw. Falniowski A. 2003. Numerical methods in taxonomy. Jagiellonian University Publishing House, Cracow. Hall B.G. 2008. Phylogenetic trees made easy. User Guide. Ed. Univ. of Warsaw, Warsaw. Hills D. M. et al. (ed.). 1996. Molecular systematics. Sinauer Associates, Sunderland, MA.	
	Supplementary literature	Danielopol D.L., Namiotko T., Horne D.J. 2022. Accidental monstrosities: Taxonomic chimeras in Ostracoda (Crustacea). Zootaxa, 5116 (2): 151-199. Sosa F.M., Pilot M. 2023. Molecular mechanisms underlying vertebrate adaptive evolution: A systematic review. Genes, 14(2), 416.	

	eResources addresses	
Example issues/ example questions/ tasks being completed	Constructing a dichotomous key for identifying six fictional species. Constructing a phenogram using the UPGMA method.	
Work placement	Not applicable	

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