University of Gdańsk

Subject card

Subject name and code	Contemporary methods in animal taxonomy, PG_00146081		
Field of study	Biology		
Date of commencement of studies	October 2024	Academic year of realisation of subject	2026/2027
Education level	undergraduate 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	
Conducting unit	Pracownia Biosystematyki i Ekologii Bezkręgowców Wodnych -> Katedra Genetyki Ewolucyjnej i Biosystematyki -> Faculty of Biology		
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	3.0	7.0	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_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 student understands the advantages, disadvantages and limitations of individual methods used in animal taxonomy	[SW4] test/exam - oral or written
[BIOLL3_K06] The graduate is prepared to take responsibility for the equipment/materials entrusted to them and for their own work and that of others	The student is responsible for the entrusted equipment/materials and his/her own work and respects the work of others	[SK8] observation of student's independent or team work
[BIOLL3_U04] The graduate will be able to apply statistical methods and computer algorithms and techniques to the description of phenomena and the analysis of biological data	The student applies basic statistical methods, algorithms and IT techniques to analyze biological data	[SU2] presentation/project/paper/ report
[BIOLL3_U01] The graduate will be able to use basic apparatus and research tools and follow the correct sequence of operations in laboratory and field work	The student uses basic research equipment and tools and has knowledge of laboratory work used in taxonomic research	[SU5] implementation of a problem task
[BIOLL3_W14] The graduate knows the theoretical basis of experimental methods and the most important techniques of the biological sciences	The student explains the principles of operation of basic research methods in animal taxonomy	[SW4] test/exam - oral or written

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	Adresy na platformie eNauczanie:

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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