University of Gdańsk

Subject card

Subject name and code	Zoology of invertebrates, PG_00196812		
Field of study	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	3.0
Learning profile	academic	Assessment form	exam
Conducting unit	Laboratory of Evolutionary Entomology and Museum of Amber Inclusions -> Katedra Zoologii Bezkręgowców i Parazytologii -> Faculty of Biology -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. Jacek Szwedo	
	Teachers		

Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	0.0	0.0	0.0	30
	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	30	4.0	41.0	75

Subject objectives	1 To review the major types of invertebrate animals and Protista (Protozoa). 2. To understand the main mechanisms and trends in the evolution of the animals discussed. 3. To be able to recognise the main types of animals studied.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[BIOLL3_W03] knows and understands at an advanced level the principles of life functioning at the level of populations, biocenoses and ecosystems, the determinants of biological diversity as well as the mechanisms and molecular basis of the evolution of organisms	He/she knows and understands at an advanced level the principles of how invertebrates function at the level of populations, biocoenoses, and ecosystems, and presents the evolution of selected groups of invertebrates	[SW4] test/exam - oral or written
[BIOLL3_W01] knows and understands at an advanced level the structure and functioning of organisms at all levels of the organization of life - from the cell (prokaryotic and eukaryotic), through tissues, organs, to the organism - as well as the relationships between them and their adaptations to the environment	He/she presents the structure of different types of invertebrates, taking into account functional relationships at the cellular (Protista), tissue, organ and organismal	[SW4] test/exam - oral or written
[BIOLL3_U09] is able to learn independently and plan her/his own development in an organized and controlled manner	He/she is able to learn independently by preparing the issues that have been identified	[SU4] test/exam - oral or written
[BIOLL3_K04] is ready to apply the principles of bioethics, scientific integrity and honesty, including the proper handling of biological material and respect for intellectual property	He/she consciously apply the principles of bioethics	[SK1] oral statement/conversation/ discussion
[BIOLL3_U03] is able to search for, select and critically analyze information from various sources, including scientific literature and electronic databases, as well as read and understand scientific texts in Polish and English	He/she independently finds and uses available sources of biological information in Polish and English, including electronic sources	[SU4] test/exam - oral or written

Subject contents

The role and tasks of systematics. Principles of modern zoological nomenclature. Basics of phenetics, cladistics and evolutionary systematics. Phylogeny, taxonomy, morphology, anatomy, bionomics, systematics and economic importance of selected protozoa and invertebrates belonging to all types (to the echinoderms). Fossil record and evolutionary changes of invertebrates.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
written test	51.0%	100.0%

Recommended reading

Basic literature

- Błaszak C. (red.) 2009, 2011, 2015. Zoologia, t. 1-3. PWN, Warszawa.
- Czapik A. 1992. Podstawy protozoologii. Wyd. 2. PWN, Warszawa.
- Grabda E. (red.) 1989. Zoologia bezkręgowce, t. 1. PWN, Warszawa.
- Moraczewski J., Riedel W., Sołtyńska M., Umiński T. 1984. Ćwiczenia z zoologii bezkręgowców. PWN Warszawa

	Supplementary literature	Brusca R.C., Giribet G., Moore W. 2023. Invertebrates. 4th Edition. Oxford University Press Inc. Dogiel W.A. 1986. Zoologia bezkręgowców. PWRiL Warszawa. Dzik J. 2015. Zoologia. Różnorodność i pokrewieństwa zwierząt. Wydawnictwa Uniwersytetu Warszawskiego, Warszawa. Dzik J. 2018. Biologia, czyli sens życia. Wydawnictwa Uniwersytetu Warszawskiego, Warszawa. Dzik J. 2020. Ewolucja. Twórcza moc selekcji. Wydawnictwa Uniwersytetu Warszawskiego, Warszawa. Dzik J. 2023. Dzieje życia na Ziemi. Wprowadzenie do paleobiologii. WYd. 5. PWN, Warszawa. Gębicki C., Szwedo J. 2000. Owady Polski. Klucz i atlas. Kubajak, Krzeszowice. Giribet G., Edgecombe G.D. 2020. The Invertebrate Tree of Life. Princeton University Press, Princeton, NJ. Grabda E. (red.) 1989. Zoologia bezkręgowce, t. 2-5, PWN, Warszawa. Jura C. 2007. Bezkręgowce. Podstawy morfologii funkcjonalnej, systematyki i filogenezy. PWN, Warszawa. Locker E.S., Hofkin B.V. 2026. Parazytologia. PWN, Warszawa. McGavin G.C., Davranoglou L.-R. 2025. Podstawy entomologii. PWN, Warszawa. Miller S., Tupper T.A. 2025. Zoologia. PWN, Warszawa. Moore J. 2009. Wprowadzenie do zoologii bezkręgowców. Wydawnictwa Uniwersytetu Warszawskiego, Warszawa. Radwańska U. 2007. Podstawy paleontologii. Wydawnictwa Uniwersytetu Warszawskiego, Warszawa. Urbanek A. 2007. Jedno istnieje tylko zwierzę Myśli przewodnie biologii porównawczej. Muzeum i Instytut Zoologii PAN, Warszawa.
	eResources addresses	
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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