

Subject card

Subject name and code	Zoology of invertebrates, PG_00196869						
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			2.0		
Learning profile	academic	Assessment form			credit		
Conducting unit	Katedra Zoologii Bezkręgowców i Parazytologii -> Faculty of Biology -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Marta Zakrzewska				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	30.0	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		2.0		18.0	50
Subject objectives	1. The knowledge of the major types of invertebrate animals and protists (Protozoa). 2. An understanding of the principal mechanisms and trends in the evolution of the animals discussed. 3. The capacity to distinguish the main categories of animals studied.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[BIOLL3_W01] The graduate 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		
	[BIOLL3_U09] The graduate is able to learn independently and plan her/his own development in an organized and controlled manner		
	[BIOLL3_U03] The graduate 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		
	[BIOLL3_U01] The graduate 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_K04] The graduate is ready to apply the principles of bioethics, scientific integrity and honesty, including the proper handling of biological material and respect for intellectual property		
	[BIOLL3_K02] The graduate 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	A review of selected systematic groups of invertebrates (characteristics and systematic position) with particular reference to domestic species. A consideration of the human use of invertebrates and their economic importance and role in nature.		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	entry tests	51.0%	25.0%
	colloquium I	51.0%	25.0%
	practical assessment	51.0%	25.0%
	attendance	93.0%	0.0%
	colloquium II	51.0%	25.0%
Recommended reading	Basic literature	Literature used in class: 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.	
		Literature studied independently by the student: 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	<p>Brusca R.C., Moore W., Shuster S.M. 2016. Invertebrates. 3rd Edition. Sinauer Associates Inc. Publishers, Sunderland, MA.</p> <p>Dogiel W.A. 1986. Zoologia bezkręgowców. PWRiL Warszawa.</p> <p>Dzik J. 2015. Zoologia. Różnorodność i pokrewieństwa zwierząt. WUW, Warszawa.</p> <p>Gębicki C., Szewo J. 2000. Owady Polski. Klucz i atlas. Kubajak, Krzeszowice.</p> <p>Giłka W., Zakrzewska M. 2013. A contribution to the systematics of Neotropical Tanytarsus van der Wulp: first descriptions from Ecuador (Diptera: Chironomidae: Tanytarsini). Zootaxa 3619: 453:459.</p> <p>Giribet G., Edgecombe G.D. 2020. The Invertebrate Tree of Life. Princeton University Press, Princeton, NJ.</p> <p>Grabda E. (red.) 1989. Zoologia bezkręgowce, t. 2-5, PWN, Warszawa.</p> <p>Jura C. 2007. Bezkręgowce. Podstawy morfologii funkcjonalnej, systematyki i filogenezy. PWN, Warszawa.</p> <p>Moore J. 2009. Wprowadzenie do zoologii bezkręgowców. WUW, Warszawa.</p> <p>Urbanek A. 2007. Jedno istnieje tylko zwierzę Myśli przewodnie biologii porównawczej. Muzeum i Instytut Zoologii PAN, Warszawa.</p>
	eResources addresses	
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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