

Subject card

Subject name and code	Zoology, PG_00203346						
Field of study	Medical Biology						
Date of commencement of studies	October 2026		Academic year of realisation of subject		2027/2028		
Education level	Bachelor's studies		Subject group		Obligatory subject group in the field of study Optional subject group 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	2		Language of instruction		Polish		
Semester of study	3		ECTS credits		3.0		
Learning profile	academic		Assessment form		exam		
Conducting unit	Laboratory of Vertebrate Ecology and Ethology -> Department of Vertebrate Ecology and Zoology -> Faculty of Biology -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. Dariusz Jakubas				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	45.0	0.0	0.0	0.0	0.0	45
	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	45		4.0		26.0	75
Subject objectives	1 To review the major systematic groups of protozoa and animals. 2. to understand the main mechanisms and trends in the evolution of the organisms discussed. 3. to identify the basic taxa of the protozoa and animals studied. 4. to understand the basic functioning of living organisms and their interrelationships.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[BIOLMEDL3_W01] is aware of the importance of lifelong learning and keeping up to date with developments in medical biology and related disciplines, and applies this knowledge to the planning and design of professional activities	Awareness of the need to critically analyse knowledge, especially that obtained from the Internet	[SK4] test/exam - oral or written
	[BIOLMEDL3_W10] has an advanced understanding of the principles of assessing processes and phenomena occurring within the body, using physical or chemical measurements, and possesses advanced knowledge of experimental methods and the key techniques of the biological sciences that may be applied in medical biology and diagnostics	explains the theoretical basis of experimental methods and lists the most important techniques of the biological sciences that can be applied to medical biology and diagnostics	[SW4] test/exam - oral or written
	[BIOLMEDL3_W02] has an advanced knowledge and understanding of the structure of the animal or human body, processes and functional relationships at the cellular, tissue, organ and organismal levels, as well as physiological and biochemical processes at an advanced level, and the mechanisms of the pathophysiology of diseases, and explains their relationship with behaviour and the organism's	Morphology, anatomy, classification and systematics, evolution and phylogeny of invertebrates. Structure and evolution of systems. Aromorphoses and idioadaptations in vertebrate evolution.	[SW4] test/exam - oral or written
	[BIOLMEDL3_W03] has an advanced knowledge and understanding of the characteristics, systematics and evolution of selected groups of organisms, taking into account their molecular basis, and describes the fundamental concepts and mechanisms of evolution; furthermore, the student describes, explains and compares, at an advanced level, the systemic regulatory mechanisms in animal and human organisms (including from an ontogenetic and phylogenetic perspective) and understands the neurobiological and genetic basis of disorders	The role, objectives and methods used in classification and systematics. Different concepts of systematic classification. Principles of modern zoological nomenclature. Classification and characterisation of the main groups of protozoa. Medical and economic importance of selected groups of protozoa. Morphology, anatomy, classification and systematics, evolution and phylogeny of invertebrates. Bionomy and economic and medical importance of selected groups of invertebrates. Characteristics, origin and main directions of the evolution of the chordates. An overview of the different systematic groups of chordates.	[SW4] test/exam - oral or written
Subject contents	The role, objectives and methods used in classification and systematics. Different concepts of systematic division. Principles of modern zoological nomenclature. Classification and characterisation of the main groups of protozoa. Medical and economic importance of selected groups of protozoa. Morphology, anatomy, classification and systematics, evolution and phylogeny of invertebrates. Bionomy and economic and medical importance of selected groups of invertebrates. Characteristics, origin and main trends in the evolution of chordates. Basic concepts of chordates anatomy. Structure and evolution of systems. Aromorphoses and idioadaptations in vertebrate evolution. An overview of the different systematic groups of chordates.		
Prerequisites and co-requisites	Basic knowledge of animal histology is required		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	not relevant	51.0%	100.0%

Recommended reading	Basic literature	Błaszak C. (red.) 2009. Zoologia, t. 1. Bezkręgowce. PWN, Warszawa. Błaszak C. (red.) 2011-2012. Zoologia, t. 2, cz. 1, 2. Stawonogi. PWN, Warszawa. Błaszak C. (red.) 2015. Zoologia, t. 3, cz. 1. Szkarłupnie płazy. PWN, Warszawa. Błaszak C. (red.) 2020. Zoologia, t. 3, cz. 3. Ssaki. PWN, Warszawa. Jasiński A. 1973. Zootomia kręgowców. PWN, Warszawa. Kardong K.V. 1998-2018. Vertebrates. Comparative anatomy, function, evolution. 8th Edition. WCB McGraw-Hill Comp. Inc., New York. Moraczewski J., Riedel W., Sołtyńska M., Umiński T. 1984. Ćwiczenia z zoologii bezkręgowców. PWN Warszawa. Szarski H. (red). 1976. Anatomia porównawcza kręgowców. PWN, Warszawa. Wallace R.L., Taylor W. 1997. Invertebrate zoology. A laboratory manual. Prentice Hall, Upper Saddle River, NJ.
	Supplementary literature	Brusca R.C., Moore W., Shuster S.M. 2016. Invertebrates. 3rd Edition. Sinauer Associates Inc. Publishers, Sunderland, MA. Czapik A. 1992. Podstawy protozoologii. Wyd. 2. PWN, Warszawa. Grabda E. [red.] 1989. Zoologia. Bezkręgowce, t. 1. PWN, Warszawa. Grodziński Z. (red). 1967. Zoologia. Przedstrunowce i strunowce. PWN, Warszawa. Dogiel W.A. 1986. Zoologia bezkręgowców. PWRiL Warszawa. Gębicki C., Szewo J. 2000. Owady Polski. Klucz i atlas. Kubajak, Krzeszowice. Grabda E. (red.) 1989. Zoologia bezkręgowce, t. 2-5, PWN, Warszawa. Jura C. 2007. Bezkręgowce. Podstawy morfologii funkcjonalnej, systematyki i filogenezy. PWN, Warszawa. Moore J. 2009. Wprowadzenie do zoologii bezkręgowców. WUW, Warszawa. Schmidt-Rhaesa A., Harzsch S., Purschke G. 2015. Structure and evolution of invertebrate nervous systems. Oxford University Press, Oxford. Szarski H. 1982-2023. Historia zwierząt kręgowych. Wyd. 6. PWN. Warszawa. Tarczyński S. 1984. Zarys parazytologii systematycznej. PWN, Warszawa.
	eResources addresses	
Example issues/ example questions/ tasks being completed	what features are common to all chodates what are the adaptations of birds to flight in the anatomy of different systems what are the most important stages in the invasion of land by vertebrates structure of mammalian limbs as an adaptation to different forms of locomotion	
Work placement	Not applicable	

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