

**Subject card**

<b>Subject name and code</b>	Identification of invertebrates I, PG_00198085						
<b>Field of study</b>	Natural Resources Conservation						
<b>Date of commencement of studies</b>	October 2026	<b>Academic year of realisation of subject</b>			2026/2027		
<b>Education level</b>	Bachelor's studies	<b>Subject group</b>			Obligatory subject group in the field of study Subject group related to scientific research in the field of study		
<b>Mode of study</b>	full-time studies	<b>Mode of delivery</b>			at the university		
<b>Year of study</b>	1	<b>Language of instruction</b>			Polish		
<b>Semester of study</b>	1	<b>ECTS credits</b>			2.0		
<b>Learning profile</b>	academic	<b>Assessment form</b>			credit		
<b>Conducting unit</b>	Katedra Zoologii Bezkręgowców i Parazytologii -> Faculty of Biology -> Rector						
<b>Name and surname of lecturer (lecturers)</b>	<b>Subject supervisor</b>		dr Paulina Kozina				
	<b>Teachers</b>						
<b>Lesson types</b>	<b>Lesson type</b>	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	<b>Number of study hours</b>	0.0	0.0	30.0	0.0	0.0	30
	E-learning hours included: 0.0						
<b>Learning activity and number of study hours</b>	<b>Learning activity</b>	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	<b>Number of study hours</b>	30		3.0		17.0	50
<b>Subject objectives</b>	<ol style="list-style-type: none"> <li>1. To review the major types of invertebrate animals.</li> <li>2. To understand the main mechanisms and trends in the evolution of the animals discussed.</li> <li>3. Identify the main types of animals studied.</li> <li>4. To be introduced to keys for identifying invertebrate animals.</li> </ol>						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[OZPL3_U04] The graduate is able to plan and carry out simple research tasks in the biological sciences under the guidance of a supervisor	The student, under the guidance of the tutor, makes simple microscope preparations and dissects selected invertebrate animals.	[SU5] implementation of a problem task [SU8] observation of student's independent or team work
	[OZPL3_W01] The graduate possesses advanced knowledge and understanding of the structural and functional relationships at the cellular, tissue, organ, and body levels.	The student will present the structure of different types of invertebrate animals, taking into account functional relationships at tissue, organ and organismal level	[SW4] test/exam - oral or written
	[OZPL3_K04] The graduate is ready to understand the need for honesty and integrity in scientific and professional work, and consciously applies the principles of bioethics	The student consciously applies the principles of bioethics.	[SK1] oral statement/conversation/discussion [SK8] observation of student's independent or team work
	[OZPL3_W04] The graduate possesses advanced knowledge and understanding of the characteristics, systematics, and evolution of selected groups of organisms, as well as the basic concepts and mechanisms of evolution	The student presents the characteristics, systematics and evolution of selected groups of invertebrate animals.	[SW4] test/exam - oral or written
	[OZPL3_U01] The graduate is able to use basic apparatus and research tools and maintains the correct sequence of operations in laboratory and field work	The student uses basic apparatus and research tools used in the systematics of invertebrate animals and follows the correct sequence of operations in laboratory work.	[SU5] implementation of a problem task [SU8] observation of student's independent or team work
	[OZPL3_U06] The graduate is able to make observations and perform basic physical, biological and chemical measurements in the field or laboratory	Students will make biological observations on the structure and function of invertebrate animals and identifies them using specialised keys.	[SU1] oral statement/conversation/discussion [SU3] text preparation/written work [SU6] demonstration of practical skills [SU8] observation of student's independent or team work
[OZPL3_K06] The graduate is prepared to demonstrate responsibility for their own and others' safe working conditions in the laboratory and in the field, and is able to recognise hazardous situations and take appropriate action	The student is responsible for the equipment/materials entrusted to him/her and his/her own work, and respects the the work of others.	[SK6] demonstration of practical skills [SK8] observation of student's independent or team work	
Subject contents	Systematic position, characterisation and identification of selected systematic groups of invertebrates with particular emphasis on domestic species.		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	attendance	85.0%	0.0%
	colloquium II	51.0%	25.0%
	colloquium I	51.0%	25.0%
	entry tests	51.0%	25.0%
	practical assesment	51.0%	25.0%
Recommended reading	Basic literature	<ol style="list-style-type: none"> <li>1. Błaszak C. [red.] 2009-2015. Zoologia, t.1.; t. 2, cz. 1, 2.; t. 3, cz. 1. PWN, Warszawa.</li> <li>2. Izdebska J.N., Fryderyk S. 2008. Morphological differentiation and interesting adaptations to parasitism in sucking lice and biting lice (Insecta, Anoplura). (W:) Arthropods. Influence on host. A. Buczek, C. Błaszak (red.). Akapit, Lublin: 21-28.</li> <li>3. Kozina P. 2015. Nowe stanowisko <i>Mantis religiosa</i> (L.) (Mantodea: Mantidae) na terenie rezerwatu Wzgórza Sobkowskie (Wyżyna Małopolska, Pogórze Szydlowskie). <i>Wiadomości Entomologiczne</i> 34: 67.</li> <li>4. Moraczewski J., Riedel W., Sołtyńska M., Umiński T. 1974. Ćwiczenia z zoologii bezkręgowców, PWN, Warszawa.</li> <li>5. Pławilszczikow N. 1972. Klucze do oznaczania owadów. PWRiL, Warszawa.</li> <li>6. Riedel W. (red.) 1980. Ćwiczenia z zoologii bezkręgowców. PWN, Warszawa.</li> </ol>	

	Supplementary literature	Czapik A. 1980. Podstawy protozoologii. PWN, Warszawa. Dogiel W.A. 1986. Zoologia bezkręgowców. PWRiL Warszawa. Dzik J. 2015. Zoologia. Różnorodność i pokrewieństwa zwierząt. WUW, Warszawa. Grabda E. (red.) 1989. Zoologia bezkręgowce, t. 1-5, PWN, Warszawa Jura C. 2002. Bezkręgowce. PWN, Warszawa. Moore J. 2009. Wprowadzenie do zoologii bezkręgowców. WUW, Warszawa.
	eResources addresses	
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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