

## Subject card

Subject name and code	Ecology, PG_00103624							
Field of study	Environmental Protection							
Date of commencement of studies	October 2024		Academic year of realisation of subject			2024/2025		
Education level	undergraduate studies		Subject group		Obligatory subject group 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	2		ECTS credits		2.0			
Learning profile	academic		Assessment form					
Conducting unit	Pracownia Ornitologii -> Katedra Ekologii i Zoologii Kręgowców -> Faculty of Biology							
Name and surname	Subject supervisor		dr Agnieszka					
of lecturer (lecturers)	Teachers							
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Projec	t	Seminar	SUM
	Number of study hours	0.0	15.0	0.0	0.0	0.0		15
	E-learning hours included: 0.0							
	<ul> <li>Additional information:</li> <li>Solving tasks</li> <li>Discussion</li> <li>Simulation games</li> <li>Group work</li> <li>Classes outside the UG campus are carried out in the Tri-City and in the Tri-City Landscape Park</li> </ul>							
Learning activity and number of study hours		n didactic Participation in led in study consultation hours		Self-study		SUM		
	Number of study hours	15		2.0		33.0		50
Subject objectives	<ol> <li>Understanding the principles of population and ecosystem functioning based on specific examples and methods.</li> <li>Understanding the principles of nature resources management.</li> <li>Acquiring the ability to use basic statistical tools to describe selected ecological problems.</li> </ol>							

Learning outcomes	Course outcome	Subject outcome	Method of verification				
	[OŚL3_U09] Prepares in Polish/ English a short description of research, observation or problem task carried out during classes using appropriate scientific terminology.	The student can present the results of his/her own experiments and field research, compare them with those obtained by others and interpret the differences	[SU3] text preparation/written work				
	[OŚL3_W06] Characterises levels of life organization, biodiversity and the interaction of organisms and the environment.	The student can determine the mutual relations in the organism- environment system and explain their basis	[SW3] text preparation/written work				
	[OŚL3_U04] Uses specialist language in the discussion and properly uses the nomenclature in the field of environmental protection and individual disciplines related to it.	The student demonstrates a clear understanding of the terminology used in ecology	[SU3] text preparation/written work				
	[OŚL3_K02] Works individually demonstrating initiative and independence in actions, and effectively cooperates in a team, performing various roles in it.	The student can work individually and in small teams	[SK8] observation of student's independent or team work				
	[OŚL3_W05] Explains the course of natural and anthropopressional physical, chemical and biological processes and phenomena occurring in nature at various levels of matter organisation.	The student can characterize and explain basic ecological phenomena and processes	[SW3] text preparation/written work				
	[OŚL3_U11] Uses statistical methods as well as algorithms and IT techniques, including application software packages to describe environmental experiments and analysis of typical data in socio-economic activities based on science and natural sciences.	The student applies basic mathematical, statistical and computer technologies to describe phenomena and analyze data used in ecology	[SU3] text preparation/written work				
Subject contents	contents Methods of assessing basic population parameters (abundance, spatial, age and sex structure of the population).						
	Population dynamics.						
	Interspecies interactions in biocenosis.						
	Population exploitation.						
	Ecological bioenergetics.						
Prerequisites and co-requisites	Basic knowledge of biology						
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade				
	attendance at classes	85.0%	50.0%				
	final grade is based on partial grades received during the semester	51.0%	50.0%				
Recommended reading	Basic literature	1. Weiner J. Życie i ewolucja biosfer	ry. PWN W-wa 2020				
		2. Krebs C.J. Ekologia eksperymentalna analiza rozmieszczenia i liczebności. PWN W-wa 2015					

	Supplementary literature	<ol> <li>Begon M., Mortimer M., Thompson D.J Ekologia populacji : studium porównawcze zwierząt i roślin. Wydawnictwo. Naukowe PWN. 1999</li> <li>Kozłowski S. 2000. Ekorozwój : wyzwanie XXI wieku. Wydaw. Naukowe PWN, 2000</li> <li>Mackenzie A., Ball A.S., Virdee S.R. Ekologia. Krótkie wykłady. PWN W-wa 2015</li> <li>Pullin A.S Biologiczne podstawy ochrony przyrody. Wydawnictwo Naukowe PWN. 2004</li> <li>Futuyma D.J. Ewolucja. Wyd. Uniwersytetu Warszawskiego 2008</li> <li>Wolański N. 2016. Ekologia człowieka. PWN (tomy I i II) 2016</li> </ol>
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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