University of Gdańsk

Subject card

Subject name and code	Ecology of animals, PG_00198100		
Field of study	Natural Resources Conservation		
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 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	credit
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	dr hab. Adrian Zwolicki	
	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	8.0	37.0	75

Subject objectives

1. Presentation of the scope of interests in animal ecology
2. Identification of the distinguishing features of animal ecology
3. Presentation of animal responses (physiological, behavioral, and population-level) to environmental factors
4. Discussion of factors and mechanisms regulating the abundance and distribution of animals within populations
5. Presentation of the relationships between animal ecology and wildlife resource management (wildlife conservation, exploitation of animal populations, control of undesirable species)

Learning outcomes

Course outcome	Subject outcome	Method of verification
[OZPL3_W05] The graduate understands the principles and mechanisms of life at the population, biocenosis, and ecosystem levels, as well as the temporal and spatial factors that influence biodiversity.	Applies basic statistical methods as well as computer techniques and tools to describe phenomena and analyze ecological data.	[SW3] text preparation/written work
[OZPL3_W14] The graduate understands the relationship between the achievements of natural sciences and their potential applications in socio-economic contexts, while considering the sustainable use of biodiversity	Explains the importance of ecological relationships in the practical conservation of animals.	[SW1] oral statement/ conversation/discussion
[OZPL3_U07] The graduate is able to draw correct conclusions on the basis of analysis and synthesis of data from various sources	Accurately draws conclusions when interpreting phenomena related to the distribution and abundance of animals, as well as interspecific interactions.	[SU3] text preparation/written work
[OZPL3_K08] The graduate is ready to systematically update his/ her natural knowledge and to apply it in practice	Systematically updates knowledge in the field of animal ecology and understands its practical applications in nature conservation.	[SK8] observation of student's independent or team work
[OZPL3_U05] The graduate is able to apply basic statistical methods and computer techniques and tools to describe phenomena and analyse biological data	applies basic statistical methods and computer techniques and tools to describe phenomena and analyze ecological data	[SU3] text preparation/written work

Subject contents

Scope of animal ecology. Identification of features distinguishing this field within general ecology. Animal responses (physiological, behavioral, population-level, and evolutionary) to environmental factors. Environmental resources and their utilization by animals. Habitat and dietary preferences, and methods of their analysis. Foraging methods and strategies. Animal population ecology: demography and the natural regulation of animal abundance and distribution. Relationships between populations of different species. Applied ecology: conservation, exploitation, and regulation of population sizes.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
	50.0%	100.0%

Recommended reading

Basic literature	Begon M., Towsend CR., Harper JL. 2006. Ecology: from individuals to Ecosystems. 4. Ed. Blackwell. Cain ML., Bowman WD., Hacker SD.2008. Ecology. Sinauer. Sunderland. Krebs CJ. 2011. Ekologia. Eksperymentalna analiza rozmieszczenia i liczebności. PWN, Warszawa.
Supplementary literature	Krebs J,R,. Davies N.B. 2001. Wprowadzenie do ekologii behawioralnej. PWN, Warszawa. Singer F. D. 2016. Ecology in Action. Cambridge Univ. Press. Cambridge
eResources addresses	

Example issues/ example questions/ tasks being completed

) The Shelford's Law of Tolerance states that:

a) The occurrence of organisms depends on a set of factors, whose values must fall within the range of their tolerance.

b) An environmental factor is limiting when the range of tolerance is the widest.

c) At the optimum value of an environmental factor, the number of individuals is the lowest, and as the value of the factor moves away from the optimum, the number of individuals successively increases.

d) Individual organisms within the same population show variation in their requirements and preferences regarding environmental factors.

Work placement

Not applicable