University of Gdańsk

Subject card

Subject name and code	Animal ecophysiology, PG_00198128		
Field of study	Natural Resources Conservation		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2028/2029
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	3	Language of instruction	Polish
Semester of study	5	ECTS credits	1.0
Learning profile	academic	Assessment form	credit
Conducting unit	Department of Vertebrate Ecology and Zoology -> Faculty of Biology -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	dr Grzegorz Zaniewicz	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	0.0	0.0	0.0	0.0	15

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	15	2.0	8.0	25

Subject objectives

Acquiring fundamental knowledge in animal ecophysiology. Developing the ability to determine the impact of stress factors on the condition of individuals, as well as understanding daily and annual cyclical metabolic changes in organisms in relation to changes in environmental conditions and habitats.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[OZPL3_W09] The graduate possesses an advanced comprehension of the current state of knowledge and the latest trends in protection of natural resources, as well as their relationship to other natural disciplines	Is familiar with the development and current state of knowledge, as well as the latest trends in animal ecology and physiology, and identifies their connections with other natural science disciplines (O_W09).	[SW4] test/exam - oral or written
[OZPL3_W03] The graduate understands the physiological processes and their relationship to the organism's adaptation to changing environmental conditions	Understands the course of basic physiological processes in animals and their relationship to the organism's adaptation to changing environmental conditions (O_W03).	[SW4] test/exam - oral or written

Subject contents

Overview of basic physiological processes occurring in animal organisms (respiration, energy metabolism, digestion and absorption, thermoregulation, water-mineral regulation). A detailed discussion of the most plastic processes, which are modified depending on changing environmental conditions, e.g., the Dehnel phenomenon, daily and annual life cycles, and changes in the environment (adaptation to the environment). Respiration, oxygen transport, and organism performance/condition depending on the living environment, its requirements, sex, and age. Food, metabolic rate, and nutritional needs depending on the life cycle phase. Energy reserves and strategies for regulating their use, employed by both migratory and sedentary animals. Condition indicators. Body temperature regulation (endothermy and ectothermy) and the effects of temperature (torpor, hibernation). Stress responses behavioral and physiological changes as a reaction to stress factors.

Prerequisites and co-requisites

<table>
<tr><td>Assessment methods and criteria</td><td colspan="2"><table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>attendance at classes</td><td>85.0%</td><td>10.0%</td></tr>
<tr><td>passing grade on the exam (lectures)</td><td>51.0%</td><td>90.0%</td></tr>
</table></td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td>Causey Whittow G. 2000. Avian Physiology. Academic Press.
Ewy Z. 1980. Zarys fizjologii zwierząt.
Krzymowski T., Przała J. 2015. Fizjologia Zwierząt. Wydawnictwo Rolnicze i Leśne.
Schmidt-Nielsen K. 1992. Fizjologia Zwierząt adaptacja do środowiska. Wydawnictwo Naukowe P</td></tr>
<tr><td>Supplementary literature</td><td>Hill W., Wyse G. A., Anderson M. 2016. Animal Physiology. Oxford University Press.
Randal D., Burggren W., French K. 2002. Eckert Animals physiology: mechanisms and adaptations. W.H. Freeman and Co.
Zaniewicz G., Meissner W., Ożarowska A. 2018. Estimation of fat reserves of Robins (Erithacus rubecula) migrating
through the southern coast of the Baltic Sea in spring. Ornis Fennica 95</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="2"></td></tr>
<tr><td>Work placement</td><td colspan="2">Not applicable</td></tr>
</table>

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