University of Gdańsk

Subject card

Subject name and code	Plant ecophysiology, PG_00198125						
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 Experimental Biology and Plant Biotechnology -> Faculty of Biology -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Anna Aksmann				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	15.0	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		3.0		7.0	25
Subject objectives	Presenting to students the basic physiological processes of plants and their dependence on environmental factors affecting plant organisms. To familiarize students with the current state of knowledge and the latest trends in plant ecophysiology and their relationship with other natural disciplines. Preparing students to conduct basic research in the field of plant physiology and ecophysiology.						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[OZPL3_W03] The graduate understands the physiological processes and their relationship to the organism's adaptation to changing environmental conditions	The graduate knows and understands at an advanced level the course of basic plant physiological processes and their relationship with the adaptation of the plant organism to changing environmental conditions.	[SW1] oral statement/ conversation/discussion [SW3] text preparation/written 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 graduate is ready to demonstrate responsibility for the safe working conditions of himself and others in the laboratory and in the field and is able to recognize hazardous situations and take appropriate actions.	[SK8] observation of student's independent or team work
[OZPL3_K01] The graduate is ready to recognise the limitations in his/her own knowledge and understands the need for continuous learning and development	The graduate is ready to recognize the limitations of his or her own knowledge and understands the need for constant learning and development.	[SK1] oral statement/conversation/ discussion
[OZPL3_U06] The graduate is able to make observations and perform basic physical, biological and chemical measurements in the field or laboratory	The graduate is able to carry out observations and perform basic measurements in the field of plant ecophysiology in the laboratory.	[SU1] oral statement/conversation/ discussion [SU6] demonstration of practical skills [SU8] observation of student's independent or team work
[OZPL3_K07] The graduate is prepared to demonstrate responsibility for the equipment/ materials entrusted, respects the work of others and is ready to consciously apply the principles of savoir-vivre in life	The graduate is ready to demonstrate responsibility for the entrusted equipment/materials and respects the work of others.	[SK8] observation of student's independent or team work
[OZPL3_U07] The graduate is able to draw correct conclusions on the basis of analysis and synthesis of data from various sources	The graduate is able to draw correct conclusions based on the analysis and synthesis of data from various sources.	[SU1] oral statement/conversation/ discussion [SU2] presentation/project/paper/ report

Subject contents

Plant water balance. The influence of environmental factors on the water management of plants. Analysis of the mineral composition of plant tissues and organs, mineral nutrition of plants, soil properties. The influence of light conditions and toxic substances (herbicides) on the photosynthesis process.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
work cards	51.0%	40.0%
written knowledge test	51.0%	60.0%

Recommended reading

Basic literature	Aksmann A., Baścik-Remisiewicz A., Burkiewicz K., Matusiak-Mikulin K., Pokora W., Synak R., Tukaj Z. (red.). 2012. Przewodnik do ćwiczeń z fizjologii roślin. Wydawnictwo UG. Szmidt-Jaworska A., Kopcewicz J. (red.). 2020. Fizjologia roślin. Wyd. PWN, Warszawa.
Supplementary literature	Szmidt-Jaworska A., Kopcewicz J (red).2020. Fizjologia Roślin Wyd., PWN, Warszawa Larcher, W. 2003. Physiological plant ecology: ecophysiology and stress physiology of functional groups. Springer. Lambers H., Chapin III F. S., Pons T. L. 2008. Plant Physiological Ecology. 2nd ed. Springer. Taiz L., Zeiger E., et al. 2015. Plant physiology and development. Sinauer Associates, Inc. Eckstein, A. (2016). Ruchy chloroplastów indukowane światłem niebieskim. Postępy Biologii Komórki, 43(4).

	eResources addresses	
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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