University of Gdańsk

Subject card

Subject name and code	Plant ecology, PG_00198098		
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 Freshwater Ecology -> Department of Plant Ecology -> Faculty of Biology -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	dr Eugeniusz Pronin	
	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. Provide basic knowledge of the biology and ecology of plants, the structure and dynamics of their populations and communities.

2. Ability to diagnose the natural environment on the basis of acquired knowledge.

3. The ability to describe the phytocenosis in light of the concept of population structure of vegetation.

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.	The student has knowledge of the levels of organization of biological systems. He/she knows the connection between the levels. The graduate knows the mechanisms that shape biological diversity.	[SW2] presentation/project/paper/ report
[OZPL3_W08] The graduate possesses advanced knowledge and understanding of data analysis tools required to comprehend natural laws and describe biological processes	The student identifies the statistical tools and data analysis necessary to determine the population structure and phytocoenoses.	[SW2] presentation/project/paper/ report [SW3] text preparation/written work
[OZPL3_U09] The graduate can prepare a properly documented study of selected biological problems	Demonstrates the ability to prepare a correctly documented study of selected problems in plant ecology.	[SU2] presentation/project/paper/ report [SU3] text preparation/written 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 student discuss and pose questions about contemporary problems and applications of plant ecology and understand the need to update this knowledge.	[SK8] 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	The student is able to independently conduct observations and collect samples in the field. He/she knows how to distinguish levels of organization: population, phytocenosis, ecosystem. In the laboratory, he/she performs physical, biological and chemical measurements.	[SU2] presentation/project/paper/ report [SU8] 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	The student are able to prepare data for statistical analyses (data cleaning, standardization). Able to select appropriate statistical analyses/tests to fit the questions asked.	[SU2] presentation/project/paper/ report
[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 independently know how to assess the level of safety and recognize dangerous situations in field work when collecting plant samples and working with biological material in the laboratory.	[SK8] observation of student's independent or team work
[OZPL3_W06] The graduate has an advanced understanding of the names and types of natural environments, including their structural and functional characteristics	The student has knowledge of natural habitat types and plant communities. Recognizes the structure and function of plant communities.	[SW2] presentation/project/paper/ report
[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 knows how to independently use basic apparatus and research tools and maintains the correct sequence of operations in laboratory and field work.	[SU8] observation of student's independent or team work
[OZPL3_K02] The graduate is ready to work effectively in a team, taking on different roles within it	The student works in a small team during data collection, analysis of results and formulation of conclusions. He/she is responsible for his/her own work and follows the rules of teamwork.	[SK8] observation of student's independent or team work

Subject contents

Methods for studying population structure and phytocoenoses in natural and transformed ecosystems. Methods of biometric and mapping analysis, techniques for establishing plots. Statistical, numerical and cartographic tools for developing results. Concepts, approaches and methodological solutions

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
report	51.0%	100.0%

Recommended reading	Basic literature	Falińska K. 2021. Ekologia roślin. Wyd. Nauk. PWN, Warszawa, 512 pp. Podbielkowski Z., Podbielkowska M. 1992. Przystosowania roślin do środowiska. Wyd. Szk. i Pedagog., Warszawa, 583 pp.
	Supplementary literature	Grime J. P. 2001. Plant strategies, vegetation processes and ecosystems properties. 2ed. John Wiley & Sons, Chichester. Maarel E. van der ., Franklin J. 2013. Vegetation Ecology. Blackwell Publ., Oxford. Szmeja J. 2006. Przewodnik do badań roślinności wodnej. Wyd. Uniwersytetu Gdańskiego, Gdańsk. Wysocki Cz., Sikorski P. 2014. Fitosocjologia stosowana w ochronie i kształtowaniu krajobrazu. Wyd. SGGW, Warszawa.
	eResources addresses	
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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