

**Subject card**

<b>Subject name and code</b>	Plant ecology, PG_00142424						
<b>Field of study</b>	Natural Resources Conservation						
<b>Date of commencement of studies</b>	October 2024	<b>Academic year of realisation of subject</b>				2025/2026	
<b>Education level</b>	undergraduate studies	<b>Subject group</b>				Obligatory subject group in the field of study Subject group related to scientific research in the field of study	
<b>Mode of study</b>	full-time studies	<b>Mode of delivery</b>				at the university	
<b>Year of study</b>	2	<b>Language of instruction</b>				Polish polish	
<b>Semester of study</b>	3	<b>ECTS credits</b>				3.0	
<b>Learning profile</b>	academic	<b>Assessment form</b>					
<b>Conducting unit</b>	Pracownia Ekologii Wód Słodkich -> Katedra Ekologii Roślin -> Faculty of Biology						
<b>Name and surname of lecturer (lecturers)</b>	<b>Subject supervisor</b>		dr hab. Krzysztof Banaś				
	<b>Teachers</b>						
<b>Lesson types</b>	<b>Lesson type</b>	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	<b>Number of study hours</b>	0.0	0.0	30.0	0.0	0.0	30
	E-learning hours included: 0.0						
	Additional information: laboratory classes  classes outside UG premises						
<b>Learning activity and number of study hours</b>	<b>Learning activity</b>	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	<b>Number of study hours</b>	30		8.0		37.0	75
<b>Subject objectives</b>	<p>1. Provide basic knowledge of the biology and ecology of plants, the structure and dynamics of their populations and communities.</p> <p>2. Ability to diagnose the natural environment on the basis of acquired knowledge.</p> <p>3. The ability to describe the phytocenosis in light of the concept of population structure of vegetation.</p>						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[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
	[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_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_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_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_W05] The graduate understands the fundamental 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_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_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_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_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	
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	Adresy na platformie eNauczenie:
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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