

Subject card

Subject name and code	Populations and plant communities structure, PG_00140095						
Field of study	Biology						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2025/2026		
Education level	Master's studies		Subject group		Obligatory subject group in the field of study Optional subject group		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	1		Language of instruction		Polish		
Semester of study	2		ECTS credits		1.0		
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 Rafał Chmara				
	Teachers		dr Rafał Chmara				
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	15.0	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	1. Knowledge of selected methods used in population ecology and ability to apply them. 2. Ability to describe the phytocenosis in light of the concept of population structure of vegetation.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[BIOLMU2_W01] the graduate has an in-depth knowledge and understanding of natural phenomena and processes at different levels of complexity	Defines and understands the basic concepts of plant ecology	[SW3] text preparation/written work
	[BIOLMU2_W04] the graduate has an in-depth knowledge of the chosen specialisation in the biological sciences	Identifies and understands the conceptual apparatus used in plant ecology	[SW3] text preparation/written work
	[BIOLMU2_U03] the graduate can critically analyse and select biological information, especially from electronic sources	Knows how to classify and verify the usefulness of plant ecology data/information	[SU3] text preparation/written work
	[BIOLMU2_U07] the graduate is able to critically confront biological information from a variety of sources and, on this basis, draw valid conclusions	Orders and classifies empirically collected plant and environmental data during fieldwork using data analysis and statistical methods, and then draws conclusions.	[SU3] text preparation/written work [SU5] implementation of a problem task
	[BIOLMU2_K01] the graduate shows initiative and is ready to act independently and feels the need for lifelong learning	The person is responsible for the assigned task and complies with conceptual and methodological arrangements.	[SK8] observation of student's independent or team work
	[BIOLMU2_K02] the graduate is ready to work effectively as a member of a team and to comply with the rules of teamwork and take responsibility for the tasks performed	He/she works in a team during fieldwork and data analysis.	[SK8] observation of student's independent or team work
Subject contents	Methods of studying the structure of populations and phytocenoses in natural natural systems. Structural and functional diversity of plant communities. Plant functional traits. Methods of biometric and cartographic analysis, techniques for establishing plots. Statistical, numerical and cartographic tools for developing results. Concepts, approaches and methodological solutions applicable in solving practical problems of valorization and diagnosis of natural systems.		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	report	51.0%	75.0%
	written colloquium	51.0%	25.0%
Recommended reading	Basic literature	Falińska K. 2021. Ekologia roślin. Wyd. Nauk. PWN, Warszawa, 512 pp. Falińska K. 2002. Przewodnik do badań biologii populacji roślin. [W:] J. B. Faliński (red.) Vademecum Geobotanicum 4. PWN, Warszawa. Pugnaire F., Valladares F. 2007. Functional plant ecology. CRC Press, Taylor & Francis, 746 pp.	
	Supplementary literature	Chmara R., Banaś K., Szmeja J. 2015. Changes in the structural and functional diversity of macrophyte communities along an acidity gradient in softwater lakes. Flora 216: 57-64. Wysocki Cz., Sikorski P. 2014. Fitosocjologia stosowana w ochronie i kształtowaniu krajobrazu. Wyd. SGGW, Warszawa. Roo-Zielińska E. 2014. Wskaźniki ekologiczne zespołów roślinnych Polski. PAN, Instytut Geografii i Przestrzennego Zagospodarowania, Warszawa. Szmeja J. 2006. Przewodnik do badań roślinności wodnej. Wyd. Uniwersytetu Gdańskiego, Gdańsk. Maarel E. van der., Franklin J. 2013. Vegetation Ecology. Blackwell Publ., Oxford.	
	eResources addresses		

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

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