

**Subject card**

<b>Subject name and code</b>	Green infrastructure in urban areas, PG_00144430						
<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>	2026/2027				
<b>Education level</b>	undergraduate studies	<b>Subject group</b>	Optional subject group 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>	3	<b>Language of instruction</b>	Polish				
<b>Semester of study</b>	6	<b>ECTS credits</b>	2.0				
<b>Learning profile</b>	academic	<b>Assessment form</b>					
<b>Conducting unit</b>							
<b>Name and surname of lecturer (lecturers)</b>	<b>Subject supervisor</b>		dr Renata Afranowicz-Cieślak				
	<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	30.0	0.0	0.0	0.0	30
	E-learning hours included: 0.0						
<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		5.0		15.0	50
<b>Subject objectives</b>	<p>1. Types and functions of urban greenery.</p> <p>2. Green innovations in cities - types, functions, ways of establishing and using.</p> <p>3. Knowledge of the habitat requirements of plants used in creating green infrastructure.</p> <p>4. Ability to select plant ingredients in the selected green infrastructure.</p>						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[OZPL3_K08] The graduate is ready to systematically update his/her natural knowledge and to apply it in practice	- systematically updates natural knowledge and knows its practical application in the field of creating greenery in urban areas	[SK1] oral statement/conversation/discussion [SK2] presentation/project/paper/report
	[OZPL3_U04] The graduate is able to plan and carry out simple research tasks in the biological sciences under the guidance of a supervisor	- under the supervision of a supervisor, plans and performs simple tasks related to comprehensive planning of green innovation in the city	[SU1] oral statement/conversation/discussion [SU2] presentation/project/paper/report
	[OZPL3_W11] The graduate possesses a fundamental understanding of the concepts and terminology of natural science, as well as knowledge of the evolution of natural sciences and the research methods employed in them. They are also cognizant of the potential for practical application	- knows the basic terminology related to the functioning of green infrastructure in cities - knows innovative green investments in cities and ways of establishing and maintaining them in urbanized space	[SW2] presentation/project/paper/report
Subject contents	Types of urban green areas. The role and functions of green areas in urbanized areas. Characteristics of selected green investments in the city, including: flower meadows, vertical gardens, green tracks, rain gardens, pocket parks. Methods for designing, establishing and maintaining green innovations in cities. Biodiversity on green roofs, peat bogs and other green projects. Shaping green areas in cities - cooperation between institutions. Selection of plant species. Maintenance and protection of green areas.		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	project and its presentation	51.0%	100.0%
Recommended reading	Basic literature	<p>Kaźmierczak A. 2013. Innovative methods of supporting the creation of green infrastructure in cities: cooperation of local authorities with investors and building owners. Sustainability Applications 4: 99-109.</p> <p>Łukasiewicz A., Łukasiewicz S. 2006. The role and shaping of urban greenery. Script for students of Environmental Protection. Scientific Publishing House of Adam Mickiewicz University in Poznań.</p> <p>Oleksiejuk E., Piotrowiak. J. (ed.) 2005. Natural urban greenery - the wealth of the city. Management principles and protection. Ed. Polish Association of Sanitary Engineers and Technicians, Toruń Branch, Toruń.</p> <p>Oleksyn H. 2011. Plant compositions in shaping green areas. Ed. University of Life Sciences in Poznań. Poznań.</p>	
	Supplementary literature	<p>Asani A. 2007. The place and importance of urban green areas. Science notebooks. Environmental Engineering/University of Zielona Góra 135(15): 11-21.</p> <p>Czerowaniec M., Lewińska J. 2000. Greenery in the city. Institute of Spatial and Municipal Management, Kraków.</p> <p>Szczepeńska, M., 2010. Green roof - an unusual place for rest and recreation. Studia Periegetica, 4: 149160.</p> <p>Kosmala M. (ed.) 2016. Green areas in the face of climate change. Polish Association of Sanitary Engineers and Technicians, Toruń Branch, Toruń, 228 pp.</p> <p>Zimny H. 2005. City ecology. Advertising and Publishing Agency A. Grzegorzczak, Warsaw.</p>	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed			

Work placement	Not applicable
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