GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Resilent Cities Engineering, PG_00059940		
Field of study	Environmental Engineering		
Date of commencement of studies	February 2026	Academic year of realisation of subject	2025/2026
Education level	second-cycle studies	Subject group	Obligatory subject group in the field of study
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	1	Language of instruction	Polish
Semester of study	1	ECTS credits	3.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Environmental Engineering Technology -> Faculty of Civil and Environmental Engineering -> Faculties of Gdańsk University of Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	prof. dr hab. inż. Magdalena Gajewska	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	0.0	0.0	30.0	0.0	45

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	45	5.0	30.0	80

Subject objectives

the aim of the course is to familiarize with the challenges resulting from climate change and methods and technologies for creating cities resistant to climate change

Learning outcomes

Course outcome	Subject outcome	Method of verification
K7_U02	is able to work individually and in a team (performing various functions, including managerial); is able to assess the time-consuming nature of the task	[SU1] Assessment of task fulfilment
[K7_W02] has broadened and well-ordered knowledge of the current law on construction, water, environmental protection and planning and spatial planning.	has extensive and structured knowledge of the applicable provisions of the construction law, water law, environmental protection as well as climate planning and development	[SW3] Assessment of knowledge contained in written work and projects
K7_U04	is able to prepare and present a presentation on the implementation of an experiment, project or research task and lead a discussion on the presented presentation	[SU5] Assessment of ability to present the results of task
K7_U03	Can prepare detailed documentation of the results of an experiment, design or research task	[SU1] Assessment of task fulfilment
[K7_U01] can obtain information from literature, databases and other sources; can integrate the obtained information, interpret and critically evaluate them, draw conclusions, and formulate and comprehesively justify the opinions	is able to obtain information from literature, databases and other sources; is able to integrate the obtained information, interpret and critically evaluate it, draw conclusions and formulate and comprehensively justify opinions	[SU1] Assessment of task fulfilment

<table>
<tr><td>Subject contents</td><td>Course content – lecture

Ecosystem functions, definition of resilience, adaptation and mitigation and meaning. Resilient cities and spatial planning. Urban Climate Change Adaptation Plan - what is it about and how to prepare it?BGD - as guides, NBS, Ecosystem services - the importance of greenery and green retention, Mitigation activities - transport, buildings, production, and adaptation - transport, buildings, production, RES and circular economy. Energy, water and food</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>urban watershed hydrology, environmental chemistry, climatology</td></tr>
<tr><td>Assessment methods and criteria</td><td><table><tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr><tr><td>group project</td><td>55.0%</td><td>100.0%</td></tr></table></td></tr>
<tr><td>Recommended reading</td><td><table><tr><td>Basic literature</td><td>Nauka o Klimacie

Świat na rozdrożu</td></tr><tr><td>Supplementary literature</td><td>EU regulations and directives, IPCC reports</td></tr><tr><td>eResources addresses</td><td></td></tr></table></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td>Tasks of cities resistant to climate changeclimate change

scenariosprinciples of adaptation and mitigation to climate changethe

importance of water,food and energy in building climate-resilient cities</td></tr>
<tr><td>Practical activites within the subject</td><td>Not applicable</td></tr>
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