



Subject card

Subject name and code	, PG_00059175						
Field of study	Zmiany klimatu i zjawiska ekstremalne						
Date of commencement of studies	October 2022		Academic year of realisation of subject			2025/2026	
Education level	first-cycle studies		Subject group			Optional subject group Subject group related to scientific research in the field of study	
Mode of study	Part-time studies		Mode of delivery			at the university	
Year of study	4		Language of instruction			Polish	
Semester of study	7		ECTS credits			2.0	
Learning profile	general academic profile		Assessment form			assessment	
Conducting unit	Department of Geotechnical and Hydraulic Engineering -> Faculty of Civil and Environmental Engineering -> Faculties of Gdańsk University of Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Patrycja Mikos-Studnicka				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	10.0	5.0	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		1.0		34.0	50
Subject objectives	Gaining basic knowledge about climate and climate change. Recognizing meteorological processes and factors influencing climate and climate change. Identifying the mutual influence of urbanization and climate change, as well as the environment and climate change. Gaining knowledge about ways to adapt to climate change.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	K6_W12	The student knows and understands meteorological processes and the factors that shape climate. They can identify the causes of climate change and determine their impact on humans and the environment.	[SW1] Ocena wiedzy faktograficznej
	[K6_K02] understands the need to formulate and communicate to the public information and opinions on the achievements of environmental engineering and other aspects of the sanitary industry engineer's activity; is aware of the importance and understands the non-technical aspects and effects of engineering activities; makes efforts to provide such information and opinions in a widely understandable way, presenting different points of view	The student understands the need for social involvement in climate change adaptation measures. They can understand the different positions of the parties involved in climate change adaptation.	[SK1] Ocena umiejętności pracy w grupie
	[K6_U16] can, when formulating and solving engineering tasks in environmental engineering, evaluate, select and apply appropriate methods and tools, recognize their non-technical aspects, including environmental, economic and legal aspects	The student can identify methods of adaptation to climate change and can identify solutions for mitigating climate change. Understands the economic and legal aspects of implementing solutions for adaptation to climate change.	[SU3] Ocena umiejętności wykorzystania wiedzy uzyskanej w ramach przedmiotu
	[K6_U01] has the ability to self-education, can obtain information from literature, databases and other sources, uses information technology, Internet resources; can integrate the obtained information, make their interpretation, as well as draw conclusions and formulate and justify opinions	The student is able to use climate databases and interpret analyzed data. Understands how climate information is presented.	[SU4] Ocena umiejętności korzystania z metod i narzędzi
Subject contents	Course content – lecture 1. Climate and climate-changing factors 2. Extreme climate phenomena and their consequences 3. Climate change: how to recognize it, change indicators 4. Climate change in urban areas 5. Climate change mitigation and adaptation strategies		
	Course content – exercises 1. Climatogram analysis 2. Time series trend analysis 3. Adaptive solution analysis		
Prerequisites and co-requisites	Basic knowledge of geography and physics at secondary school level.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	tasks to be performed during the tutorials	60.0%	100.0%
Recommended reading	Basic literature	1. Budziszewska M., A. Kardaś, Z. Bohdanowicz, "Climate ABC. The interdisciplinary current scientific knowledge base of climate change", 2. Adaptation Manual for Cities. Guidelines for the preparation of a Municipal Climate Change Adaptation Plan update 2023. 3. Atlas of the effects of extreme phenomena in Poland", period of 2001-2019 4. Klimada 2.0 Climate Change Knowledge Base	
	Supplementary literature	1. Newton D.E., The Climate Change Debate: A Reference Handbook, ABC-CLIO 2020 2. Falarz M., (red), 2021 Climate Change in Poland. Past, Present, Future, Springer 3. Martyn D., 2000, Klimaty kuli ziemskiej, PWN	
	eResources addresses		

Example issues/ example questions/ tasks being completed	
Practical activities within the subject	Not applicable

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