



## Subject card

Subject name and code	Meterology and climatology, PG_00057573						
Field of study	Green Technologies						
Date of commencement of studies	October 2024		Academic year of realisation of subject		2025/2026		
Education level	first-cycle studies		Subject group		Optional subject group		
Mode of study	Full-time studies		Mode of delivery		at the university		
Year of study	2		Language of instruction		Polish		
Semester of study	4		ECTS credits		2.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Department of Corrosion and Electrochemistry -> Faculty of Chemistry -> Faculties of Gdańsk University of Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. inż. Juliusz Orlikowski				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	0.0	15.0	30
	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	30		5.0		15.0	50
Subject objectives	The aim of the course is to present basic issues related to meteorology and climatology.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[K6_W03] has a basic knowledge of soil, air and water pollutants, design and supervision of environmentally friendly technologies and technologies which do not produce waste, knows technology of cleaning and neutralization of industrial waste and wastewater management, has a basic understanding of the theoretical basis of methods and types of apparatus used in chemical analysis of environmental pollutants	Basic knowledge related to the causes of climate change	[SW1] Assessment of factual knowledge
	[K6_U03] is able to use information and communication technologies relevant to the common tasks of engineering, is able to use known methods and mathematical-physical models to describe and explain phenomena and chemical processes	Understanding the phenomena occurring in the atmosphere	[SU1] Assessment of task fulfilment
	[K6_U05] can formulate and solve engineering tasks analytical methods, simulation as well as experimental, able to apply knowledge of basic physics and mathematics to analyze the results of experiments, is able to analyze and assess existing technical solutions	Ability to make a weather forecast based on appropriate sources	[SU1] Assessment of task fulfilment
	[K6_U01] is able to obtain information from literature, databases and other sources, is able to integrate the information obtained, to make their interpretation, as well as draw conclusions and formulate and justify opinions, take part in the discussion	Ability to obtain measurement data and synoptic analyzes available on the Internet	[SU1] Assessment of task fulfilment
Subject contents	Course content – lecture Basics of dynamic meteorology. Climatic processes occurring on Earth. Physical processes occurring in the atmosphere. Evolution of low and high pressure systems. Types and types of atmospheric fronts. Types and types of cloud cover. Interpretation of aerological surveys. Particle balance in the atmosphere. Convective phenomena, convective indices, principles of numerical forecasts. Interpretation of satellite images. Obtaining synoptic and meteorological data		
Prerequisites and co-requisites	Basics of gas and liquid physics		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Lecture	60.0%	80.0%
	Seminar	60.0%	20.0%
Recommended reading	Basic literature	Nauka o klimacie, Marcin Popkiewicz, Aleksandra Kardaś, Szymon Malinowski. Warszawa, 2018 Meteorologia i klimatologia, Krzysztof Kożuchowski, Warszawa, 2012	
	Supplementary literature	Meteorologia. Teoria i praktyka, Adam Kantorysiński, Warszawa 2019	
	eResources addresses		
Example issues/ example questions/ tasks being completed	Preparation of a weather forecast for a specific place, based on the acquired synoptic data		
Practical activities within the subject	Not applicable		

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