University of Gdańsk

Subject card

Subject name and code	Meteorology and climatology - laboratory, PG_00119856						
Field of study	Geography						
Date of commencement of studies	October 2024		Academic year of realisation of subject	2024/2025			
Education level	undergraduate studies		Subject group	Obligatory subject group in the field of study Subject group related to scientific research 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	2		ECTS credits	1.0			
Learning profile	academic		Assessment form				
Conducting unit	Pracownia Badań Klimatu -> Katedra Oceanografii Fizycznej i Badań Klimatu -> Faculty of Oceanography and Geography						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Małgorzata Owczarek				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	20.0	0.0	0.0	20
	E-learning hours included: 0.0						
	Additional information: online classes - if necessary						

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	20	3.0	7.0	30

Subject objectives	
	learning the basic sources of information in meteorology and climatology. Learning the main principles and purposes of meteorological observations. ability to prepare meteorological data and analyze them preparation for independent analysis of basic problems in the field of meteorology and climatology

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[GEOGRL3-W02] key concepts in geography and theories on spatial variation and distribution of processes and phenomena on the Earth's surface	student knows and understands the basic concepts of meteorology and climatology, understands the importance of processes occurring in the atmosphere and their connections with other elements of the environment	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion
	[GEOGRL3-U03] use theoretical knowledge of geographic sciences and available sources of information to correctly interpret basic natural, social, economic and political processes	student is able to combine theoretical knowledge in the field of meteorology and climatology in the analysis and interpretation of basic meteorological and climatic processes and phenomena and the connections of these processes with economic and social phenomena	[SU4] test/exam - oral or written [SU5] implementation of a problem task [SU8] observation of student's independent or team work
	[GEOGRL3-K02] bear full responsibility for the actions taken actions and adhere to the principles of professional ethics and principles of intellectual honesty, is aware of the importance of a professional approach in professional life professional life	The student is aware of the responsibility for the reliability of measurements and analyzes carried out, is aware of the need to comply with the principles of professionalism and ethics in professional life	[SK1] oral statement/conversation/ discussion [SK8] observation of student's independent or team work
	[GEOGRL3-U08] use scientific language and express themselves and discuss topics concerning geographic issues in Polish and in a foreign language	the student is able to use scientific language correctly, is able to use concepts from the field of meteorology and climatology in written and oral statements, is able to use basic terminology in the field of meteorology and climatology in English	[SU1] oral statement/conversation/ discussion [SU3] text preparation/written work [SU4] test/exam - oral or written
	[GEOGRL3-U02] formulate and analyze basic problems concerning changes in physical and geographic conditions and the social, economic and political situation in local, regional and global scales	student is able to perceive and analyze changes in climate factors and elements in relation to economic and social processes at various spatial and temporal scales	[SU1] oral statement/conversation/ discussion [SU4] test/exam - oral or written
	[GEOGRL3-U01] identify and analyze basic natural and socio-economic processes and phenomena and analyze their causes and course	student is able to assess the nature of the processes occurring in the atmosphere and the variability of climate elements and their consequences	[SU1] oral statement/conversation/ discussion [SU3] text preparation/written work [SU4] test/exam - oral or written
	[GEOGRL3-W07] on advanced level methods of aquiring data on the natural and anthropogenic environment, including operation of specialized equipment	the student knows and understands at an advanced level methods of obtaining meteorological data, is able to find various sources of meteorological data, both archival and current,	[SW5] implementation of a problem task
	[GEOGRL3-W08] at an advanced level methods and principles development of data on the natural and anthropogenic environment, and methods of their analysis and interpretation	student knows and understands at an advanced level the methods and principles of preparing meteorological data, is able to analyze and draw conclusions about processes in the natural environment and their connections with anthropogenic processes,	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion [SW5] implementation of a problem task
	[GEOGRL3-W03] in an advanced degree the processes and phenomena occurring in the natural environment of the Earth, with particular emphasis on the processes and phenomena occurring on the territory of Poland, especially the Coastal and South Baltic Lake Districts	student knows and understands at an advanced level the processes and phenomena occurring in the atmosphere and climate factors, especially in the area of Poland and the South Baltic Coast and Lake District	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report

	Course outcome	Subject outcome	Method of verification
	[GEOGRL3-W05] Has advanced knowledge of the environment Earth's geographic environment, understood as a unified system of interrelated and interacting each other's components; its diversity, functioning and dynamics of change, including the mutual interaction of environmental components in the area of South Baltic Coastal and Lake Districts	student knows and understands the role of processes occurring in the atmosphere and the role of climate in the geographical environment system, especially knows the environmental system of the South Baltic Coast and Lake District area	[SW1] oral statement/ conversation/discussion [SW3] text preparation/written work
	[GEOGRL3-U05] find and select the necessary information from professional literature and other sources, including electronic sources	student is able to select and use meteorological information from various sources, both in printed form and on the Internet	[SU2] presentation/project/paper/ report [SU5] implementation of a problem task [SU8] observation of student's independent or team work
	[GEOGRL3-U06] apply methods and research tools of geographic sciences, including conducting observations and field measurements, and assess their suitability for the tasks in which the application objective of geography can be achieved	student is able to select and apply research methods in the field of meteorology and climatology to carry out various tasks, the student knows the basic types of measuring equipment in meteorology and the principles of using them	[SU4] test/exam - oral or written [SU5] implementation of a problem task

Subject contents

Rules of a network of meteorological observations in the world and in Poland.

Basic data sources in climatology.

Meteorological elements information about the observation methodology

Statistical and graphic methods of climatological studies.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
written test	51.0%	80.0%
correctness and timeliness of tasks performed	100.0%	20.0%

Recommended reading

Basic literature

Kożuchowski K. (ed.), 2012, Meteorology and climatology, PWN, Warsaw

Niedźwiedź T. (ed.), 2003, Meteorological Dictionary, IMWM, Warsaw.

WMO, 1992, International meteorological vocabulary

	Supplementary literature	Malinowska M. (ed.), 2010, Guide to exercises in meteorology and climatology, UG Publishing House, Gdańsk Woś A., 2001, Meteorology for geographers, PWN, Warsaw Kożuchowski K, , 2011, Polish climate, new look, PWN, Warsaw Popkiewicz M., Kardaś A., Malinowski Sz, 2018 Climate science, Post Factum Publishing House, Warsaw Prześlij opinię
	eResources addresses	Podstawowe https://klimat.imgw.pl/ - Climate of Poland, IMWM NRI https://library.wmo.int/records/item/35809-international-meteorological-vocabulary?offset=1 - International meteorological vocabulary, WMO Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed	What phenomenon does the photograph represent? What is it and how is it created? What unit is the height of snow cover measure in? Determine what barometric system is represented by the isobars on the marked (red) fragment of the synoptic map	
Work placement	Not applicable	

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