University of Gdańsk

Subject card

Subject name and code	Meteorology and Climatology - tutorials, PG_00192585		
Field of study	Water Management and Protection of Water Resources		
Date of commencement of studies	October 2027	Academic year of realisation of subject	2027/2028
Education level	Bachelor's studies	Subject group	Obligatory subject group in the field of study Subject group related to practical vocational preparation
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	2.0
Learning profile	practical	Assessment form	credit
Conducting unit	Climate Research Laboratory -> Department of Physical Oceanography and Climate Research -> Faculty of Oceanography and Geography -> Rector		
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	30.0	0.0	0.0	0.0	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	1.0	19.0	50

Subject objectives

- Learning the basic sources of information in meteorology and climatology.
- Learning the main principles and purposes of meteorological observations.
- Ability to prepare preliminary meteorological data
- Ability to use Internet sources in the field of atmosphere, weather and climate monitoring.
- Preparation for your own field research.
- Preparing the student to independently analyze basic problems in the field of atmospheric sciences and their impact on human activity

Learning outcomes

Course outcome	Subject outcome	Method of verification
[GWOZWL3-U09] prepare in Polish a well documented study of the results in the scope of the studied issues.	The student is able to prepare in Polish a well documented study of the results in the scope of the studied issues	[SU3] text preparation/written work
[GWOZWL3-U01] make basic observations of processes and phenomena occurring in the hydrosphere and carry out basic measurements of selected processes of water purification on a laboratory scale.	student knows the basic types of measuring equipment in meteorology, is able to carry out basic meteorological measurements and observations	[SU1] oral statement/conversation/ discussion [SU6] demonstration of practical skills [SU8] observation of student's independent or team work
[GWOZWL3-W01] in advanced basic biological, physical and chemical processes and phenomena, as well as analyzes their mutual relations and course in relation to natural environment and socio-ecological systems.	Student is able to use basic methods of meteorological and climatological studies,student is able to prepare meteorological data and, on this basis, is able to analyze and draw conclusions about processes in the natural environment and their connections with anthropogenic processes, especially in the field of water circulation in the environment	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report [SW5] implementation of a problem task
[GWOZWL3-U16] demonstrate creativity in working independently and in team, taking on a variety of roles, including a leadership role.	Student is able to independently perform specific tasks in the field of meteorology and climatology and organize teamwork to perform a specific task	[SU8] observation of student's independent or team work
[GWOZWL3-W02] the importance of advanced knowledge in the sciences allowing to understand the processes and phenomena occurring in the hydrosphere, as well as knowledge of the social sciences and of the Earth's geographic environment - as a system of interrelated and interacting components.	student knows 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, especially the hydrosphere, and the impact of human activity	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion
[GWOZWL3-U07] use literature and other available sources of information, including information technology, multimedia, Internet, databases, and select and critically evaluate information.	student is able to find various sources of meteorological data, both archival and current, is able to collect data needed to perform a specific task	[SU2] presentation/project/paper/ report [SU3] text preparation/written work [SU8] observation of student's independent or team work
[GWOZWL3-K05] take responsibility for the safety of his own work and that of others, dealing with emergencies, exercising caution in the laboratory and in the field, responsibility for entrusted equipment and apparatus.	student is aware of the responsibility for the entrusted measuring equipment and for the correctness of the measurements and analyzes carried out	[SK1] oral statement/conversation/ discussion [SK8] observation of student's independent or team work

Subject contents

Meteorological observation network in Poland.Basic data sources in climatologyMeteorological elements, especially regarding water in the atmosphere - basic information about the observation methodology and data processingBasic statistical and graphic methods of climatological studies

Prerequisites and co-requisites

basic knowledge about the atmosphere from geography lessons and gas physics from physics lessons in the secondary school curriculum.

Knowledge of the basics of solving mathematical and statistical tasks.

Assessment methods and criteria

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

Recommended reading	Basic literature	Kożuchowski K. (eds.), 2012, Meteorology and climatology, PWN, WarsawBajkiewicz-Grabowska E., Kossowska-Cezak U., 2008,Basics of hydrometeorologyNiedźwiedź T. (ed), 2003, Meteorological Dictionary, IMWM, Warsaw.
	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 Wyszkowski A., 2008, Guide for field exercises in meteorology and climatology, Ed. UG, Gdańsk.
	eResources addresses	
Example issues/ example questions/ tasks being completed	List the three most important features of heavy rainfall Using the chart provided, approximately determine the humidity deficiency this air and determine the approximate value of the dew point temperature. Based on the data, determine the number of hot days at a given weather station	
Work placement	Not applicable	

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