

Subject card

Subject name and code	Meteorology and climatology - field training, PG_00119846						
Field of study	Geography						
Date of commencement of studies	October 2024	Academic year of realisation of subject			2025/2026		
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	2	Language of instruction			Polish		
Semester of study	4	ECTS credits			3.0		
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 Janusz Filipiak				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	24.0	0.0	0.0	0.0	24
	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	24		6.0		45.0	75
Subject objectives	<p>Acquisition of knowledge and skills in the following areas: the principles of locating and operating a meteorological garden, knowledge of the construction and operation of meteorological measuring equipment, the principles of conducting meteorological observations and measurements and developing research results, and the organization of field research on a local scale.</p> <p>Developing the ability to work in a group and assume various roles in it.</p>						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[GEOGRL3-U04] plan and carry out, independently and in a team, a simple research procedure in the field of geographical sciences under the guidance of a scientific supervisor	Student is able to plan and carry out, independently and as part of a team, a simple research procedure in the field of meteorology under the guidance of a research supervisor.	[SU5] implementation of a problem task [SU6] demonstration of practical skills [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 apply the methods and research tools of geographic science, including field observations and measurements, and assess their suitability for the tasks in which the application objective of geography can be realized.	[SU5] implementation of a problem task [SU6] demonstration of practical skills [SU8] observation of student's independent or team work
	[GEOGRL3-U07] use geoinformatics techniques and simple statistical tools and methods of spatial analysis to determine relationships between a variety of variables specific to the geographic environment and present the results of the analyses performed	Student is able to use simple statistical tools to determine the relationship between a variety of variables characteristic of the geographic environment and to present the results of the analysis.	[SU5] implementation of a problem task [SU6] demonstration of practical skills [SU8] observation of student's independent or team work
	[GEOGRL3-W07] on advanced level methods of acquiring data on the natural and anthropogenic environment, including operation of specialized equipment	Student knows and understands to an advanced degree the methods of acquiring data on the natural and anthropogenic environment, including the operation of specialized equipment used in meteorology.	[SW2] presentation/project/paper/report
	[GEOGRL3-K03] work in a group and perform various roles in it, take care of the entrusted equipment and the safety of themselves and others	Student is ready to work in a group and perform various roles in it, take care of the equipment entrusted to him and the safety of himself and others.	[SK8] observation of student's independent or team work
	[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 to an advanced degree the processes and phenomena occurring in the natural environment of the Earth, with particular emphasis on meteorological processes and phenomena occurring in the South Baltic Lakes.	[SW2] presentation/project/paper/report
	[GEOGRL3-U01] identify and analyze basic natural and socio-economic processes and phenomena and analyze their causes and course	Student can identify and analyze basic natural processes and phenomena and analyze their causes and course.	[SU5] implementation of a problem task [SU8] observation of student's independent or team work
	[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 to an advanced degree the methods and principles of developing data on the environment (meteorological measurements and observations), and methods of their analysis and interpretation.	[SW2] presentation/project/paper/report
Subject contents	<p>Meteorological site: A1. Arrangement of measuring instruments, timing of measurements and observations, order of measurements Meteorological equipment; principles of operation and maintenance: Barometer, CNR-1 pyrrometer, CM-3 pyranometer, Campbell Stokes heliograph, automatic weather stations: WatchDog WD-2000, Milos 500, thermometers: station ordinary, maximum, minimum, ground, water, wind meters: sonic WS-425, Lambrecht, M-47, AC-1, rain gauges: Hellmann's, electric Vaisala RG-13H, evaporimeter GGI 3000, pluviograph, self-descriptions: thermohygrograph, barograph, psychrometers: Assmann, August. Meteorological observations: A2. Assessment of the magnitude and type and cloud cover A3. Meteorological phenomena (precipitation, sediment, photometers, ground condition). Field studies: A4. Defining the purpose and scope of the research A5. Defining research methods (depending on the purpose of the research) A6. Determining the number and location of measurement points A7. Technical preparation of measurements and equipment, A8. Practical mastery of measurement technique, A9. Conducting field surveys, A10. Preparation of the results of measurements.</p>		

Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	acceptance of the report on the field research carried out	51.0%	50.0%
	obtaining a passing grade on the test of knowledge of meteorological measuring equipment	51.0%	50.0%
Recommended reading	Basic literature	IMGW-PIB, 2014, Instrukcja dla stacji meteorologicznych, IMGW-PIB, Warszawa Malinowska M. (red.), 2010, Przewodnik do ćwiczeń z meteorologii i klimatologii, Wyd. UG, Gdańsk. Wyszkowski A., 2009, Przewodnik do ćwiczeń terenowych z meteorologii i klimatologii, Wyd. UG, Gdańsk.	
	Supplementary literature	Kozłowska-Szczęśna T., Błażejczyk K., Krawczyk B., 1997, Bioklimatologia człowieka. Metody i ich zastosowanie w badaniach bioklimatu Polski, IGiPZ PAN, Monografie 1, Warszawa Kossowska-Cezak U., Martyn D., Olszewski K., Kopacz-Lembowicz M., 2000, Meteorologia i klimatologia. Pomiary, obserwacje, opracowania, Wydawnictwo Naukowe PWN, Warszawa-Łódź Paszyński J., 1980, Metody sporządzania map topoklimatycznych, Dokumentacja Geograficzna, IGiPZ, z. 3, Warszawa. Rózdżyński K., 1995 i 1996, Miernictwo meteorologiczne, IMGW, cz. I i II, Warszawa.	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed	1. Construction, functioning and operation of selected meteorological measuring instruments. 2. How to plan a topoclimatological study. 3. Interpretation of results of topoclimatological measurements.		
Work placement	Not applicable		

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