University of Gdańsk

Subject card

Subject name and code	Meteorology and Climatology - field training, PG_00193804		
Field of study	Geography		
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 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	2.0
Learning profile	academic	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 Janusz Filipiak	
	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	2.0	18.0	50

Subject objectives	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. Developing the ability to work in a group and assume various roles in it.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[GEOGRL3-W04] has advanced knowledge of the Earth's geographical environment, understood as a unified system of interconnected and interacting components; its diversity, functioning, and dynamics of change, including the interaction of environmental components in the area of the South Baltic Coast and Lake District	The student has an advanced understanding of the Earth's climate system, understood as a unified system of interrelated and interacting components; its diversity, functioning and dynamics of change, which enables them to interpret the interactions between environmental components in the South Baltic Coast and Lake District region.	[SW2] presentation/project/paper/ report [SW5] implementation of a problem task
[GEOGRL3-U03] can plan and conduct, independently and as part of a team, simple research in the field of geography under the supervision of a scientific advisor, based on the necessary information from professional literature and other sources	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-U04] can apply field and laboratory methods and research tools, spatial analysis methods, and methods of presenting research results in the field of geography, assess their usefulness for tasks in which the application goal of geography can be realized	The student is able to use measuring instruments and methods of meteorological measurement and observation to carry out independent field observations and measurements, and to assess their suitability for tasks that serve the practical applications of meteorology and climatology.	[SU4] test/exam - oral or written [SU5] implementation of a problem task [SU6] demonstration of practical skills [SU8] observation of student's independent or team work
[GEOGRL3-U01] can dentify and analyze basic natural and socio-economic processes and phenomena, analyze their causes and course, and formulate and discuss basic issues concerning physical-geographical conditions and the social, economic, and political situation and their changes on various spatial scales	Student can identify and analyze basic natural processes and phenomena and analyze their causes and course.	[SU2] presentation/project/paper/ report [SU5] implementation of a problem task
[GEOGRL3-U09] is able to work in a group and take on various roles within it, look after the equipment entrusted to them, and ensure their own safety and that of others.	The student is able to work in a group and take on various roles within it, to distribute responsibilities fairly and effectively, and to look after the meteorological equipment entrusted to them as well as their own safety and that of others.	[SU5] implementation of a problem task [SU6] demonstration of practical skills [SU8] observation of student's independent or team work

Subject contents

Meteorological site:
1. Arrangement of measuring instruments, timing of measurements and observations, order of measurements
Meteorological equipment; principles of operation and maintenance: Barometer, CNR-1 pyrradiometer, 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, evaporometer GGI 3000, pluviograph, self-descriptions: thermohygrograph, barograph, psychrometers: Assmann, August.

Meteorological observations:
2. Assessment of the magnitude and type and cloud cover
3. Matheorological phenomena (precipitation, sediment, photometers, ground condition).

Field studies:
4. Defining the purpose and scope of the research
5. Defining research methods (depending on the purpose of the research)
6. Determining the number and location of measurement points
7. Technical preparation of measurements and equipment,
8. Practical mastery of measurement technique,
9. Conducting field surveys,
10. Preparation of the results of measurements.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
report and presentation on the results of field research	51.0%	50.0%
written 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-Szczęsna 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. Różdżyński K., 1995 i 1996, Miernictwo meteorologiczne, IMGW, cz. I i II, Warszawa.
	eResources addresses	
Example issues/ example questions/ tasks being completed	Construction, functioning and operation of selected meteorological measuring instruments.	
Work placement	Not applicable	

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