1.	**Field of study**	**Geography**
2.	Faculty	Faculty of Natural Sciences
3.	Academic year of entry	2025/2026 (winter term)
4.	Level of qualifications/degree	second-cycle studies
5.	Degree profile	general academic
6.	Mode of study	full-time

7.	**General information about the module**
Module name	**Meteorological data acquisition methods and databases**
Module code	W2-GF-S2-608
Number of the ECTS credits	4
Language of instruction	Polish
Purpose and description of the content of education	In the module, the student will gain knowledge on the methods of obtaining meteorological data (measurements and observations) and the method of their organization and archiving in databases. Modern automatic measuring devices and the principles of their placement in an automatic measuring station depending on the profile of the research conducted will be discussed. The methods of programming the recording of data in these devices and the principles of their downloading from the device will be explained. The student will gain general knowledge on databases, methods of storing data in these databases and the access to data from various types of databases. The most important meteorological and climatological databases will be discussed along with the principles of access to them
List of modules that must be completed before starting this module (if necessary)	not applicable

8. Learning outcomes of the module

Code	Description	Learning outcomes of the programme	Level of competenc (scale 1-5)
W2-GF-S2-608 _1	the student has knowledge of the use of meteorological data in climatology, including instrumental measurements, organization of data in databases and forecasting weather-forming processes based on them, and knows the principles of planning field measurements, acquiring data and using appropriate tools for their analysis	KGG2_W02	2
W2-GF-S2-608 _2	It uses advanced techniques and IT tools to obtain instrumental data and, based on them, model, forecast and solve specific problems in the field of meteorology and climatology.	KGG2_U01	3
W2-GF-S2-608 _3	is able to obtain and interpret instrumental data and, based on their analysis, formulate appropriate conclusions. Based on data from various databases and theoretical knowledge, is able to describe, analyze and interpret the causes and course of natural processes and phenomena, as well as to formulate critical opinions and independently propose solutions using the appropriate research method	KGG2_U03	3
W2-GF-S2-608 _4	demonstrates the ability to critically analyze and select information from various database sources and correctly interprets and explains natural phenomena, as well as the mutual relationships between them. Has the ability to practically use the acquired knowledge in various field studies in the field of meteorology and environmental monitoring	KGG2_U02	2

9.	Methods of conducting classes	
Code	**Category**	**Name (description)**
a01	Lecture methods / expository methods	Formal lecture/ course-related lecture *a systematic course of study involving a synthetic presentation of an academic discipline; its implementation assumes a passive reception of the information provided*
a02	Lecture methods / expository methods	Monographic lecture *an exhaustive discussion of one issue, usually related to the research interests of the person teaching the course or a thorough presentation of one selected issue*
b01	Problem-solving methods	Problem-based lecture *an analysis of a selected scientific or practical problem accompanied by its assessment and an attempt to provide a solution to the issues presented in the lecture as well as the indication of the consequences of the proposed solution*
b04	Problem-solving methods	Activating method – discussion / debate *an exchange of views supported by substantive arguments leading to a clash of different views, a compromise or the identification of common positions; it proceeds according to previously agreed-upon rules regarding the time, manner and turn-taking as well as the principles of civil discourse; a discussion is not a competition but aims at finding the best solutions or presenting different points of view; its varieties include brainstorming, Oxford-style debate, panel discussion, decision tree, conference discussion; a debate is an orderly dispute between supporters and opponents of a viewpoint, usually specialists in the field or pre-selected representatives of a group dealing with a common problem*
c07	Demonstration methods	Screen presentation *a presentation of synthetic image content using computer graphics, e.g., a series of slides or other multimedia forms, usually accompanied by a commentary; typical components of a screen presentation include text organized into bulleted points, charts, images and animations, sometimes sound effects or music; a multimedia illustration of course content presented in the form of a projected image*
d01	Programmed learning methods	Working with a computer *e.g., Webquest; implementation of educational tasks using electronic and digital devices, computer programs and Internet applications; the academic teacher acts as a consultant; students' work is carried out step by step according to the plan laid own by the person teaching the course and following his instructions, and proceeds towards producing the indicated results within the set deadline*
d03	Programmed learning methods	Working with another teaching tool *e.g. using websites in any way or according to the rules set by the teacher; or making use of other subject-specific tools*

10.	Forms of teaching				
Code	**Name**	**Number of hours**	**Assessment of the learning outcomes of the module**	**Learning outcomes of the module**	**Methods of conducting classes**
W2-GF-S2-608 _fs _1	lecture	15	course work	W2-GF-S2-608 _1	a01, a02, b01
W2-GF-S2-608 _fs _2	laboratory classes	15	course work	W2-GF-S2-608 _2, W2-GF-S2-608 _3, W2-GF-S2-608 _4	b04, c07, d01, d03

11.	The student's work, apart from participation in classes, includes in particular:		
Code	**Category**	**Name (description)**	**Is it part of the BUNA?**
a01	Preparation for classes	Search for materials and review activities necessary for class participation *reviewing literature, documentation, tools and materials as well as the specifics of the syllabus and the*	No

		range of activities indicated in it as required for full participation in classes	
a02	Preparation for classes	Literature reading / analysis of source materials *reading the literature indicated in the syllabus; reviewing, organizing, analyzing and selecting source materials to be used in class*	No
a04	Preparation for classes	Consulting materials complementary to those indicated in the syllabus *agreeing on materials complementary to those indicated in the syllabus, supporting the implementation of tasks resulting from or necessary for class participation*	Yes
b01	Consulting the curriculum and the organization of classes	Getting acquainted with the syllabus content *reading through the syllabus and getting acquainted with its content*	Yes
b03	Consulting the curriculum and the organization of classes	Consulting the schedule *getting acquainted with the class schedule, possibly in the presence of the year tutor, in order to optimize participation in classes, including those supplementary to the core subjects listed in the pursued study programme*	Yes

Information on the details of the module implementation in a given academic year can be found in the syllabus available in the USOS system: https://usosweb.us.edu.pl.