

1.	Field of study	Environmental Hazard Engineering
2.	Faculty	Faculty of Natural Sciences
3.	Academic year of entry	2023/2024 (winter term), 2024/2025 (winter term)
4.	Level of qualifications/degree	first-cycle studies (in engineering)
5.	Degree profile	general academic
6.	Mode of study	full-time

7.	General information about the module	
Module name		Basics of Cartography, Topography and Geodesy
Module code		W2-IZ-S1-002
Number of the ECTS credits		5
Language of instruction		Polish
Purpose and description of the content of education		The module Basics of geodesy, cartography and topography is designed to enable students to become familiar with the basics of creating general geographic, thematic and topographic maps and using them. It indicates the place and importance of cartography and cartographic spatial analysis in the system of natural sciences. Transfers knowledge of the mathematical elements of maps, their geographical content and methods of graphical presentation of natural and socio-economic phenomena on maps. It introduces the basics of using thematic and topographic maps in analogue and digital form to obtain qualitative and quantitative information about the main components of the geographical environment.
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)
U1	the student has knowledge, updates it, possesses skills and applies them in the use of basic methods, techniques and tools for the preparation and editing of cartographic studies, including in the field of modern information systems of the territory at a level that allows describing and interpreting natural and socio-economic phenomena. Demonstrates the ability to work in a group	U04		3
		U05		3
		W02		3
U2	the student uses available sources of information on geographic space, including electronic sources	U02		3
		U03		3
W1	the student has knowledge of basic conceptual categories and terminology used in cartography and topography, has knowledge of the development of these fields and their place in the system of sciences	W01		3

9.	Methods of conducting classes		
Code	Category	Name (description)	
a01	Lecture methods / expository methods	Formal lecture/ course-related lecture <i>a systematic course of study involving a synthetic presentation of an academic discipline; its implementation assumes a passive reception of the information provided</i>	

b02	Problem-solving methods	Lecture-discussion <i>transmission of content involving interaction with the lecture audience; discussion of lecture-related issues is one of its elements or constitutes its follow-up</i>
d01	Programmed learning methods	Working with a computer <i>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</i>
d03	Programmed learning methods	Working with another teaching tool <i>e.g. using websites in any way or according to the rules set by the teacher; or making use of other subject-specific tools</i>

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-IZ-S1-002_fs_1	lecture	30	exam	U1, W1	a01, b02
W2-IZ-S1-002_fs_2	laboratory classes	30	course work	U1, U2	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 <i>reviewing literature, documentation, tools and materials as well as the specifics of the syllabus and the range of activities indicated in it as required for full participation in classes</i>		No
b01	Consulting the curriculum and the organization of classes	Getting acquainted with the syllabus content <i>reading through the syllabus and getting acquainted with its content</i>		No

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>.