

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		Geological, Geomorphological and Geophysical Methods in Geohazards Analysis
Module code		W2-IZ-S1-010
Number of the ECTS credits		2
Language of instruction		Polish
Purpose and description of the content of education		As part of the module, the student learns and learns to apply geological and geophysical methods used in the analysis of geological hazards. Familiarizes with the methodology of analysis of geological hazards: their causes, manifestations, effects as well as detection, registration, warning and prevention or minimization of their effects. He learns the procedures related to geological hazards used before, during and after their appearance. Acquires the knowledge and skills of using traditional and instrumental techniques of collecting and processing geological data, the principles of spatial construction of a model of geological structure and the principles of geological work - field and chamber. Acquires the ability to use cartographic methods to construct geological maps, geological cross-sections and lithostratigraphic profiles with explanations.
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)
U01	he can plan and carry out experiments, including measurements and computer simulations, interpret the results and draw conclusions	U01		3
		U02		2
		U03		4
		U04		5
		U13		4
U02	he can use analytical, simulation and experimental methods to formulate and solve environmental engineering tasks aimed at geological hazards	U01		2
		U02		2
		U04		5
		U13		4
W01	he understands the basic geological phenomena and processes with a focus on geohazards	U09		4
		U12		1
		W01		2

		W03	4
		W05	2
		W08	3
W02	he has knowledge of research methods used in science related to geological hazards including principles and techniques used in geological mapping	U12	4
		W01	2
		W02	3
		W03	4
		W08	4

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>
c06	Demonstration methods	Demonstration-imitation <i>a presentation of a model way of performing specific activities accompanied by a commentary; it aims at triggering imitation activities in an individual or in a group of participants observing the activities of the person teaching the course until the right habit is formed through regular exercise; the demonstration-imitation method is combined with a physical practice of activities/behaviours</i>
c07	Demonstration methods	Screen presentation <i>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</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>
e01	Practical methods	Laboratory exercise / experiment <i>[also conducted as fieldwork] a method of practical application of knowledge; implemented in three stages: the recognition of a problem induced by the task content, the formulation of the problem and the attempt to solve it accompanied by the assessment of the effects; the goal is to acquire skills, abilities and habits, and to consolidate the acquired knowledge so that it becomes operational; the laboratory method assumes greater independence of learners than carrying out an experiment</i>
e04	Practical methods	Project scheduling <i>proceeding according to the steps proposed within a specific methodology for the completion of a task; e.g., identifying project objectives, determining the result, identifying strengths, limitations, opportunities and threats (SWOT), establishing a schedule of activities, assessing resources, establishing an implementation plan; the initial diagnosis; the reassessment of</i>

		<i>assumptions; the process of preparing the practical implementation of a project</i>
f01	Methods of self-learning	Self-education <i>a method which involves independent acquisition of knowledge, skills and social competences, extending their scope and quality; complementary to the learning process taking place in class; taking on the task of developing and adjusting qualifications on one's own; self-study</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-S1-010_fs_1	lecture	15	exam	U01, U02, W01, W02	a01, b02, c06, f01
W2-IZ-S1-010_fs_2	laboratory classes	15	course work	U01, U02, W01, W02	c07, d01, d03, e01, e04, f01

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>	Yes
a02	Preparation for classes	Literature reading / analysis of source materials <i>reading the literature indicated in the syllabus; reviewing, organizing, analyzing and selecting source materials to be used in class</i>	No
a03	Preparation for classes	Developing practical skills <i>activities involving the repetition, refinement and consolidation of practical skills, including those developed during previous classes or new skills necessary for the implementation of subsequent elements of the curriculum (as preparation for class participation)</i>	Yes
a04	Preparation for classes	Consulting materials complementary to those indicated in the syllabus <i>agreeing on materials complementary to those indicated in the syllabus, supporting the implementation of tasks resulting from or necessary for class participation</i>	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>.