

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 geology
Module code		W2-IZ-S1-004
Number of the ECTS credits		6
Language of instruction		Polish
Purpose and description of the content of education		<p>In the module Fundamentals of Geology, the structure and evolution of the Earth are discussed. Both endogenous and exogenous processes are presented and characterized, taking into account their course, effects, i.e., rocks and sediments as well as geomorphological forms. Natural conditions for individual geological processes are indicated, as well as their mutual connections. The acquired knowledge can be the basis for forecasting the geological natural disasters, and predicting the effects of geological events on a regional as well as global scale.</p> <p>Content of the module:</p> <p>The structure and evolution of the Earth.</p> <p>Endogenous processes: Plate tectonics. Earthquakes. Orogenic processes. Tectonic structures. Igneous processes: Origin and evolution of magma. Rock-forming minerals of igneous rocks. Classification and review of igneous rocks. Metamorphic processes. Rock-forming minerals of metamorphic rocks. Classification and systematic review of metamorphic rocks.</p> <p>Exogenous processes: Weathering. Mass movements. Sedimentary environments. Rock-forming minerals of sedimentary rocks. Characteristics of sedimentary rocks: origin, classification and systematic review.</p> <p>Methods of determining the age of rocks and minerals. Geological time scale - the main events in the history of the lithosphere (palaeogeographical changes, orogenic cycles) and the biosphere.</p>
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)	
K1	understands the need to constantly expand his knowledge. is able to manage his own time for self-education in an organized manner	K01	3	
U1	can use professional geological terminology and explain mechanisms and effects of geological processes. can recognize rock-forming minerals and basic types of rocks, and interpret the conditions of their formation	U01 U02 U05 U08	4 2 1 2	
W1	has knowledge of the structure and evolution of the Earth	W01	4	

	knows and understands the conditions, genesis, forms and mechanisms of endo- and exogenous processes of the Earth has knowledge of the basic methods of dating minerals and rocks - acquires basic information on forecasting natural disasters with a geological background and predicting the effects of geological events on a regional and global scale	W02 W03 W05	2 1 1
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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>
a03	Lecture methods / expository methods	Description <i>a description of objects, phenomena, processes or people; it involves specifying the structure and characteristic features of the object, phenomenon, or process being described; it is usually accompanied by a demonstration of the described object or by its models, drawings, tables, charts, etc.; a description may take the form of an explanation, classification, justification or comparison</i>
a05	Lecture methods / expository methods	Explanation/clarification <i>explication involving the derivation of a predetermined theorem from other, already known ones, in the number of steps specified by the person teaching the course</i>
c01	Demonstration methods	Exhibition <i>preparing an object for public display and displaying it in order to elicit a specific reaction; creating a themed collection of specimens/objects/works to illustrate a specific issue</i>
c03	Demonstration methods	Audio playback / audio drama <i>preparation and reproduction of sound material (audio recording) in its entirety or in fragments in order to illustrate the content taught in class, to submit it to analysis and evaluation or to use it as a method of sound perception, including the appreciation of a musical piece, an artistic audio drama, an oral presentation of an artistic or scientific text as well as a media text; analysis of the sound material recorded on a carrier with a view to studying a sound-related phenomenon</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>
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>
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>
f02	Methods of self-learning	Individual work with a text <i>searching for and acquiring new information using textbooks and other written sources (including their digital versions); searching for texts, selecting fragments for analysis/interpretation, using other texts to solve a problem related to the studied issue</i>
f03	Methods of self-learning	Conceptual work

		<i>a (mainly intellectual) activity carried out independently (or in a selected group) resulting in the creation of a concept, idea or project; creating a plan based on a vision; developing a general outline of a project; producing a simplified sketch of the variant versions of a procedure/product/work</i>
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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-S1-004_fs_1	lecture	30	exam	K1, U1, W1	a01, a03, a05, c01, c03, c07, f01, f02
W2-IZ-S1-004_fs_2	laboratory classes	30	course work	K1, U1, W1	e01, f01, f02, f03

11. The student's work, apart from participation in classes, includes in particular:				
Code	Category	Name (description)		Is it part of the BUNA?
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
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>.