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

7.	**General information about the module**
Module name	**Hydrogeology, Engineering Geology and Geological Drilling Service – Field Trip**
Module code	W2-GE-S1-420
Number of the ECTS credits	4
Language of instruction	Polish
Purpose and description of the content of education	Po zrealizowaniu modułu student nabędzie umiejętności projektowania studni, kartowania hydrogeologicznego, polowych badań hydrogeologicznych i geologiczno-inżynierskich. Zapozna się z zadaniami geologa na wierceniach, skonfrontuje teoretyczną wiedzę z zakresu wiertnictwa i górnictwa z praktycznymi aspektami tych modułów. Obserwując pracę geologa w terenie przekona się czy jest to praca odpowiadająca jego możliwościom i aspiracjom.
List of modules that must be completed before starting this module (if necessary)	[W2-GE-S1-412] Applied Geology 1 [W2-GE-S1-411] Mining 1 [W2-GE-S1-409] Hydrogeology [W2-GE-S1-413] Drilling 1

8. Learning outcomes of the module

Code	Description	Learning outcomes of the programme	Level of competenc (scale 1-5)
W2-GE-S1-420_1	zapoznaje się z systemami odwadniania kopalń odkrywkowych oraz konstrukcjami studni odwadniających i eksploatacyjnych	1GE_K2 1GE_U1 1GE_W1 1GE_W3	2 1 1 1
W2-GE-S1-420_2	realizuje w terenie badania monitoringowe wód podziemnych oraz pomiary hydrometryczne w ciekach powierzchniowych	1GE_K1 1GE_U2 1GE_U6 1GE_U7	1 2 1 1
W2-GE-S1-420_3	stosuje podstawowe polowe metody oznaczanie współczynnika filtracji strefy aeracji i saturacji	1GE_U1 1GE_U2 1GE_U8	1 1 1
W2-GE-S1-420_4	posiada podstawową wiedzę w zakresie kartowania hydrogeologicznego	1GE_K6	1

		1GE_U1 1GE_W1	1 1
W2-GE-S1-420_5	rozpoznaje podstawowe typy wiertnic i sprzęt specjalistyczny	1GE_K5 1GE_U1 1GE_U8	2 2 2
W2-GE-S1-420_6	dobiera konstrukcję otworu do danych warunków geologicznych i hydrogeologicznych	1GE_K5 1GE_U1 1GE_U6	2 2 1
W2-GE-S1-420_7	zna obowiązki geologa w obsłudze wierceń	1GE_K2 1GE_K3 1GE_K5 1GE_K6 1GE_U2 1GE_U3 1GE_U6 1GE_U7 1GE_U8	1 1 2 3 3 1 2 3 2

9. Methods of conducting classes

Code	Category	Name (description)
a05	Lecture methods / expository methods	Explanation/clarification *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*
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*
b07	Problem-solving methods	Activating methods: a case study *a comprehensive description of a phenomenon connected with the selected discipline; reflecting the reality, presenting the 'what', 'where' and 'how' of the phenomenon, i.e., all of its key aspects to be discussed in class; used as a reproduction, presentation, discussion or diagnosis of factors that shape the phenomenon or interact with it; an in-depth qualitative analysis and evaluation of a selected phenomenon*
c06	Demonstration methods	Demonstration-imitation *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*

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*
e01	Practical methods	Laboratory exercise / experiment *[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*
e04	Practical methods	Project scheduling *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 assumptions; the process of preparing the practical implementation of a project*
e05	Practical methods	Internship *including professional and individual training; gaining skills and experience in real-life conditions, e.g., in the environment, institution or workplace the student is preparing for by following a specific study programme; training in real working conditions*
e06	Practical methods	Observation *also conducted as fieldwork; a method of watching phenomena, objects or people in a systematic/planned way in order to gain knowledge about them; perceptual separation of elements of a model action as an element of learning through imitation; a complex system of cognition based on sensory experiences*

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-GE-S1-015_CT	field practice	60	course work	W2-GE-S1-420_1, W2-GE-S1-420_2, W2-GE-S1-420_3, W2-GE-S1-420_4, W2-GE-S1-420_5, W2-GE-S1-420_6, W2-GE-S1-420_7	a05, b04, b07, c06, d03, e01, e04, e05, e06

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 *reading the literature indicated in the syllabus; reviewing, organizing, analyzing and selecting source materials to be used in class*	No
a03	Preparation for classes	Developing practical skills *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)*	No
c02	Preparation for verification of learning outcomes	Studying the literature used in and the materials produced in class *exploring the studied content, inquiring, considering, assimilating, interpreting it, or organizing knowledge obtained from the literature, documentation, instructions, scenarios, etc., used in class as well as from the notes or other materials/artifacts made in class*	No
c03	Preparation for verification of learning outcomes	Implementation of an individual or group assignment necessary for course/phase/	No

		examination completion *a set of activities aimed at performing an assigned task, to be executed out of class, as an obligatory phase/element of the verification of the learning outcomes assigned to the course*	
d01	Consulting the results of the verification of learning outcomes	Analysis of the corrective feedback provided by the academic teacher on the results of the verification of learning outcomes *reading through the academic teacher's comments, assessments and opinions on the implementation of the task aimed at checking the level of the achieved learning outcomes*	No
d03	Consulting the results of the verification of learning outcomes	Review of internship documentation *an analysis of the portfolio of documentation obtained during internship, including professional internship, and other practical classes and studio sessions, as well as the documentation developed in order to obtain credit for such classes; verification of the description, necessary attachments, opinions and grades before submitting the portfolio for acceptance*	No
e01	Activities complementary to the classes	Undertaking, on one's own initiative and individually, activities aimed at expanding the scope or depth of the teaching content, also beyond the walls of the University *a set of activities undertaken independently and on the student's own initiative, aimed at expanding the depth and scope of knowledge and skills, their revision and repetition, retention or verification, also activities carried outside the university, e.g., in a culture promoting or educational institution, a laboratory, in the open air, etc.; also self-education*	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.