

1.	Field of study	Aquamatics - Interdisciplinary Management of Water Environments
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	Water status and resources monitoring
Module code	W2-AQ-S1-015
Number of the ECTS credits	5
Language of instruction	Polish
Purpose and description of the content of education	Moduł umożliwi studentowi zdobycie wiedzy i umiejętności z zakresu teoretycznej i praktycznej oceny stanu wód powierzchniowych i podziemnych oraz osadów dennych z uwzględnieniem typologii wód. Studenci poznają metody prowadzenia monitoringu, w tym jego rodzaje i zakres zgodnie z obowiązującymi regulacjami prawa krajowego i międzynarodowego. Poznają sposoby analizy i interpretacji wyników uzyskanych w monitorowaniu wód powierzchniowych i podziemnych prowadzonych w podsystemie Państwowego Monitoringu Środowiska oraz przeprowadzą ocenę stanu/potencjału jednolitej części wód powierzchniowych oraz stanu wód podziemnych.
List of modules that must be completed before starting this module (if necessary)	[W2-AQ-S1-012] Basics of chemistry [W2-AQ-S1-008] Basics of hydrobiology [W2-AQ-S1-010] Basic of hydrogeology [W2-AQ-S1-009] Basics of hydrology

8. Learning outcomes of the module			
Code	Description	Learning outcomes of the programme	Level of competenc (scale 1-5)
W2-AQ-S1-015_1	Zna podstawowe terminy i pojęcia dotyczące monitoringu wód.	AQ1_W01 AQ1_W03 AQ1_W05	4 4 4
W2-AQ-S1-015_2	Zna cele i zasady prowadzenia monitoringu stanu wód w Polsce.	AQ1_W01 AQ1_W03 AQ1_W05	4 4 4
W2-AQ-S1-015_3	Potrafi dokonać oceny stanu wód.	AQ1_U02 AQ1_U03 AQ1_W01 AQ1_W03 AQ1_W05	3 3 3 3 3

W2-AQ-S1-015_4	Potrafi powołać się na zapisy regulacji prawnych obowiązujących w monitoringu wód.	AQ1_U02 AQ1_U03 AQ1_W03 AQ1_W05	2 2 2 2
W2-AQ-S1-015_5	Potrafi zidentyfikować zagrożenia związane z wodami wynikające z działalności człowieka, potrafi ocenić ich skalę oraz wpływ na środowisko.	AQ1_K02 AQ1_U02 AQ1_U03 AQ1_W03 AQ1_W05	2 2 2 2 2
W2-AQ-S1-015_6	Zna podstawowe źródła danych o środowisku i potrafi je pozyskać i opracować.	AQ1_K02 AQ1_U02 AQ1_U03 AQ1_W03 AQ1_W05	2 2 2 2 2
W2-AQ-S1-015_7	Potrafi przygotować bazę danych o środowisku na podstawie pozyskanych danych monitoringowych.	AQ1_K02 AQ1_U02 AQ1_U03 AQ1_U04 AQ1_W05	3 3 3 3 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>
b01	Problem-solving methods	Problem-based lecture <i>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</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>
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>

	assumptions; the process of preparing the practical implementation of a project				
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-AQ-S1_015 fs 1	lecture	15	exam	W2-AQ-S1-015_1, W2-AQ-S1-015_2, W2-AQ-S1-015_6	a01, b01
W2-AQ-S1_015 fs 2	laboratory classes	30	exam	W2-AQ-S1-015_3, W2-AQ-S1-015_4, W2-AQ-S1-015_5, W2-AQ-S1-015_7	d01, d03, e04
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
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
a05	Preparation for classes	Production/preparation of tools, materials or documentation necessary for class participation <i>developing, preparing and assessing the usefulness of tools and materials (e.g. aids, scenarios, research tools, equipment, etc.) to be employed in class or as an aid when preparing for classes</i>			No
c01	Preparation for verification of learning outcomes	Determining the stages of task implementation contributing to the verification of learning outcomes <i>devising a task implementation strategy embracing the division of content, the range of activities, implementation time and/or the method(s) of obtaining the necessary materials and tools, etc.</i>			No
c02	Preparation for verification of learning outcomes	Studying the literature used in and the materials produced in class <i>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</i>			No
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 <i>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</i>			Yes
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 <i>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</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>.