

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		Basics of water management 1		
Module code		W2-AQ-S1-040		
Number of the ECTS credits		3		
Language of instruction		Polish		
Purpose and description of the content of education		Celem modułu jest zapoznanie studenta z następującymi zagadnieniami: źródła informacji hydrologicznej, statystycznej z zakresu gospodarowania wodą, o jakości wody, podstawowe zasady i zadania gospodarki wodnej, zagadnienia związane ze zjawiskami ekstremalnymi (susze, powódzie), system organizacyjny gospodarki wodnej w Polsce, aktualne i prognozowane problemy z zakresu gospodarowania wodą. W trakcie ćwiczeń terenowych student zapozna się z funkcjonowaniem elementów gospodarki wodnej.		
List of modules that must be completed before starting this module (if necessary)		[W2-AQ-S1-023] Basics of data analysis [W2-AQ-S1-031] Basics of ecotoxicology [W2-AQ-S1-008] Basics of hydrobiology [W2-AQ-S1-010] Basic of hydrogeology [W2-AQ-S1-009] Basics of hydrology [W2-AQ-S1-024] Basics of environmental protection [W2-AQ-S1-045] Basics of hydrogeology - field classes [W2-AQ-S1-046] Basics of hydrology - field classes		
8.	Learning outcomes of the module			
Code	Description	Learning outcomes of the programme	Level of competences (scale 1-5)	
W2-AQ-S1-040_1	Rozumie podstawowe zjawiska i procesy hydrologiczne oraz posiada podstawową wiedzę z zakresu gospodarki wodnej.	AQ1_W01	4	
		AQ1_W02	4	
W2-AQ-S1-040_2	Zna, analizuje i prognozuje funkcjonowanie gospodarki wodnej (zaopatrzenie w wodę, odprowadzanie ścieków, gospodarowanie wodą w okresie wezbrań i powodzi oraz w okresie suszy, podstawy regulacji rzek i potoków, podstawy zarządzania zasobami wodnymi).	AQ1_K02	3	
		AQ1_U01	3	
		AQ1_U02	3	
		AQ1_U10	3	
		AQ1_W01	3	
		AQ1_W02	3	
		AQ1_W04	3	
		AQ1_W05	3	

W2-AQ-S1-040_3	Posiada podstawową wiedzę i umiejętności w zakresie przygotowywania analiz na potrzeby dokumentacji hydrologicznych.	AQ1_K02	3
		AQ1_U01	3
		AQ1_U02	3
		AQ1_W01	3
		AQ1_W02	3
		AQ1_W04	3
		AQ1_W05	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>
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>
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>
b07	Problem-solving methods	Activating methods: a case study <i>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</i>
b10	Problem-solving methods	SWOT analysis <i>a method of analyzing a phenomenon/action/work of an institution, employed to organize information and solve problems; applied in strategic planning, project implementation or solving a business or organizational problem; a universal tool to be used in the initial stage of a strategic analysis which involves sorting information about a problem into four categories: strengths and weaknesses, opportunities and threats; SWOT analysis makes it possible to determine the factors in favour of a project and its chances for success, as well as eliminating or reducing negative factors and threats to the project at the stage of early diagnosis</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>

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-AQS1- 040 fs 1	lecture	15	exam	W2-AQ-S1-040 _1, W2-AQ-S1-040 _2, W2-AQ-S1-040 _3	a01, b01, c07
W2-AQS1- 040 fs 2	practical classes	30	exam	W2-AQ-S1-040 _2, W2-AQ-S1-040 _3	a05, b07, b10, d01

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
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>	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
c03	Preparation for verification of learning outcomes	Implementation of an individual or group assignment necessary for course/phase/ examination completion <i>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</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>.