

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		Engineering seminar 3
Module code		W2-AQ-S1-049
Number of the ECTS credits		2
Language of instruction		Polish
Purpose and description of the content of education		<p>Student nabywa umiejętności przygotowania pracy naukowej na poziomie pracy inżynierskiej. Uczy się planowania i realizacji kolejnych etapów przygotowania opracowania naukowego: pozyskiwania danych i literatury, efektywnej selekcji danych i literatury, prawidłowego wykorzystania informacji (w tym zasady działania Antyplagiatu), formułowania celu opracowania naukowego. W zależności od realizowanej przez studenta specjalności i tematyki pracy inżynierskiej: doboru odpowiednich metod do rozwiązania konkretnego problemu lub sporządzania kompilacji na podstawie istniejącej literatury.</p>
List of modules that must be completed before starting this module (if necessary)		[W2-AQ-S1-038] Legal aspects in water management [W2-AQ-S1-021] GIS 1 [W2-AQ-S1-022] GIS 2 [W2-AQ-S1-015] Water status and resources monitoring [W2-AQ-S1-018] Basics of chemical analytics [W2-AQ-S1-023] Basics of data analysis [W2-AQ-S1-012] Basics of chemistry [W2-AQ-S1-014] Basics of ecology [W2-AQ-S1-031] Basics of ecotoxicology [W2-AQ-S1-011] Basics of engineering geology [W2-AQ-S1-040] Basics of water management 1 [W2-AQ-S1-041] Basics of water management 2 [W2-AQ-S1-008] Basics of hydrobiology [W2-AQ-S1-010] Basic of hydrogeology [W2-AQ-S1-035] Basics of engineering and mining hydrogeology [W2-AQ-S1-009] Basics of hydrology [W2-AQ-S1-025] Basics of hydrotechnics [W2-AQ-S1-034] Basics of ichthyology [W2-AQ-S1-007] Basics of computer science and network security [W2-AQ-S1-005] Basics of mathematics and statistics 1 [W2-AQ-S1-016] Basics of meteorology and climatology [W2-AQ-S1-032] Basics of chemometric methods [W2-AQ-S1-017] Basics of aquatic microbiology

[W2-AQ-S1-043] Basics of groundwater modelling [W2-AQ-S1-036] Basics of surface water modelling 1 [W2-AQ-S1-037] Basics of surface water modelling 2 [W2-AQ-S1-024] Basics of environmental protection [W2-AQ-S1-020] Basics of water reclamation and renaturalisation [W2-AQ-S1-039] Basics of water purification and treatment technology [W2-AQ-S1-019] Basic principles of documentation preparation [W2-AQ-S1-050] Diploma thesis 1 [W2-AQ-S1-051] Diploma thesis 2 [W2-AQ-S1-044] Work placement 1 [W2-AQ-S1-026] Engineering project 1 [W2-AQ-S1-027] Engineering project 2 [W2-AQ-S1-028] Engineering project 3 [W2-AQ-S1-030] Engineering proseminar [W2-AQ-S1-047] Engineering seminar 1 [W2-AQ-S1-048] Engineering seminar 2 [W2-AQ-S1-033] Water in the city [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 competenc (scale 1-5)
W2-AQ-S1-049_1	Potrafi sformułować problem badawczy i zaproponować sposób jego rozwiązania.	AQ1_K01 AQ1_U01 AQ1_W01	5 5 5
W2-AQ-S1-049_2	Potrafi zaplanować badania i przeprowadzić je zgodnie z obowiązującymi zasadami.	AQ1_K01 AQ1_K02 AQ1_U01 AQ1_U02 AQ1_U03	4 4 4 4 4
W2-AQ-S1-049_3	Potrafi samodzielnie wykorzystać poznane narzędzia badawcze.	AQ1_K01 AQ1_K02 AQ1_U02 AQ1_W01 AQ1_W08	4 4 4 4 4
W2-AQ-S1-049_4	Umie opracować uzyskane wyniki badań, krytycznie ocenić uzyskane wyniki badań i sformułować wnioski zgodnie z obowiązującą wiedzą.	AQ1_K01 AQ1_K02 AQ1_U02	3 3 3

		AQ1_W01	3
		AQ1_W08	3
W2-AQ-S1-049_5	Potrafi przygotować dobrze udokumentowane opracowanie z zakresu nauk o wodzie oraz dokonać ustnej prezentacji zagadnień szczegółowych z zakresu nauk o wodzie zarówno w języku polskim jak i angielskim.	AQ1_K02	3
		AQ1_U01	3
		AQ1_U09	3
		AQ1_W04	3
W2-AQ-S1-049_6	Potrafi myśleć i działać w sposób przedsiębiorczy.	AQ1_K04	3
		AQ1_W07	3
W2-AQ-S1-049_7	Rozumie potrzebę uczenia się przez całe życie, wykazuje potrzebę stałego aktualizowania wiedzy kierunkowej oraz podnoszenia kompetencji zawodowych i osobistych.	AQ1_U11	4

9. Methods of conducting classes		
Code	Category	Name (description)
b05	Problem-solving methods	Activating method – seminar / proseminar <i>a seminar method; usually an oral presentation of a previously studied/diagnosed problem delivered on a forum; it aims at provoking a discussion concerning the results of research work; a type of conference, course or training session modelled on seminar classes</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- 049 fs 1	seminar	30	course work	W2-AQ-S1-049_1, W2-AQ-S1-049_2, W2-AQ-S1-049_3, W2-AQ-S1-049_4, W2-AQ-S1-049_5, W2-AQ-S1-049_6, W2-AQ-S1-049_7	b05

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
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
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

b03	Consulting the curriculum and the organization of classes	Consulting the schedule <i>getting acquainted with the class schedule, possibly in the presence of the year tutor, in order to optimize participation in classes, including those supplementary to the core subjects listed in the pursued study programme</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
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
d02	Consulting the results of the verification of learning outcomes	Development of a corrective action plan as well as supplementary/corrective tasks <i>reviewing and selecting tasks and activities enabling the elimination of errors indicated by the academic teacher, their verification or correction resulting in completing the task with at least the minimum passing grade</i>	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 <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>.