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| 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 |

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| 7. | General information about the module | |
| Module name | | Basics of chemistry |
| Module code | | W2-AQ-S1-012 |
| Number of the ECTS credits | | 4 |
| Language of instruction | | Polish |
| Purpose and description of the content of education | | Wykonywanie ćwiczeń, praca z internetowymi źródłami danych. |
| List of modules that must be completed before starting this module (if necessary) | | not applicable |

| 8. | Learning outcomes of the module | | | |
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| Code | Description | Learning outcomes of the programme | Level of competenc (scale 1-5) | |
| W2-AQ-S1-012 _1 | Posiada wiedzę z zakresu chemii niezbędną dla zrozumienia podstawowych zjawisk i procesów zachodzących w atmosferze, hydrosferze i geosferze. | AQ1_W01 AQ1_W02 | 5 5 | |
| W2-AQ-S1-012 _2 | Zna techniki pozyskiwania danych o składzie chemicznym atmosfery i hydrosfery, ma wiedzę o podstawowych technikach stosowanych w badaniach chemicznych parametrów wody. | AQ1_W03 AQ1_W08 | 3 3 | |
| W2-AQ-S1-012 _3 | Potrafi poprawnie przeanalizować uzyskiwane wyniki badań. | AQ1_U04 | 4 | |
| W2-AQ-S1-012 _4 | Rozumie podstawowe zjawiska i procesy chemiczne zachodzące w wodzie. | AQ1_W01 AQ1_W08 | 4 4 | |
| W2-AQ-S1-012 _5 | Opracowuje dane, interpretuje i analizuje wyniki analiz. | AQ1_U01 AQ1_W08 | 4 4 | |

| 9. | Methods of conducting classes | | |
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| 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> | |

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| 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> |
| d02 | Programmed learning methods | Working with a programmed textbook <i>working with a textbook containing instructional material covering part of or the entire curriculum of the module as well as a formula for studying the content; includes working with a subject textbook, an atlas, a catalogue, a problem book, etc.</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> |

| 10. Forms of teaching | | | | | |
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| 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_012fs_1 | lecture | 15 | course work | W2-AQ-S1-012_1, W2-AQ-S1-012_2 | a01, b01, d02 |
| W2-AQ-S1_012fs_2 | laboratory classes | 15 | course work | W2-AQ-S1-012_3, W2-AQ-S1-012_4, W2-AQ-S1-012_5 | e01 |

| 11. The student's work, apart from participation in classes, includes in particular: | | | |
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| 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 |
| 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 |
| 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 |
| e01 | Activities complementary to the classes | Undertaking, on one's own initiative and individually, activities aimed at expanding the scope | No |

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| | | 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> | |
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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>.