

Subject card

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|--|---|--|--|------------|--|---------|-----|
| Subject name and code | Biomolecules - laboratory , PG_00206159 | | | | | | |
| Field of study | Oceanography | | | | | | |
| Date of commencement of studies | October 2026 | Academic year of realisation of subject | | | 2027/2028 | | |
| Education level | Bachelor's studies | Subject group | | | Obligatory subject group in the field of study Optional subject group Subject group related to scientific research in the field of study | | |
| Mode of study | full-time studies | Mode of delivery | | | at the university | | |
| Year of study | 2 | Language of instruction | | | Polish | | |
| Semester of study | 4 | ECTS credits | | | 4.0 | | |
| Learning profile | academic | Assessment form | | | credit | | |
| Conducting unit | Faculty of Oceanography and Geography -> Rector | | | | | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | | dr Robert Konkel | | | | |
| | Teachers | | | | | | |
| Lesson types | Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
| | Number of study hours | 0.0 | 0.0 | 45.0 | 0.0 | 0.0 | 45 |
| | E-learning hours included: 0.0 | | | | | | |
| | Additional information: Lab exercises | | | | | | |
| Learning activity and number of study hours | Learning activity | Participation in didactic classes included in study plan | Participation in consultation hours | Self-study | SUM | | |
| | Number of study hours | 45 | 3.0 | 27.0 | 75 | | |
| Subject objectives | Acquiring basic knowledge about organic compounds of natural origin, their structure, properties, and methods of detection. The ability to use basic techniques and equipment employed in biochemical, chemical, and biological laboratories. | | | | | | |
| Learning outcomes | Course outcome | | Subject outcome | | Method of verification | | |
| | [OCEANL3-K01] is willing to plan and implement, individually or as a team, the subsequent stages of the entrusted task, is willing to take responsibility for the results of these works, effectively cooperates in the team and performs various roles in it | | Is ready to take responsibility for their own work as well as work done in a team. | | [SK2] presentation/project/paper/report | | |
| | [OCEANL3-W02] has a broad knowledge and understanding of physical, biological, chemical, and geological processes and phenomena occurring in aquatic environments, with particular emphasis on the marine environment | | Knows and understands the basic properties of various biomolecules. | | [SW4] test/exam - oral or written | | |
| | [OCEANL3-U03] is able to process, describe, and present results, and draw conclusions | | Is capable of processing and describing the results of biomolecule analyses and interpreting them. | | [SU2] presentation/project/paper/report | | |

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| Subject contents | 1. Detection and characterization of various groups of organic compounds. 2. Kinetics of enzymatic reactions. 3. Transport across biological membranes. 4. Techniques for separation, isolation, and identification of biomolecules (including flash chromatography, preparative and analytical chromatography, mass spectrometry, hybrid techniques). 5. Mechanisms of ion and organic compound transport across biological membranes. | | |
| Prerequisites and co-requisites | | | |
| Assessment methods and criteria | Subject passing criteria | Passing threshold | Percentage of the final grade |
| | Test | 51.0% | 90.0% |
| | Report | 51.0% | 10.0% |
| Recommended reading | Basic literature | Yadav, H.S., 2021. Biochemistry. UAE: Bentham Science Publisher. | |
| | Supplementary literature | Articles in Marine Drugs journal. | |
| | eResources addresses | | |
| Example issues/ example questions/ tasks being completed | | | |
| Work placement | Not applicable | | |

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