University of Gdańsk

Subject card

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|---|---|---|---|
| Subject name and code | Hydroecology - laboratory classes, PG_00201224 | | |
| Field of study | Aquaculture – Business And Technology | | |
| Date of commencement of studies | October 2026 | Academic year of realisation of subject | 2026/2027 |
| Education level | Bachelor's studies | Subject group | Obligatory subject group in the field of study |
| Mode of study | full-time studies | Mode of delivery | at the university |
| Year of study | 1 | Language of instruction | Polish |
| Semester of study | 1 | ECTS credits | 3.0 |
| Learning profile | practical | Assessment form | credit |
| Conducting unit | Department of Marine Ecosystems Functioning -> Faculty of Oceanography and Geography -> Rector | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | dr Iwona Bubak | |
| | Teachers | dr Iwona Bubak<br>dr Aleksandra Zgrundo | |

| Lesson types | Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
|---|---|---|---|---|---|---|---|
| | Number of study hours | 0.0 | 0.0 | 30.0 | 0.0 | 0.0 | 30 |
| | E-learning hours included: 0.0 | | | | | | |

| 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 | 30 | 2.0 | 43.0 | 75 |

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| Subject objectives | Introduction to ecology as a scientific discipline utilizing specialized terminology and research methodologies. The course presumes that, in addition to mastering fundamental concepts and techniques pertinent to the investigation of ecological systems, the student will grasp the significance of abiotic and biotic factors, as well as the processes that shape the structure and function of ecosystems. |

## Learning outcomes

| Course outcome | Subject outcome | Method of verification |
|---|---|---|
| [AKWAL3-U01] can plan and perform simple tasks under supervision or independently in the analysis of the aquatic environment, using appropriate methods of description and identification | Students perform simple scientific tasks related to the analysis of aquatic environment by using the appropriate descriptive and identification methods, under the supervision of academic advisor or individually | [SU8] observation of student's independent or team work |
| [AKWAL3-K01] is ready to assess the risks and threats stemming from working in the laboratory and is responsible for the equipment and teaching materials entrusted to them and for the safety of their own work and that of others | Students are able to cooperate and work in a team, taking on different roles | [SK8] observation of student's independent or team work |
| [AKWAL3_W02] has an advanced understanding of chemical, biological, physical processes and phenomena, identifies them, analyses their mechanisms in relation to the aquatic environment, and is aware of the connections between various natural disciplines | Students understand and correctly describe the basic chemical / biological / physical processes and phenomena, analyze them in relation to the aquatic environment | [SW1] oral statement/ conversation/discussion |
| [AKWAL3_W01] has an advanced understanding of the links between achievements in selected fields of science and natural science disciplines, and their potential applications in socio-economic life | Students understands and correctly describe the relationships between the achievements of sciences and disciplines of natural sciences used in ecology and the possibility of using them in socio-economic life. | [SW3] text preparation/written work |

## Subject contents

1. Populations - group features (i.e. size, density, reproduction, mortality, age structure).
2. Biocoenosis - biocoenotic indicators, biodiversity, biotic interactions.
3. Evolutionary ecology.
4. Ecological niche.
5. Ecological tolerance.
6. Curves of areas and observation of the ecological succession phenomenon based on algae communities of the Gulf of Gdańsk.
7. Threats to the aquatic ecosystems - environmental campaigns.

## Prerequisites and co-requisites

Basic information in the field of biology and hydrobiology (high school level)

## Assessment methods and criteria

| Subject passing criteria | Passing threshold | Percentage of the final grade |
|---|---|---|
| final written test (covering the contents of laboratories) | 51.0% | 35.0% |
| reports, presentations, projects (assessment based on scientific content, accuracy of the scientific content, originality, form) | 51.0% | 50.0% |
| active participation in classe | 51.0% | 15.0% |

## Recommended reading

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| Basic literature | 1. Begon M., Townsend C.R., Harper J.L. 2006. Ecology From Individuals to Ecosystems, Blackwell Publishing Ltd.<br>2. Falińska K. 1996. Ekologia roślin, (Podstawy teoretyczne, populacja, zbiorowisko, procesy), Wyd. PWN, Warszawa<br>3. Kalinowska A. 2002. O Ekologii - wybór na Nowe Stulecie, Agencja Reklamowo-Wydawnicza A. Grzegorczyk, Warszawa<br>4. Kawecka B., Eloranta P.N. 1994. Zarys ekologii glonów i środowisk śródlądowych. PWN, Warszawa<br>5. Kronenberg J., Bergier T. (red.) 2010. Wyzwania zrównoważonego rozwoju w Polsce, Fundacja Sendzimira, ISBN 978-83-62168-00-2<br>6. Lampert W., Sommer U. 1996. Ekologia wód śródlądowych, Wyd. PWN, Warszawa<br>7. Trojan P. 1975. Ekologia ogólna, Wyd. PWN, Warszawa |
| Supplementary literature | - |
| eResources addresses | |

## Example issues/ example questions/ tasks being completed

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## Work placement

Not applicable

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