University of Gdańsk

Subject card

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|---|---|---|---|
| Subject name and code | Recultivation and Renaturalization of Water - laboratory classes, PG_00201456 | | |
| Field of study | Water Management and Protection of Water Resources | | |
| Date of commencement of studies | October 2026 | Academic year of realisation of subject | 2028/2029 |
| Education level | Bachelor's studies | Subject group | Obligatory subject group in the field of study<br>Subject group related to practical vocational preparation |
| Mode of study | full-time studies | Mode of delivery | at the university |
| Year of study | 3 | Language of instruction | Polish |
| Semester of study | 6 | ECTS credits | 1.0 |
| Learning profile | practical | Assessment form | credit |
| Conducting unit | Centrum Monitoringu i Ochrony Wód -> Faculty of Oceanography and Geography -> Rector | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | prof. dr hab. inż. Julita Dunalska | |
| | Teachers | | |

**Lesson types**

| Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
|---|---|---|---|---|---|---|
| Number of study hours | 0.0 | 0.0 | 15.0 | 0.0 | 0.0 | 15 |

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 | 15 | 1.0 | 9.0 | 25 |

**Subject objectives**

Acquiring the ability to select appropriate restoration and rehabilitation techniques to suit individual morphometric and catchment characteristics of water bodies.

## Learning outcomes

| Course outcome | Subject outcome | Method of verification |
|---|---|---|
| [GWOZWL3-U03] The student has the ability observe and describe the changes taking place in water management and predict further directions of its development as well as conduct a critical analysis of case studies of problems of water management and protection of water resources in terms of impact on ecological, social and economic systems; natural valorization and assessment of quality of the environment. | Student acquires the ability to observe and describe changes occurring in water management and predicts further directions of its development. He/she is able to carry out a critical analysis of the environmental data obtained and, on the basis of this data, plan restoration and technical renaturalization methods adapting them to the individual characteristics of the water body in order to protect water resources. | [SU2] presentation/project/paper/ report |
| [GWOZWL3-K06] The student has the ability an informed and reliable assessment of the impact of humans on the aquatic environment. | In planning activities, demonstrates an attitude of informed and reliable assessment of the impact of human activities on the aquatic environment. | [SK1] oral statement/conversation/ discussion |
| [GWOZWL3-W05] The student has advanced knowledge and understanding of assumptions of the ecosystem approach to management of the environment and human activities in the environment as well as the development directions in the field of applied solutions and scientific research for the protection and restoration of water resources in selected divisions of the national economy. | Is familiar with developments in methods to protect and restore water resources. | [SW2] presentation/project/paper/ report<br>[SW5] implementation of a problem task |

## Subject contents

- Concept of modern water restoration according to Nature-Based Solutions and Circular Economy.- Basic principles for the design of restoration and renaturalization measures - implementation steps, risks.

## Prerequisites and co-requisites

## Assessment methods and criteria

| Subject passing criteria | Passing threshold | Percentage of the final grade |
|---|---|---|
| project presentation | 51.0% | 100.0% |

## Recommended reading

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|---|---|
| Basic literature | - Dunalska J.A. 2019. Rekultywacja jezior teoria i praktyka. Wyd. PAN, Warszawa.<br><br>- Kajak Z. 2001. Hydrobiologia limnologia. Ekosystemy wód śródlądowych. Wyd. PWN<br><br>- Biedroń I., Brzuska P., Dondajewska-Pielka R., Furdyna A., Gołdyn R., Grygoruk M., Grześkowiak A., Horska-Schwarz S., Jusik S., Kłósek K., Krzymiński W., Ligęza J., Łapuszek M., Okrasiński K., Pawlaczyk P., Przesmycki M., Popek Z., Szałkiewicza E., Suska K., Żak J. 2020. Renaturyzacja wód. Podręcznik dobrych praktyk renaturyzacji wód powierzchniowych. Kraków. PDF.<br><br>- Klapper H. 2003. Technologies for lake restoration. J. Limnol., 62(1): 73-90. |
| Supplementary literature | - Dunalska J. 2014. Zagrożenia związane z rekultywacją jezior. Mat. Konf. Problemy rekultywacji jezior ze szczególnym uwzględnieniem Jeziora Suskiego, 15-16 maja, Bałoszyce. |
| eResources addresses | |

## Example issues/ example questions/ tasks being completed

## Work placement

Not applicable

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