University of Gdańsk

Subject card

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| Subject name and code | Hydrographic Research Methods - field classes, PG_00201444 | | | | | | |
| Field of study | Water Management and Protection of Water Resources | | | | | | |
| Date of commencement of studies | October 2027 | | 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 | 2 | | Language of instruction | | Polish | | |
| Semester of study | 4 | | ECTS credits | | 1.0 | | |
| Learning profile | practical | | Assessment form | | credit | | |
| Conducting unit | Laboratory of Limnology -> Department of Hydrology -> Faculty of Oceanography and Geography -> Rector | | | | | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | | dr Kamil Nowiński | | | | |
| | Teachers | | | | | | |
| Lesson types | Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
| | Number of study hours | 0.0 | 15.0 | 0.0 | 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 | To learn practical methods of measuring hydrographic objects and interpreting measurement results.Identifying the relationship between hydrographic objects and their surroundings.Acquiring practical skills in hydrographic mapping. | | | | | | |

## Learning outcomes

| Course outcome | Subject outcome | Method of verification |
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| [GWOZWL3-W04] research techniques, methods and tools currently used in water management and the protection of water resources, in both the natural and social sciences, including basic statistical and IT tools enabling the description, modelling and interpretation of data concerning phenomena and processes occurring in the aquatic environment, as well as tools for describing relationships within socio-ecological systems. | The student knows and understands basic terminology and processes related to the existence of hydrographic objects; knows basic research techniques and methods to describe, interpret and explain the relationships between the various natural phenomena that determine the functioning of hydrographic objects | [SW1] oral statement/ conversation/discussion<br>[SW2] presentation/project/paper/ report |
| [GWOZWL3-U01] make basic observations of processes and phenomena occurring in the hydrosphere and carry out basic measurements of selected processes of water purification on a laboratory scale. | The student is able to select appropriate procedures, research tools and methods in order to carry out independent measurements of basic phenomena and processes occurring in the aquatic environment | [SU2] presentation/project/paper/ report<br>[SU6] demonstration of practical skills |
| [GWOZWL3-U16] demonstrate creativity in working independently and in team, taking on a variety of roles, including a leadership role. | Can plan and organize the correct execution of work<br>Individual and group work. Using original methods, he is able to solve problems that arise during the implementation of tasks. When carrying out group work, he takes on different roles in the group. Asking and discussing, he completes gaps in knowledge and clarifies problems with the interpretation of natural phenomena | [SU1] oral statement/conversation/ discussion<br>[SU6] demonstration of practical skills<br>[SU8] observation of student's independent or team work |
| [GWOZWL3-K05] take responsibility for the safety of his own work and that of others, dealing with emergencies, exercising caution in the laboratory and in the field, responsibility for entrusted equipment and apparatus. | The student is ready to work and cooperate in a group, being aware of the responsibility for his actions and taking into account the common good.<br>He observes safety rules and is ready to bear<br>responsibility for his own safety and the safety of others both during<br>performing chamber work and during field work. Taking part in team and individual field work the student demonstrates<br>responsibility for their correct and safe execution and care for the entrusted equipment and work safety | [SK8] observation of student's independent or team work |

## Subject contents

1. morphometric measurements of lakes and rivers.2. measurements of water level fluctuations of surface and groundwater.3. Measurements of the capacity of groundwater outflows and flow rates of watercourses. 4. measurements of physical and chemical properties of waters.5. measurements of vertical elements of the water cycle.6. Hydrographic mapping and analysis of the hydrographic structure of the catchment area.7. Development and interpretation of measurement results.

## Prerequisites and co-requisites

## Assessment methods and criteria

| Subject passing criteria | Passing threshold | Percentage of the final grade |
|---|---|---|
| Conducting field research and interpreting and presenting the results (written and oral) | 51.0% | 100.0% |

## Recommended reading

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| Basic literature | Gutry-Korycka M., Werner-Więckowska H., 1996, Guide to hydrographic field surveys, Wyd. Nauk. PWN, Warsaw, 276 p.Lange W. (ed.), 1993, Methods of limnological research, UG, Gdansk, Poland,GIS-3 Technical Guidelines, Hydrographic Map of Poland - scale 1:50,000, 2005, GUGiK, Warsaw.Pasławski Z., 1973, Methods of river hydrometry, PIHM Instructions and Manuals No. 115, Wyd. Komunikacji i Łączności, Warsaw. |

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| | Supplementary literature | - |
| | eResources addresses | |
| Example issues/ example questions/ tasks being completed | | |
| Work placement | Not applicable | |

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