University of Gdańsk

Subject card

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| Subject name and code | Hydrology - field classes, PG_00201411 | | |
| Field of study | Water Management and Protection of Water Resources | | |
| Date of commencement of studies | October 2027 | Academic year of realisation of subject | 2027/2028 |
| 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 | 1 | Language of instruction | Polish |
| Semester of study | 2 | ECTS credits | 2.0 |
| 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 Wojciech Maślanka | |
| | Teachers | | |

**Lesson types**

| Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
|---|---|---|---|---|---|---|
| Number of study hours | 0.0 | 30.0 | 0.0 | 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 | 1.0 | 19.0 | 50 |

**Subject objectives**

Understanding the causes and geographical conditions of water circulation in nature.

Spatial differentiation of hydrosphere objects and their characteristics.

Understanding the human impact on shaping the hydrosphere.

Learning the sources of hydrological information.

| Learning outcomes | Course outcome | Subject outcome | Method of verification |
|---|---|---|---|
| | [GWOZWL3-W01] in advanced basic biological, physical and chemical processes and phenomena, as well as analyzes their mutual relations and course in relation to natural environment and socio-ecological systems. | K_W01 Knows and understands physical, chemical and biological processes and phenomena occurring in the aquatic environment. It examines mutual relationships and the course of these processes and phenomena in relation to the natural environment i anthropogenic. | [SW5] implementation of a problem task |
| | [GWOZWL3-U15] by solving in groups the assigned problem situations, is able to appropriately set priorities to achieve task defined by themselves or others. | K_U15 Is able to work in a group, divide tasks appropriately in such a way that: achieve the intended goal. | [SU5] implementation of a problem task<br>[SU8] observation of student's independent or team work |
| | [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. | K_U01 Is able to properly observe the processes and phenomena taking place in the aquatic environment. Is able to make basic selected measurements processes and phenomena. Familiarizes himself with laboratory water analysis techniques | [SU5] implementation of a problem task |
| | [GWOZWL3-U02] select and independently apply basic research techniques and tools, with adhering to established analytical procedures in the field of environmental research in water management, adequately to the considered research problem. | K_U02 Using his knowledge, he can choose appropriate techniques and tools used in field and laboratory research with behavior established procedures for testing the aquatic environment, appropriate to the one discussed research issues. | [SU5] implementation of a problem task |
| | [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. | K_K05 Performs tasks conscientiously, taking responsibility for the entrusted person research equipment and apparatus. Works in the field and in the laboratory carefully maintaining occupational safety standards. He can adequately respond in emergency situations. | [SK8] observation of student's independent or team work |
| | [GWOZWL3-U16] demonstrate creativity in working independently and in team, taking on a variety of roles, including a leadership role. | K_U16 Is able to plan and organize work, can work independently, but also in teamwork, depending on current needs resulting from the implementation of the task can assume various roles, including skill group management | [SU5] implementation of a problem task<br>[SU8] observation of student's independent or team work |

<table>
<tr><td>Subject contents</td><td>Exercise issues<br><br>Familiarization with hydrographic objects in the field and the ability to identify them independently<br><br>Flow measurement using various methods<br><br>Recognizing the types of groundwater outflows and measuring their efficiency<br><br>Measurement of groundwater level<br><br>Hydrographic mapping<br><br>Morphometry and bathymetry of lakes<br><br>Study of the basic physical and chemical characteristics of surface and groundwater<br><br>Elements of water management<br><br>Threats and counteracting pollution of the water environment<br><br>Interpretation of the hydrographic map of Poland at a scale of 1:50,000<br><br>Concept and implementation of problem work in the field of hydrology and water management, and presentation of the obtained results - group work</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>Completion of lecture and exercises in the field of hydrology and oceanography.<br><br>Knowledge of: physical geography, mathematics and statistics</td></tr>
<tr><td>Assessment methods and criteria</td><td><table><tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr><tr><td>completion of final work</td><td>51.0%</td><td>100.0%</td></tr></table></td></tr>
<tr><td>Recommended reading</td><td>Basic literature</td><td>A. Literature required for the final pass of the course:<br><br>Bajkiewicz-Grabowska E., Mikulski Z., 2002, Guide to exercises in general hydrology, PWN, Warsaw.<br><br>Drwal J., Gołębiewski R., Lange W., 1975, Borucinka River Basin as an example of a representative catchment area of the Kashubian Lake District, Zesz. Science. Department BiNOZ UG, Geography 3.<br><br>Gutry-Korycka M., Werner- Więckowska H., 1989, Guide to hydrographic field research, PWN, Warsaw. Development instructions hydrographic map of Poland, 1964, Document. Geogr. IG PAN. A.2.</td></tr>
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| | Supplementary literature | B. Additional literature:<br><br>Pociask-Karteczka J., (ed.), 2003, Catchment area, properties and processes, UJ IGiGP, Kraków. Terrain Information System,<br><br>Hydrographic Map of Poland, scale 1:50,000 in analog and numerical form, Technical Guidelines K-3.4, 1997, GUGiK, Warsaw.<br><br>Technical guidelines K 3-4. Hydrographic map on a scale of 1: 50,000, 1985, Warsaw |
| | eResources addresses | |
| Example issues/ example questions/ tasks being completed | Development of a hydrographic map of a river or lake catchment<br><br>Independent performance of flow measurements and their calculation<br><br>Measurements of physical and chemical parameters of lake waters and their interpretation<br><br>Independent research project in the field of hydrology, using the instruments learned | |
| Work placement | Not applicable | |

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