

**Subject card**

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| <b>Subject name and code</b>                       | Role and operations of national meteorological and hydrological services, PG_00091516  |   |  |  |                |   |            |
| <b>Field of study</b>                              | Water Management and Protection of Water Resources   |   |  |  |                |   |            |
| <b>Date of commencement of studies</b>             | October 2024   |   | <b>Academic year of realisation of subject</b> |  |                | 2025/2026   |            |
| <b>Education level</b>                             | undergraduate studies  |   | <b>Subject group</b>                           |  |                | Obligatory subject group in the field of study<br>Subject group related to practical vocational preparation |            |
| <b>Mode of study</b>                               | full-time studies  |   | <b>Mode of delivery</b>                        |  |                | at the university   |            |
| <b>Year of study</b>                               | 2  |   | <b>Language of instruction</b>                 |  |                | Polish  |            |
| <b>Semester of study</b>                           | 4  |   | <b>ECTS credits</b>                            |  |                | 1.0   |            |
| <b>Learning profile</b>                            | practical  |   | <b>Assessment form</b>                         |  |                |   |            |
| <b>Conducting unit</b>                             | Pracownia Badań Klimatu -> Katedra Oceanografii Fizycznej i Badań Klimatu -> Faculty of Oceanography and Geography   |   |  |  |                |   |            |
| <b>Name and surname of lecturer (lecturers)</b>    | <b>Subject supervisor</b>  |   | dr Janusz Filipiak                             |  |                |   |            |
|  | <b>Teachers</b>  |   |  |  |                |   |            |
| <b>Lesson types</b>                                | <b>Lesson type</b>   | <b>Lecture</b>  | <b>Tutorial</b>                                | <b>Laboratory</b>                          | <b>Project</b> | <b>Seminar</b>  | <b>SUM</b> |
|  | <b>Number of study hours</b>   | 15.0  | 0.0  | 0.0  | 0.0            | 0.0   | 15         |
|  | E-learning hours included: 0.0   |   |  |  |                |   |            |
| <b>Learning activity and number of study hours</b> | <b>Learning activity</b>   | <b>Participation in didactic classes included in study plan</b> |  | <b>Participation in consultation hours</b> |                | <b>Self-study</b>   | <b>SUM</b> |
|  | <b>Number of study hours</b>   | 15  |  | 5.0  |                | 10.0  | 30         |
| <b>Subject objectives</b>                          | To learn the main principles of the organization of the network of meteorological and hydrological measurements and observations and the functioning of the Polish National Hydrological and Meteorological Service. |   |  |  |                |   |            |

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| Learning outcomes   | Course outcome  | Subject outcome  | Method of verification  |
|   | [GWOZWL3-W03] organization and legal basis of environment protection, nature protection and water management, as well as the principles of organization and operation of hydrological and meteorological services and the basics of Integrated Environmental Monitoring   | P6U_W ,P6S_WG  | [SW4] test/exam - oral or written   |
|   | [GWOZWL3-U07] use literature and other available sources of information, including information technology, multimedia, Internet, databases, and select and critically evaluate information  | P6U_U , P6S_UW   | [SU5] implementation of a problem task                                      |
|   | [GWOZWL3-U04] distinguish between objectives, analyze and evaluate modern strategies for managing environment especially in the context of ecosystem approach to managing human activities in the environment with taking into account relevant law regulations and the indication of administrative bodies responsible for the management of waters and the protection of water resources  | P6U_U , P6S_UW   | [SU4] test/exam - oral or written<br>[SU5] implementation of a problem task |
| [GWOZWL3-K03] systematic further education and professional development, updating and expand their knowledge and skills, understands the limitations of his own knowledge in the context of civilization progress and recognizes authorities in the professional and scientific environment | P6S_KK  | [SK5] implementation of a problem task   |   |
| Subject contents  | A.1. Basic information on the history of meteorological and hydrological measurements and observations in Poland.<br>A.2 Legal basis, structure and tasks of the State Hydrological and Meteorological Service.<br>A.3. Organization of the system of hydrological and meteorological measurements in Poland and its basic components.<br>A.4. Distribution of information on meteorological and hydrological phenomena.<br>A.5. Representativeness of the meteorological station, homogeneity of measurement data, data quality control. Organization of measurement networks<br>A.6 Metadata. |  |   |
| Prerequisites and co-requisites   |   |  |   |
| Assessment methods and criteria   | Subject passing criteria  | Passing threshold  | Percentage of the final grade   |
|   | realization of the problem task   | 51.0%  | 20.0%   |
|   | obtaining a passing grade on the written test in accordance with the UG Academic Regulations.   | 51.0%  | 80.0%   |
| Recommended reading   | Basic literature  | A.1. used during the class<br>Ustawa Prawo Wodne.<br>WMO, 2023-2024, Guide to Meteorological Instruments and Methods of Observation, WMO No. 8, Genewa.<br>WMO, 2013, Guide to Global Observing System, WMO No. 488, Genewa.<br><br>A.2. studied independently by the student<br>Ehinger J., 1993, Siting and Exposure of Meteorological Instruments, WMO No. 589 (IOM Report No. 55), Genewa. |   |

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|  | Supplementary literature | <p>IMGW, 1999, System Monitoringu i Osłony Kraju, IMGW, Warszawa.</p> <p>IMGW-PIB, 2014, Instrukcja dla stacji meteorologicznych, IMGW-PIB, Warszawa.</p> <p>WMO, 2003, Meteorological systems for hydrological purposes, WMO No. 813, Genewa.</p> <p>WMO, 2012, Guide to Hydrological Practices, WMO No. 168, Genewa.</p> <p>WMO, 2018, Guide to Climatological Practices, WMO No. 100, Genewa.</p> <p>WMO, 2024, Manual on WIGOS, WMO No. 1160, Genewa.</p> <p>WMO, 2024, Guide to WIGOS, WMO No. 1165, Genewa.</p> |
|  | eResources addresses     | Adresy na platformie eNauczenie:  |
| Example issues/<br>example questions/<br>tasks being completed |                          |   |
| Work placement   | Not applicable           |   |

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