



Subject card

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| Subject name and code | , PG_00061708 | | | | | | |
| Field of study | Environmental Engineering | | | | | | |
| Date of commencement of studies | October 2026 | Academic year of realisation of subject | | | | 2026/2027 | |
| Education level | second-cycle studies | Subject group | | | | Obligatory subject group in the field of study Subject group related to scientific research in the field of study | |
| Mode of study | Part-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 | general academic profile | Assessment form | | | | assessment | |
| Conducting unit | Department of Environmental Engineering Technology -> Faculty of Civil and Environmental Engineering -> Faculties of Gdańsk University of Technology | | | | | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | dr inż. Karolina Fitobór | | | | | |
| | Teachers | | | | | | |
| Lesson types | Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
| | Number of study hours | 15.0 | 10.0 | 0.0 | 0.0 | 0.0 | 25 |
| | 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 | 25 | 3.0 | 52.0 | 80 | | |
| Subject objectives | Presentation of issues and processes related to the sustainable development of environmental elements (soil, water, air, landscape), their protection, monitoring and restoration. | | | | | | |
| Learning outcomes | Course outcome | Subject outcome | | | | Method of verification | |
| | K7_W07 | Student has in-depth, well-structured, theoretically based knowledge of municipal management, including water and wastewater treatment processes, air protection technologies and land reclamation. | | | | [SW3] Assessment of knowledge contained in written work and projects [SW2] Assessment of knowledge contained in presentation [SW1] Assessment of factual knowledge | |
| | K7_W03 | Student has in-depth, well-structured and theoretically based knowledge related to measurement, management, monitoring of the environment, as well as methods of protection and remediation of its elements. | | | | [SW3] Assessment of knowledge contained in written work and projects [SW2] Assessment of knowledge contained in presentation [SW1] Assessment of factual knowledge | |
| | [K7_U01] can obtain information from literature, databases and other sources; can integrate the obtained information, interpret and critically evaluate them, draw conclusions, and formulate and comprehensively justify the opinions | Student is able to obtain information from literature, databases and other sources; can combine the obtained information, interpret it and critically evaluate it, as well as draw conclusions, formulate opinions and fully justify them. | | | | [SU5] Assessment of ability to present the results of task [SU4] Assessment of ability to use methods and tools [SU3] Assessment of ability to use knowledge gained from the subject [SU2] Assessment of ability to analyse information | |
| | K7_U07 | Student is able to plan and conduct a laboratory test, field research or computer simulations leading to the assessment of the effectiveness of the solutions used in environmental engineering. | | | | [SU5] Assessment of ability to present the results of task [SU4] Assessment of ability to use methods and tools [SU3] Assessment of ability to use knowledge gained from the subject [SU1] Assessment of task fulfilment | |

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| Subject contents | <p>Course content – lecture Presentation of the characteristics and methods of protection of particular environmental elements (protection of soil, water, air).</p> <p>Presentation of problems and challenges in monitoring and micropollutants removal from the environment emitted as a result of civilization development.</p> | | |
| Prerequisites and co-requisites | knowledge in the field of environmental chemistry, environmental protection, green technologies, environmental monitoring, water and wastewater technology, air protection and monitoring | | |
| Assessment methods and criteria | Subject passing criteria | Passing threshold | Percentage of the final grade |
| | tutorials | 60.0% | 40.0% |
| | lectures | 60.0% | 60.0% |
| Recommended reading | Basic literature | <p>Bukowski Z., Malina G.: Praktyczne aspekty rekultywacji, rewitalizacji i remediacji. Wydawnictwo Uniwersytetu Kazimierza Wielkiego w Bydgoszczy, Bydgoszcz 2019.</p> <p>Lewandowski W., Aranowski R.: Technologie ochrony środowiska w przemyśle i energetyce. Wydawnictwo Naukowe PWN, Warszawa 2016.</p> <p>Dobrzańska B., Dobrzański G., Kielczewski D.: Ochrona środowiska przyrodniczego. Wydawnictwo Naukowe PWN, Warszawa 2012.</p> | |
| | Supplementary literature | <p>Wójcik J.: Antropogeniczne zmiany środowiska przyrodniczego Ziemi. Wydawnictwo Naukowe PWN, Warszawa 2021.</p> <p>Naumczyk J.: Chemia środowiska. Wydawnictwo Naukowe PWN, Warszawa 2017</p> <p>Chelmicki W.: Woda. Zasoby, degradacja, ochrona. Wydawnictwo Naukowe PWN, Warszawa 2012.</p> <p>Wielgosiński G., Zarzycki R.: Technologie i procesy ochrony powietrza. Wydawnictwo Naukowe PWN, Warszawa 2018.</p> | |
| | eResources addresses | | |
| Example issues/ example questions/ tasks being completed | <p>Lectures:</p> <p>List the main components and pollutants of air.</p> <p>List the anthropogenic factors that cause soil erosion and suggest methods of protecting soil against erosion.</p> <p>Tutorials:</p> <p>Present/discuss the technology enabling active protection of a selected element of the environment.</p> | | |
| Practical activities within the subject | Not applicable | | |

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