



Subject card

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| Subject name and code | Chemistry I, PG_00043528 | | | | | | |
| Field of study | Environmental Engineering | | | | | | |
| Date of commencement of studies | October 2020 | Academic year of realisation of subject | | | 2020/2021 | | |
| Education level | first-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 | Full-time studies | Mode of delivery | | | at the university | | |
| Year of study | 1 | Language of instruction | | | Polish | | |
| Semester of study | 2 | ECTS credits | | | 5.0 | | |
| Learning profile | general academic profile | Assessment form | | | assessment | | |
| Conducting unit | Department of Environmental Engineering Technology -> Faculty of Civil and Environmental Engineering | | | | | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | dr inż. Karolina Fitobór | | | | | |
| | Teachers | dr inż. Karolina Fitobór inż. Krystyna Mierzejewska dr inż. Alina Wargin | | | | | |
| Lesson types and methods of instruction | Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
| | Number of study hours | 30.0 | 0.0 | 30.0 | 0.0 | 0.0 | 60 |
| | E-learning hours included: 0.0 | | | | | | |
| | Adresy na platformie eNauczanie: Chemia - laboratorium (semestr letni 2020/2021) - Moodle ID: 8444 https://enauzanie.pg.edu.pl/moodle/course/view.php?id=8444 Chemia - laboratorium (semestr letni 2020/2021) - Moodle ID: 8444 https://enauzanie.pg.edu.pl/moodle/course/view.php?id=8444 | | | | | | |
| | Additional information: E-course (E-nauczanie PG platform): https://enauzanie.pg.edu.pl/moodle/course/view.php?id=4207 https://enauzanie.pg.edu.pl/moodle/course/view.php?id=4334 | | | | | | |
| 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 | 60 | 5.0 | 40.0 | 105 | | |
| Subject objectives | Revision of the general chemistry and introduction to the chemistry of construction materials and environmental chemistry; knowledge and ability to perform chemical analyses (qualitative and quantitative tests of water and wastewater). | | | | | | |

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| Learning outcomes | Course outcome | Subject outcome | Method of verification |
| | [K6_U09] is able to use well-chosen methods and measuring devices that enable determination of basic parameters of the water treatment process and wastewater treatment; can perform simple laboratory tests leading to the assessment of water quality, pollutant load in sewage | Student is able to use properly selected methods and devices, and is able to perform simple laboratory tests. | [SU1] Assessment of task fulfilment [SU4] Assessment of ability to use methods and tools |
| | [K6_W03] has a structured and theoretically founded knowledge in the field of chemistry and biology, including knowledge necessary to understand the technological processes related to water treatment, wastewater treatment, waste management and sludge management | Student has in-depth and well-structured chemistry and biology knowledge, including the knowledge necessary to understand technological processes related to water and wastewater treatment, as well as waste and sludge management. | [SW1] Assessment of factual knowledge |
| Subject contents | Basic information of general chemistry (i.a.: constitution of matter, kinetics of chemical equations, stoichiometry, inorganic chemistry, physical chemistry), as well as the most important issues of chemistry of construction materials and environmental chemistry (with particular emphasis on water and wastewater chemistry). | | |
| Prerequisites and co-requisites | Ability to use the knowledge from lectures during laboratory classes. | | |
| Assessment methods and criteria | Subject passing criteria | Passing threshold | Percentage of the final grade |
| | Laboratory classes: course completion (tests, reports) | 60.0% | 40.0% |
| | Lectures: tests | 60.0% | 60.0% |
| Recommended reading | Basic literature | (All literature in Polish) | |
| | | <p>Lectures:</p> <p>Prejzner J.: <i>Chemia z elementami chemii środowiska</i>. Wydawnictwo Politechniki Gdańskiej, Gdańsk 1996.</p> <p>Czarnecki I., Broniewski T., Henning O.: <i>Chemia w budownictwie</i>. Wydawnictwo Arkady, Warszawa 2000.</p> <p>Bielański A.: <i>Podstawy chemii nieorganicznej</i>. Wydawnictwo Naukowe PWN, Warszawa 2010.</p> <p>Laboratory classes:</p> <p>Prejzner J.: <i>Laboratorium chemii ogólnej i sanitarnej</i>. Wydawnictwo Politechniki Gdańskiej, Gdańsk 1991. /oraz pozostałe wydania/</p> | |
| | Supplementary literature | (All literature in Polish) | |
| | | <p>Lectures:</p> <p>Kowal A.L., Świdorska Bróz M.: <i>Oczyszczanie Wody. Podstawy teoretyczne i technologiczne, procesy i urządzenia</i>. Wydawnictwo Naukowe PWN, Warszawa 2007.</p> <p>Laboratory classes:</p> <p>Prejzner J.: <i>Laboratorium chemii ogólnej i sanitarnej</i>. Wydawnictwo Politechniki Gdańskiej, Gdańsk 1991. /oraz pozostałe wydania/</p> | |

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| | eResources addresses | Chemia - laboratorium (semestr letni 2020/2021) - Moodle ID: 8444 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=8444 Chemia - laboratorium (semestr letni 2020/2021) - Moodle ID: 8444 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=8444 |
| Example issues/ example questions/ tasks being completed | Determinations and measurements of selected water components. | |
| Work placement | Not applicable | |