GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

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|---|---|---|---|
| Subject name and code | , PG_00048775 | | |
| Field of study | Green Technologies | | |
| Date of commencement of studies | October 2020 | Academic year of realisation of subject | 2023/2024 |
| Education level | first-cycle studies | Subject group | Obligatory subject group in the field of study<br>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 | 4 | Language of instruction | English |
| Semester of study | 7 | ECTS credits | 3.0 |
| Learning profile | general academic profile | Assessment form | assessment |
| Conducting unit | Faculty of Chemistry | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | dr hab. inż. Marek Tobiszewski | |
| | Teachers | dr hab. inż. Marek Tobiszewski | |

**Lesson types and methods of instruction**

| Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
|---|---|---|---|---|---|---|
| Number of study hours | 15.0 | 0.0 | 0.0 | 15.0 | 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 | 5.0 | 40.0 | 75 |

**Subject objectives**

The aim of the course is to familiarize the student with legal regulations and the monitoring system of various components of the environment.

**Learning outcomes**

| Course outcome | Subject outcome | Method of verification |
|---|---|---|
| [K6_W03] has a basic knowledge of soil, air and water pollutants, design and supervision of environmentally friendly technologies and technologies which do not produce waste, knows technology of cleaning and neutralization of industrial waste and wastewater management, has a basic understanding of the theoretical basis of methods and types of apparatus used in chemical analysis of environmental pollutants | Has knowledge of the use of standard procedures for the determination of environmental pollutants | [SW1] Assessment of factual knowledge |
| [K6_U04] capable of formulating and solving design tasks in the field of environmental technology to recognize their non-technical aspects, including environmental, economic and legal. Is capable of applying the principles of occupational health and safety. Is able to make initial assessment of engineering solutions and actions | Is able to design an environmental monitoring system to solve the assumed problem. | [SU2] Assessment of ability to analyse information |

**Subject contents**

1. introduction to environmental monitoring 2. sampling plans 3. Monitoring of the atmospheric air 4. Water monitoring 5. Monitoring the quality of the soil

**Prerequisites and co-requisites**

Completed courses in analytical chemistry and environmental chemistry.

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|---|---|---|---|
| Assessment methods and criteria | Subject passing criteria | Passing threshold | Percentage of the final grade |
| | project | 50.0% | 50.0% |
| | lecture | 50.0% | 50.0% |
| Recommended reading | Basic literature | Pobieranie próbek środowiskowych do analizy / Jacek Namieśnik, Jerzy Łukasik, Zygmunt Jamrógiewicz, 1995, Gdańsk | |
| | Supplementary literature | none | |
| | eResources addresses | Adresy na platformie eNauczanie: | |
| Example issues/ example questions/ tasks being completed | 1. What is the role of environmental monitoring?<br>2. What is the principle of PM10 and PM2.5 determination?<br>3. Describe the structure and main tasks of State Environmental Monitoring. | | |
| Work placement | Not applicable | | |