

## Subject card

| Subject name and code                       | , PG_00062177   |  |   |                                     |     |  |            |     |  |
|---|---|--|---|-------------------------------------|-----|--|------------|-----|--|
| Field of study                              | Recycling and Energy Recovery   |  |   |                                     |     |  |            |     |  |
| Date of commencement of studies             | October 2023  |  | Academic year of realisation of subject   |                                     |     | 2023/2024  |            |     |  |
| Education level                             | first-cycle studies   |  | Subject group   |                                     |     | Optional subject group<br>Humanistic-social subject group                |            |     |  |
| Mode of study                               | Full-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   |                                     |     | asses  | assessment |     |  |
| Conducting unit                             | Department Of Environmental Engineering Technology -> Faculty Of Civil And Environmental Engineering -> Wydziały Politechniki Gdańskiej               |  |   |                                     |     |  |            |     |  |
| Name and surname                            | Subject supervisor  | prof. dr hab. inż. Magdalena Gajewska                    |   |                                     |     |  |            |     |  |
| of lecturer (lecturers)                     | Teachers  |  | prof. dr hab. inż. Magdalena Gajewska   |                                     |     |  |            |     |  |
|   |   |  | mgr inż. Alicja Kupczyk   |                                     |     |  |            |     |  |
|   |   |  | dr hab. inż. Eliza Kulbat   |                                     |     |  |            |     |  |
|   | Lesson type   | sson type Lecture Tutorial Laboratory Project Seminar SU |   |                                     |     | SUM  |            |     |  |
| Lesson types and methods of instruction     | Number of study   | 20.0   | 20.0  | 0.0                                 | 0.0 |  | 0.0        | 40  |  |
|   | E-learning hours included: 0.0  |  |   |                                     |     |  |            |     |  |
| Learning activity and number of study hours | Learning activity   | Participation in<br>classes include<br>plan              |   | Participation in consultation hours |     | Self-study   |            | SUM |  |
|   | Number of study hours   | 40   |   | 0.0                                 |     | 0.0  |            | 40  |  |
| Subject objectives                          | Getting to know the meanings of the concepts: ecology and sustainable development, as well as the principles and goals of sustainable development.    |  |   |                                     |     |  |            |     |  |
| Learning outcomes                           | Course outcome  |  | Subject outcome   |                                     |     | Method of verification   |            |     |  |
|   | [K6_U71] is able to apply knowledge from humanistic, social, economic or legal sciences in order to solve problems in a social environment            |  | Can apply knowledge from the fields of humanities, social sciences, or economics to solve problems in the social environment."                        |                                     |     | [SU3] Assessment of ability to use knowledge gained from the subject     |            |     |  |
|   | [K6_K71] is conscious of the need to apply knowledge from humanistic, social, economic or legal sciences in order to function in a social environment |  | Is aware of the need to use knowledge from the fields of humanities, social sciences, economics, or law in functioning within the social environment. |                                     |     | [SK4] Assessment of communication skills, including language correctness |            |     |  |
|   | [K6_W71] has general knowledge<br>in humanistic, social, economic or<br>legal sciences  |  | Has general knowledge in the field of ecology or social and economic sciences   |                                     |     | [SW3] Assessment of knowledge contained in written work and projects     |            |     |  |

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| Subject contents                |   |   |                               |  |  |  |  |  |
|---------------------------------|---|---|-------------------------------|--|--|--|--|--|
|                                 | Introduction to Ecology:  |   |                               |  |  |  |  |  |
|                                 | Basic ecological concepts.     Structure and functions of ecosystems.   |   |                               |  |  |  |  |  |
|                                 | Ecology and Humans:   |   |                               |  |  |  |  |  |
|                                 | <ul> <li>The impact of human activity on the environment.</li> <li>Ecological issues related to urbanization, pollution, and climate change.</li> <li>Concepts of sustainable development.</li> <li>Principles and Goals of Sustainable Development:</li> <li>Analysis of sustainable development goals defined by the United Nations.</li> <li>Examples of actions for sustainable development worldwide.</li> </ul>   |   |                               |  |  |  |  |  |
|                                 |   |   |                               |  |  |  |  |  |
|                                 |   |   |                               |  |  |  |  |  |
|                                 | Global Ecological Challenges:   |   |                               |  |  |  |  |  |
|                                 | <ul> <li>Biodiversity conservation.</li> <li>Effects of climate change.</li> <li>Natural resource management.</li> </ul> Environmental Policy: <ul> <li>International and national aspects of environmental policy.</li> <li>Examples of successes and challenges in environmental protection.</li> </ul> Sustainable Lifestyle: <ul> <li>Environmental education.</li> <li>Adaptation and mitigation.</li> <li>Encouraging pro-environmental choices in daily life.</li> </ul> |   |                               |  |  |  |  |  |
|                                 |   |   |                               |  |  |  |  |  |
|                                 |   |   |                               |  |  |  |  |  |
|                                 |   |   |                               |  |  |  |  |  |
|                                 |   |   |                               |  |  |  |  |  |
| Prerequisites and co-requisites |   |   |                               |  |  |  |  |  |
| Assessment methods              | Subject passing criteria  | Passing threshold   | Percentage of the final grade |  |  |  |  |  |
| and criteria                    | exercised - task execution  | 55.0%   | 40.0%                         |  |  |  |  |  |
|                                 | lectures - test   | 55.0%   | 60.0%                         |  |  |  |  |  |
| Recommended reading             | Basic literature  | Małgorzata Lipińska-Rzeszutek, Mariusz KubiakWspółczesne bezpieczeństwo ekologiczne,(2017),   |                               |  |  |  |  |  |
|                                 |   | Wprowadzenie do ekologii biochemicznej,S. A. Ostroumow, (1992), Wydawnictwo: PWN  Droga do zrównoważonego rozwoju w Polsce w świetle założeń agendy2030, (2022) Barbara Hadryjańska |                               |  |  |  |  |  |
|                                 |   |   |                               |  |  |  |  |  |
|                                 | Supplementary literature  | https://sdgs.un.org/goals,  |                               |  |  |  |  |  |
|                                 |   |   |                               |  |  |  |  |  |
|                                 |   | https://www.imf.org/en/About/Factsheets/Sheets/2023/IMF-Sustainable-development-goals-SDGs  |                               |  |  |  |  |  |
|                                 | eResources addresses Adresy na platformie eNauczanie:   |   |                               |  |  |  |  |  |

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| Example issues/<br>example questions/<br>tasks being completed | What do you know about networks of protected areas in Europe?  |
|--|--|
|  | When did the first international actions and agreements on environmental protection take place, and what did they involve? |
|  | Discuss the key issues related to the protection of water resources?   |
|  | Why do air and atmospheric pollution have a global character?  |
|  | Explain the concept of sustainable development?  |
|  | Provide the goals of sustainable development?  |
|  | Explain the significance of the individual 17 sustainable development goals.   |
|  | What do the terms mitigation, adaptation mean provide examples?  |
| Work placement   | Not applicable   |

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