SUBJECT DATASHEET

Environmental Management

BMEGT42BX4U002-00

I. SUBJECT DESCRIPTION

1. SUBJECT DATA

Subject name
Environmental Management

ID (subject code)	BMEGT42BX4U002-00

Type of subject
contact unit

Course types and lessons

Type	*Lessons*
Lecture	2
Practice	0
Laboratory	0

Type of assessment
mid-term grade

Number of credits
3

Subject Coordinator

Name	*Position*	*Contact details*
Dr. Csuvár Ádám	assistant professor	csuvar.adam@gtk.bme.hu

Educational organisational unit for the subject
Department of Environmental Economics and Sustainability

Subject website
https://edu.gtk.bme.hu

Language of the subject
angol - EN

Curricular role of the subject, recommended number of terms

Direct prerequisites

Strong	None
Weak	None
Parallel	None
Exclusion	None

Validity of the Subject Description
Approved by the Faculty Board of Faculty of Economic and Social Sciences, Decree No: 580501/3/2025 registration number. Valid from: 2025.07.10.

2. OBJECTIVES AND LEARNING OUTCOMES

Objectives

The aim of the course is for students to provide a comprehensive understanding of the most pressing sustainability-related challenges and explore pathways leading to the creation of effective technical and managerial solutions. By integrating the principles and mindset of sustainable development into engineering training, the subject fosters a modern and responsible way of thinking that is essential for future engineering practices. Moreover, the course will enable students to apply sustainability principles across various business functions. Students will be able to understand how to embed sustainability goals into business strategies and operations.

Academic results

Knowledge

1. The student will comprehend the conceptual framework, the most important relationships, and main theories within the field of environmental management with a focus on microeconomic interpretation and organizational applications;
2. recognizes the role of sustainability in corporate operations and understand the framework of corporate social responsibility;
3. understands the roles and responsibilities of corporations in environmental protection and analyses the company's broader environment to implement environmental goals;
4. is able to apply problem-solving methods relevant to environmental management: including solutions related to externalities, analytical techniques, and decision-support methods at the microeconomic level (corporate environmental management tools);
5. familiarises with the basic economic, core business functions, legal aspects, and tools related to environmental management and is able to integrate sustainability principles into core business operations;
6. acquires comprehensive knowledge of fundamentals, limits, and requirements of the field of environmental protection;
7. knows the basic engineering challenges posed by climate change and explores the framework of effective interventions, including their potential impacts.

Skills

1. The student will be able to professionally express their perspective and put forward their arguments related to environmental protection problems;
2. identify environmental protection problems at the microeconomic level and plan a theoretical solution process using the appropriate corporate environmental management tools;
3. analyse environmental problems at the microeconomic level and find solutions by applying a systematic approach based on the PDCA-logic in accordance to international standards related to environment-oriented management;
4. explore, understand, interpret, and apply literature related to the field of environmental management;
5. employ the professional terminology of environmental management in both written and oral communication and understands the English equivalent of the related concepts;
6. understand the regional and global impacts of micro-level decisions.

Attitude

1. The student is open to learning about developments and innovation in the field of environmental management;
2. ready to adopt a way of thinking that requires a complex approach;
3. understands the broad scope of environmental issues and is willing to explore corporate-level practical solutions to tackle these issues using environmental management tools and methods;
4. open to cooperation and collaboration;
5. willing to apply the PDCA logic consistently both in thinking and decision making.

Independence and responsibility

1. The student independently analyses basic environmental management problems and explores effective solutions, based on given resources;
2. understands and applies the importance of collaboration and cooperation in solving environmental problems;
3. consistently applies a systematic approach in their decisions to address environmental management issues;

Teaching methodology

Theoretical lectures supported with practical exercises and case studies. Analysis of case studies (in the topic of environmental management and business sustainability) in groups.

Materials supporting learning

- S. Schaltegger, R. Burritt, H. Petersen (2003): An Introduction to Corporate Environmental Management - Striving for Sustainability, Routledge
- Sarkar, D., Datta, R., Mukherjee, A. and Hannigan, R. eds., 2015. An integrated approach to environmental management. John Wiley & Sons.
- Porter, M. and Van der Linde, C., 1995. Green and competitive: ending the stalemate. The Dynamics of the eco-efficient economy: environmental regulation and competitive advantage, 33, pp.120-134.
- Kriebel, D., Tickner, J., Epstein, P., Lemons, J., Levins, R., Loechler, E. L., Quinn, M., Rudel, R., Schettler, T., & Stoto, M. (2001). The precautionary principle in environmental science. Environmental health perspectives, 109(9), 871–876. https://doi.org/10.1289/ehp.01109871

- Zilahy, G., 2017. Environmental management systems—History and new tendencies.
- Chu, E.W. and Karr, J.R., 2013. Environmental impact, concept and measurement of. Encyclopedia of biodiversity, p.278.

II. SUBJECT REQUIREMENTS

TESTING AND ASSESSMENT OF LEARNING PERFORMANCE

General Rules

The assessment of the learning outcomes stated in point 2.2. is based on two summative assessments (mid-term exams).

Performance assessment methods

Detailed description of the performance evaluations carried out during the study period: summative assessment: a complex, written evaluation
method of the knowledge and ability-type competency elements of the subject in the form of a mid-term exam. The mid-term exam focuses
on the understanding and application of the acquired basic knowledge (concepts, definitions, characteristics of methodologies) and connections.

Percentage of performance assessments, conducted during the study period, within the rating

- **1st summative assessment**: 50
- **2nd summative assessment**: 50
- **Total**: 100

Percentage of exam elements within the rating

Conditions for obtaining a signature, validity of the signature

-

Issuing grades

Excellent	91
Very good	85–90
Good	70–84
Satisfactory	60–69
Pass	50–59
Fail	0-49

Retake and late completion

1) Pursuant to the current CoS, each summative assessment can be retaken, repeated or completed late. 2) The summative assessments can be retaken, repeated or completed late for the first time during the late completion period free of charge. In the event of a retake, the new result always overwrites the old one. 3) If the student is unable to obtain a grade other than 'Fail' even with the retake, repeat and late completion possibilities according to point 1), they may make a second attempt to successfully complete the course after paying the fee specified in the regulations.

Coursework required for the completion of the subject

Participation	24
Preparation for contact lesson	12
Preparation for summative assessment	26
Independent learning of designated written curriculum	28
Total	90

Approval and validity of subject requirements

Consulted with the Faculty Student Representative Committee, approved by the Vice Dean for Education, valid from: 07.07.2024.

III. COURSE CURRICULUM

THEMATIC UNITS AND FURTHER DETAILS

Topics covered during the term

In order to achieve the learning outcomes set out at point 2.2, the subject consists of the following thematic blocks. In the syllabi of the courses announced in each semester, these topics are scheduled according to the calendar and other conditions.

1 Environmental trends and the economic framework
2 Environmental risks and assessment
3 Corporate environmental strategy
4 Approaches to environmental protection
5 Environmental management systems (EMS)
6 Environmental performance evaluation
7 The use of environmental indicators
8 Framework of corporate social responsibility (CSR)
9 Environmental marketing
10 Sustainable consumer behavior and lifestyle
11 Sustainable business models

Additional lecturers

Dr. Csuvár Ádám egyetemi adjunktus / senior lecturer csuvar.adam@gtk.bme.hu

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