SUBJECT DATASHEET

Environmental Management

BMEGT42M411

I. SUBJECT DESCRIPTION

1. SUBJECT DATA

Subject name
Environmental Management

ID (subject code)	BMEGT42M411

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	senior lecturer	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
magyar - HU

Curricular role of the subject, recommended number of terms
Programme: **MSc in Environmental Engineering**
Subject Role: **Compulsory**
Recommended semester: **1**

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: 580439/11/2024 registration number. Valid from: 29.05.2024.

2. OBJECTIVES AND LEARNING OUTCOMES

Objectives

The aim of the course is to highlight that the activities of organisations ought to be managed through the system of processes, or, in other words, highlighting the process oriented approach. This approach may be applied for all processes, for management functions, in other words, to the entire PDCA cycle. The course unit aims to empower students to understand and to be capable the integration of environmental protection in the management functions.

Academic results

Knowledge

1. The student knows the organisational and motivational tools and methods relevant for leadership, and the legal framework defining their professional work;
2. knows the basics of labour, fire safety, security, IT, legal, economic and management basics related to environmental management systems, their boundaries and requirements;
3. knows the of the application of such methods, and the practical applicability of methods and their findings in organisational practice.

Skills

1. The student is competent in applying the generic and specific mathematical, natural science and social science principles, rules, internependencies and procedures in order to resolve problems arising in the domain of environmental protection;
2. is competent in the application of management tools and methods for the resolution of environmental problems and challenges;
3. is competent in the complex, intergrated resolution of problems and issues.

Attitude

1. They shall adopt the professional and ethical system of values required for environmental protection;
2. they shall strive to plan and execute their duties professionally, autonomously or in a working group;
3. they shall strive to perform their work with a system-oriented and process-oriented mindset, following a complex approach.

Independence and responsibility

1. During their decision-making, they shall respect workplace health and safety, technical, economic and legal regulations, as well as fundamental engineering ethics;
2. they shall take an initiator attitude in resolving environmental problems and conflicts, they shall uncover and reveal the shortcomings of applied techniques and technologies, the endemic risks in processes, and shall initiate mitigatory efforts in order to contain and reduce these;
3. feels responsible for taking greater account of environmental and social aspects.

Teaching methodology

Lectures, team work

Materials supporting learning

- Az oktató által rendelkezésre bocsátott előadásanyagok és egyéb tanulástámogató feladatok, erőforrások.
- Lecture slides and other study materials provided by the lecturer.

II. SUBJECT REQUIREMENTS

TESTING AND ASSESSMENT OF LEARNING PERFORMANCE

General Rules

The above (2.2) stated learning outcomes are evaluated on the basis of a mid-term exam, a case game with problem solving and an independent
task. 1. summative assessment of the competencies acquired during the semester (1 mid-term exam + case game with problem solving); 2.
and developing an independent task.

Performance assessment methods

Detailed description of performance evaluations during the study period: 1. Summative assessment: a complex, written evaluation of the content of the subject in the form of a mid-term exam. The purpose of the case game is to check the usage of the acquired knowledge
and the existence of competences. 2. Independent task: a complex evaluation method of the learning outcomes of the subject's knowledge,
ability, attitude, responsibility and independence, which shows how well the student acquired the knowledge, whether he has the skills and ability to solve the task independently, whether he was able to apply and evaluate knowledge in a creative way. The content of the independent task is determined by the instructor after discussion with the student. The framework and deadline for the independent assignment are determined by the instructor.

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

- **1st summative assessment**: 30
- **2nd summative assessment**: 30
- **formative assessment**: 40
- **total**: 100

Percentage of exam elements within the rating

Conditions for obtaining a signature, validity of the signature

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Issuing grades

Excellent	91
Very good	85-90
Good	70-84
Satisfactory	55-69
Pass	40–54
Fail	0-39

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. 4) Pursuant to the current CoS, in the case of formative assessments, if the assignment was submitted on time, it is possible to repeat or retake it before the end of the late completion period, if the original task has already been accepted by the instructor. 5) Formative assessments can be submitted late, subject to payment of the special procedure fee specified in the regulations. The latest date for late submission is the last day of the late completion period.

Coursework required for the completion of the subject

participation in contact classes	28
preparation for contact classes	12
preparation for summative assessments	10
preparation of the formative assessment	40
total	90

Approval and validity of subject requirements

Consulted with the Faculty Student Representative Committee, approved by the Vice Dean for Education, valid from: 06.05.2024.

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 Requirements of the subject and the topics of independent tasks. Basics: the tasks of management in the field of environmental protection.

2 The model of the organizational relationship system. The management environment of business organizations (company, institution, household) (the role and responsibility of the operating organization in achieving environmental goals).

3 Examination of the process of industrial metabolism material flow analysis, which enables the connection of macro- and micro-relationships.

4 The levels of Material Flow Accounting (MFA): international, national and regional, local (e.g. local governments, industrial ecosystems), and company site level.

5 Site (company) level of material flow analysis.

6 The relationship between ecosystem services, industrial ecology (ecosystem) and environmental management. Industrial ecology and sustainability, the goals of industrial ecology, the need for a multidisciplinary approach. Tool systems supporting the goals of industrial ecology.

7 Examples, case studies: procedures for identifying and evaluating environmental factors.

8 Examples, case studies: the relationship between life cycle assessment and eco-labelling.

9 Examples, case studies: environmental condition assessment (review) and management tasks of the unified environmental use authorization procedure, IPPC – BAT requirements.

10 Examples, case studies: basic tasks of local government environmental protection.

11 Examples, case studies: organizational experiences of system operation based on the ISO 50001 and ISO 14001 standards.

12 Examples, case studies: applicability and usability of SWOT analysis in environmental marketing.

Additional lecturers

Dr. Kósi Kálmán György címzetes egyetemi tanár / honorary professor kosi.kalman@gtk.bme.hu

Approval and validity of subject requirements