



# **SUBJECT DATASHEET**

## **Environmental Management Systems**

### **BMEGT42M413**

# I. SUBJECT DESCRIPTION

## 1. SUBJECT DATA

### **Subject name**

Environmental Management Systems

### **ID (subject code)**

BMEGT42M413

### **Type of subject**

contact unit

### **Course types and lessons**

<i>Type</i>	<i>Lessons</i>
Lecture	1
Practice	1
Laboratory	0

### **Type of assessment**

mid-term  
grade

### **Number of credits**

3

### **Subject Coordinator**

<i>Name</i>	<i>Position</i>	<i>Contact details</i>
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Dr. Csuvár Ádám	senior lecturer	csuvar.adam@gtk.bme.hu
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### **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 for the specialisation**

Recommended semester: **2**

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### **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 unit is to introduce the benefits and underlying opportunities of the implementation of system-oriented management in the environmental protection efforts of businesses.

### Academic results

#### Knowledge

1. The student knows the structural elements of environmental management systems;
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, interdependencies and procedures in order to resolve problems arising in the domain of environmental protection;
2. is competent in the design and operation of environmental management systems;
3. is competent in the design and operation of integrated systems.

#### 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

participating in contact classes	28
preparing for contact classes	12
preparation for summative assessments	10
preparation of the summative 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 Self-regulation and environmental management. Interpretation of the environmental management system.
- 2 Expected (expected) benefits from operating the system. The Responsible Care program. Standardization background (national system standards).
- 3 The European Union's environmental management and certification (EMAS) system. Content and requirements of the regulation.
- 4 The ISO 14000 family of standards. Energy management system. The system of sustainable event management.
- 5 The goal of system construction according to the ISO 14001 standard. Basic elements of an environment-oriented management system.
- 6 Essential differences in the requirements imposed by the EMAS and ISO 14001 standards during system construction.
- 7 Planning tasks of system construction. The role and importance of environmental factors during system construction and operation.
- 8 System construction tasks of introduction and operation.
- 9 System building tasks of control and management review.
- 10 Integrated systems in the practice of economic organizations.
- 11 Auditing and certification (authentication) of the environmental management (environmental management, environmental management and certification) system. Certification of the EMAS system.
- 12 Auditing and certification (authentication) of the environmental management (environmental management, environmental management and certification) system. ISO 14001 system certification.

### Additional lecturers

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

### Approval and validity of subject requirements