SUBJECT DATASHEET

ENVIRONMENTAL PERFORMANCE EVALUATION

BMEGT42MN21

I. SUBJECT DESCRIPTION

1. SUBJECT DATA

Subject name
ENVIRONMENTAL PERFORMANCE EVALUATION

ID (subject code)	BMEGT42MN21

Type of subject
contact lesson

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. Zilahy Gyula	full professor	zilahy.gyula@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; angol - ENG

Curricular role of the subject, recommended number of terms
Programme: **Engineering Manager MSc - Environmental Management specialisation for students starting from 2016/17/Term 1**
Subject Role: **Compulsory for the specialisation**
Recommended semester: **0**

Programme: **Engineering Manager Msc - Environmental management specialisation**
Subject Role: **Elective for the specialisation**
Recommended semester: **0**

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: 581046/15/2021. Valid from: 24.11.2021.

2. OBJECTIVES AND LEARNING OUTCOMES

Objectives

The aim of the subject is to familiarize the student with the techniques and methods related to environmental performance evaluation. The subject presents the macro-level methods of performance evaluation, and their necessity and goals in corporate application, as well as the applicability of individual methods and results in corporate practices.

Academic results

Knowledge

1. The student knows the concept system related to the field of management, the most important related concepts and theories.
2. The student knows the role of sustainability in the operation of organizations.
3. The student knows the tasks of the management related to the field environmental protection (the corporation and their environment – the role and responsibility of the corporation regarding the implementation of environmental goals).
4. The student knows the problem-solving methods related to environmental management, the solutions related to externalities, and the micro level analysis and decision supporting methods (corporate environmental management tools).
5. The student knows the basic economic, business related and legal regulations and tools related to the management of organizations

Skills

1. The student is able to employ the obtained general and specific management knowledge, tools and methods in order to solve problems in the field of environmental protection.
2. The student is able to think systematically, and to use a PDCA- or process management based approach.

Attitude

1. The student accepts the professional and ethical values related to the field of environmental protection and is open to learning about the developments and innovations in the field
2. The student aims to plan and implement their independent- or group tasks on a high professional level.
3. The student aims to perform their work with a complex, process-oriented and systematic approach.
4. Based on the above mentioned points, the student is open for cooperation.

Independence and responsibility

1. The student takes occupational health and safety, technological, economic and legal regulations and basic principles of engineering ethic into account during their decisions, and is capable of independent problem-solving.
2. The student takes initiative in the solving of environmental protection related problems, reveals the shortcomings of the applied technologies and the threats related to the applied processes. Furthermore, the student instigates the preformation of measures aimed to mitigate these.

Teaching methodology

Lectures, where case studies are presented after the theoretic lecture.

Materials supporting learning

- Kósi Kálmán – Valkó László (szerk.): Környezetmenedzsment. Typotex Kiadó, Budapest, 2006.
- Bartus Gábor – Szalai Ákos: Környezet, jog, gazdaságtan. Környezetpolitikai eszközök, környezet-gazdaságtani modellek és joggazdaságtani magyarázatok. Pázmány Press, Budapest, 2014.
- Az előadások diasora. – Slideshows of the lectures.

II. SUBJECT REQUIREMENTS

TESTING AND ASSESSMENT OF LEARNING PERFORMANCE

General Rules

The evaluation of the learning outcomes stated above (2.2) occurs through two written midterm examinations (summative assessments)

Performance assessment methods

A. The detailed description of the evaluation of learning outcomes during the study period 1. summative assessment: the complex written
evaluation method of the subject, and the competence elements of knowledge, attitude and self-reliance and accountability through a midterm exam. The exam focuses on the attained basic knowledge (concepts, definitions, characteristics of different methodologies) as well as the understanding and application of related concepts. The duration of the exam amounts to 45 minutes.

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

- **1. summative assessment**: 50%
- **2. summative assessment**: 50%
- **total**: 100%

Percentage of exam elements within the rating

Conditions for obtaining a signature, validity of the signature

Issuing grades

Excellent	90
Very good	80–90
Good	70–79
Satisfactory	60–69
Pass	40–59
Fail	40

Retake and late completion

1) The late completion of the individual assessments is possible, as specified in the CoS. 2) The summative assessment can be repeated or completed in a delayed manner in an aggregate manner in the late completion period (for the first time, free of charge). In case of repeating, the better result is taken into account. 3) In case the student did not earn a grade better than a Fail with the repeat described in 2), upon payment of the fee specified in the Code, the student can attempt a second aggregated retake.

Coursework required for the completion of the subject

participation in contact lessons	14×2=28
preparation for assessments	2×21=42
independent studying of study materials	20
total	90

Approval and validity of subject requirements

0

III. COURSE CURRICULUM

THEMATIC UNITS AND FURTHER DETAILS

Topics covered during the term

Subject includes the topics detailed in the course syllabus to ensure learning outcomes listed under 2.2. can be achieved. Timing of the topics may be affected by calendar or other circumstances in each semester

1 The goal and methods of the course. Basics: material flow analysis, process management, PDCA cycle based flow analysis.

2 The industrial metabolism, and the material flow analysis. economic material balance. Economy and environment: a new approach is needed!

3 System of Accounts versus Environmental Accounts. Environmental accounts and the SNA. The fields of application of environmental accounts.

4 The fields of application of environmental accounts. The Systen if Economic and Environmental Accounts, SEEA.

5 Eco-controlling as a tool for securing constant development and the improving of corporate environmental performance. The environmental support of corporate controlling and Balance ScoreCard, BSC.

6 The methods of environmental performance evaluation, and their applicability. The preparation phase of performance evaluation: eco-mapping.

7 Performance evaluation in accordance with the ISO 14001 patent. The goals and extent of the audit program. Audit activities.

8 Managing an audit program. The responsibilities, resources and processes related to the audit program. Implementation of the audit program. Following up and reviewing the audit program.

9 Audit activities: the initiation of the audit, the reviewing of the documents, preparations for the on-site audit activities, conducting the on-site audit activities, preparation of an audit report, conclusion of the audit, performance of tasks due to the audit.

10 Preparedness and evaluation of auditors: personal qualities, knowledge and abilities, qualifications, work experience, auditor qualification and experience, maintaining and improving preparedness.

11 The processes of environmental performance evaluation in accordance with the ISO 14031 patent. The concept and types of environmental indicators.

12 The aspects related to the selection and application of environmental indicators. The role and importance of environmental indicators in performance evaluation.

13 The appearance of environmental performance in the environmental and sustainability related reports of economic entities (GRI STANDARDS).

14 Case study, exercises.

Additional lecturers

Approval and validity of subject requirements

0