SUBJECT DATASHEET

Environmental Management of Energy

BMEGT42A006

I. SUBJECT DESCRIPTION

1. SUBJECT DATA

Subject name
Environmental Management of Energy

ID (subject code)	BMEGT42A006

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
2

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: **Elective subjects**
Subject Role: **Elective**
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: 580251/13/2023 registration number. Valid from: 29.03.2023.

2. OBJECTIVES AND LEARNING OUTCOMES

Objectives

The aim of the course is to provide general knowledge to the students about the policy and indicator-based background of sustainable energy management

Academic results

Knowledge

1. Knows the main concepts of sustainable energy management.
2. Knows the main interlinkages between energetics and dimension's of sustainability
3. Knows the process of energy markets and their impacts on envrionment and society
4. Knows the main principles of national and EU energy policies

Skills

1. Able to form own opinion in energy management issues

Attitude

1. Cooperate by the lecturer and other students
2. Endeavors to understand the complex sytems
3. Endeavors to make its decisions taking into account technical, economic and social aspects

Independence and responsibility

1. Independently selects and applies the relevant problem-solving and analytical methods in solving the analyt-ical tasks belonging to his / her field
2. Feels responsible for achieving sustainable development
3. Feels responsible for taking greater account of environmental and social aspects

Teaching methodology

Lectures, team work

Materials supporting learning

- Előadás-anyagok/Lecture slides
- Peter Zweifel; Aaron Praktiknjo; Georg Erdmann: Energy Economics. Berlin University of Technology. Springer, Germany, 2017.

II. SUBJECT REQUIREMENTS

TESTING AND ASSESSMENT OF LEARNING PERFORMANCE

General Rules

The two pillars of the evaluation of learning outcomes set out in point 2.2.: 1. summative evaluation of the learning outcomes to test the competences acquired during the semester (2 mid-term exams); 2. as well as an optional independent study.

Performance assessment methods

Detailed description of performance evaluations during the semester: 1. Summative evaluation of learning outcomes: a complex, written evaluation method of the subject and knowledge and ability-type competence elements in the form of a mid-term exam. The test focuses
on the assessment of the acquired knowledge and its application, thus placing the problem recognition and solution in the center. The course material on which the evaluation is based is determined by the lecturer of the subject, the available working time is 50 minutes. 2.
Optional independent study: a complex evaluation method of the subject's knowledge, ability, attitude, independence and responsibility competence elements, which takes the form of an individual or group study. The content, requirements, submission deadline and evaluation
method of the study are determined by the instructor.

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

- **1st summative assessment**: 50
- **2nd summative assessment**: 50
- **Optional independent study**: 40
- **total**: 140

Percentage of exam elements within the rating

Conditions for obtaining a signature, validity of the signature

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Issuing grades

Excellent	90
Very good	85–89
Good	70–84
Satisfactory	55–69
Pass	40–54
Fail	0-39

Retake and late completion

1) Both of the two summative assessments can be retaken once. 2) The summative assessments can be retaken or corrected for the first time during the replacement period free of charge. In the event of a correction, the new result always overwrites the old one. 3)
If the student is unable to obtain a grade other than unsatisfactory even with the retake stated at 1), he/she may make a second attempt to successfully complete the course by paying the fee specified in the regulations.

Coursework required for the completion of the subject

Attending contact lessons	28
Preparing for contact lessons	12
Preparing for summative assessments	10
Independent study of study-materials	10
total	60

Approval and validity of subject requirements

III. COURSE CURRICULUM

THEMATIC UNITS AND FURTHER DETAILS

Topics covered during the term

In order to achieve the learning outcomes set out in 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 Introduction, the world's energy situation, global trends
2 Hungary's energy situation, trends
3 Energy, energy management indicators
4 Possibilities of using renewable energy sources I.
5 Possibilities of using renewable energy carriers II.
6 Energy efficiency, energy saving, building energy
7 Integrated energy and climate policy
8 The energy business model (energy markets) I.
9 The business model of energy (energy markets) II.
10 Energy life cycle analysis
11 Sustainability-based analysis of the environmental effects of different energy carriers
12 Sustainable energy management at local and regional level (SECAP)

Additional lecturers

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Dr. Pálvölgyi Tamás	egyetemi docens	palvolgyi.tamas@gtk.bme.hu

Approval and validity of subject requirements