



# **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**

<i>Type</i>	<i>Lessons</i>
Lecture	2
Practice	0
Laboratory	0

### **Type of assessment**

mid-term  
grade

### **Number of credits**

2

### **Subject Coordinator**

<i>Name</i>	<i>Position</i>	<i>Contact details</i>
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 environment 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 systems
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 analytical 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

-

### 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

Kármán-Tamus Éva PhD hallgató tamus.eva@gtk.bme.hu

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

### Approval and validity of subject requirements