SUBJECT DATASHEET

ENVIRONMENTAL ECONOMICS

BMEGT42M400

I. SUBJECT DESCRIPTION

1. SUBJECT DATA

Subject name
ENVIRONMENTAL ECONOMICS

ID (subject code) BMEGT42M400

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. Valkó László	honorary professor	valko.laszlo@gtk.bme.hu

Educational organisational unit for the subject
Department of Environmental Economics and Sustainability

Subject website
https://edu.gtk.bme.hu/course/search.php?search=42M400

Language of the subject
magyar - HU, angol - EN

Curricular role of the subject, recommended number of terms

Direct prerequisites

Strong	None
Weak	None
Parallel	None
Exclusion	None

Validity of the Subject Description
Validity is before 2017, next review in September 2021

2. OBJECTIVES AND LEARNING OUTCOMES

Objectives

The aim of the course is to acquaint students with the theoretical and practical application of environmental economics, sustainability, and the European Union and Hungarian system of environmental regulation policy.

Academic results

Knowledge

1. knowledge of the basic concepts, theories, national economy and international contexts of environmental economics.
2. the typical sustainability and macro-level environmental indicators.
3. the possibilities and main principles of environmental regulation related to their special field of interest.

Skills

1. explore and analyze the facts and basic relations concerning the interactions of economic and environmental systems using the learned theories and methods, to formulate independent conclusions and critical remarks,
2. prepare decision-making proposals for technical-economic alternatives that include environmental issues in a significant way.
3. follow and interpret international economic processes, as well as changes in the relevant, related policies and legislation of the environmental field, and their effects. These are taken into account in their analyzes, proposals and decisions.
4. apply the techniques of solving environmental and economic problems, the problem solving methods, their application conditions and limitations.
5. work with other disciplines.

Attitude

1. demonstrate problem-sensitive, proactive behavior in order to ensure quality work, they are initiators.
2. susceptible to the reception of new information, new professional knowledge and methodologies, open to new, independent and cooperative tasks and responsibilities. They strive to develop their knowledge and working relationships.
3. are open to the changes of the wider economic and social environment of the given job, work organization, enterprise, they strive to follow and understand the changes.
4. are inclusive for views of others, on sectoral, national and European values (including social, ecological and sustainability aspects).

Independence and responsibility

1. take responsibility for analyzes, conclusions and decisions.
2. take responsibility for compliance with professional, legal, ethical standards and rules related to work and conduct.

Teaching methodology

Lectures, written and oral communication, use of IT tools and techniques.

Materials supporting learning

- Tankönyvek, jegyzetek, letölthető anyagok:
- Bartus Gábor – Szalai Ákos: Környezet, jog, gazdaságtan, Pázmány Press, Budapest, 2014
- (https://jak.ppke.hu/uploads/collection/205/file/Bartus-Szalai_Kornyezet_Jog_Gazdasagtan_2014_final.pdf)
- Textbooks, notes, downloadable materials:
- Gábor Bartus - Ákos Szalai: Environment, Law, Economics, Pázmány Press, Budapest, 2014
- (https://jak.ppke.hu/uploads/collection/205/file/Bartus-Szalai_Kornyezet_Jog_Gazdasagtan_2014_final.pdf)

II. SUBJECT REQUIREMENTS

TESTING AND ASSESSMENT OF LEARNING PERFORMANCE

General Rules

The learning objectives detailed in 2.2 will be assessed by means of two mid-term assessments.

Performance assessment methods

Mid-term assessments: Summative assessments: a complex written assessment to establish the level of knowledge and competences. The assessment focuses on the evaluation of the level of acquired knowledge and application competences. The topic of the mid-term assessment
is determined by the lecturer and announced to the students in advance. The duration of the mid-term assessment is 45 minutes.

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

- **first written assessment (test)**: 50%
- **second written assessment (test)**: 50%
- **összesen**: 100%

Percentage of exam elements within the rating

Conditions for obtaining a signature, validity of the signature

Issuing grades

Excellent	> 90
Very good	85–92
Good	70-85
Satisfactory	55-70
Pass	40-55
Fail	< 40

Retake and late completion

1) Both summative assessments may be attempted a second time. 2) Both summative assessments may be re-attempted free of charge during
the specified re-take and make-up period. The result of the re-attempted assessment will overwrite the result of the first attempt in all cases. 3) Should the student not be able to obtain a non-Fail grade on the first re-attempt, they may take a second re-attempt, for a fee.

Coursework required for the completion of the subject

participation in contact classes	28
preparation for classes	12
preparation for assessments	20
exam preparation	0
	60

Approval and validity of subject requirements

III. COURSE CURRICULUM

THEMATIC UNITS AND FURTHER DETAILS

Topics covered during the term

A 2.2. pontban megfogalmazott tanulási eredmények eléréséhez a tantárgy a következő tematikai blokkokból áll. Az egyes félévekben meghirdetett kurzusok sillabuszaiban e témaelemeket ütemezzük a naptári és egyéb adottságok szerint.

1 Particularities of contemporary environmental problems. Complexity and globality. The necessity to manage environmental problems. Methods and approaches of environmental mitigation. Micro-regional, environmental crisis management, the relationship between regional economic and ecological issues.

2 The specifics of natural and economic systems. The open chains of the economy, and the possibility of closing these loops.

3 Contemporary features of the relationship between the environment and the economy, global strategies to date and their critique. The concept, levels, dimensions and indicators of sustainable development. Environmental economics critique of traditional macroeconomic indicators, shortcomings of GDP-type indicators. Presentation and critical analysis of new types of macroeconomic indicators. Possible methods of economic evaluation of the environment, environmental methods of products-technologies-processes, environmental life cycle of products-technologies-processes (LCA analysis). Grouping of metrics (indicators), PSR and DPSIR models.

4 Interpretation of the concept of externalities in environmental economics, grouping of externalities. Characteristics of environmental processes (referring to infrastructure planning). Pareto's optimum, the optimal level of externalities. Environmental damage, environmental costs (case study).

5 Pollution chain model (typology of environmental impacts - intervention options).

6 The need for environmental regulation / internalization of externalities / and its appearance in economic theories / Pigovian taxes and subsidies, Coase's theorem: introduction, shortcomings. Complex technical-economic regulatory possibility of managing externalities (sectoral case study).

7 The purpose, system and main tools of environmental regulation, with special regard to the contexts of direct, economic and management-type regulation. The current domestic and international practice of environmental regulation, primarily in the European Union.

Additional lecturers

Horváth György Ádám PhD egyetemi adjunktus senior lecturer	horvath.gyorgy@gtk.bme.hu
Princz-Jakovics Tibor PhD egyetemi adjunktus senior lecturer	princz-jakovics.tibor@gtk.bme.hu

Approval and validity of subject requirements

Part I-III of the Subject Form is to be approved by the Head of Department of Environmental Economics named under