SUBJECT DATASHEET

Environmental Economics

BMEGT42M410

I. SUBJECT DESCRIPTION

1. SUBJECT DATA

Subject name
Environmental Economics

ID (subject code)	BMEGT42M410

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
3

Subject Coordinator

Name	*Position*	*Contact details*
Dr. Bartus Gábor	senior lecturer	bartus.gabor@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: **MSc in Environmental Engineering**
Subject Role: **Compulsory**
Recommended semester: **1**

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 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. The students has knowledge of the basic, comprehensive concepts, theories, facts, national economic and international connections of environmental economics;
2. has mastered the basic information-gathering and analysis methods of environmental economics, and knows its characteristic indicators;
3. knows the basics of the environmental protection fields related to his field of expertise;
4. knows the most significant normative theories of environmental policy intervention: the Pigou theorem and the Coase tradition;
5. knows the types of environmental policy intervention solutions, their advantages and disadvantages. Knows the criteria according to which the appropriate intervention tool can be selected for a given environmental problem;
6. knows the possibilities of government failures in the planning of environmental policy interventions;
7. knows the more frequently used environmental economic analysis methods: natural capital and ecosystem service evaluation procedures, cost-benefit analysis solutions.

Skills

1. By applying the learned theories and methods, the student is able to evaluate the social welfare and economic consequences of any environmental use problem, and to determine the necessary range of facts and data necessary for the evaluation;
2. after evaluating the characteristics of a given, arbitrary environmental use problem, is able to determine possible alternatives for environmental policy interventions suitable for solving the problem, after comparative analysis and evaluation of these alternatives, is able to independently propose the appropriate corporate response or public policy intervention;
3. follows and interprets world economic, international, EU and national economic policy and policy processes, and is able to interpret the effects of changes on the future state of natural resources based on these;
4. is able to determine the complex consequences of economic processes and organizational events;
5. can apply techniques for solving environmental problems, problem solving methods, taking into account their application conditions and limitations;
6. is able to cooperate with representatives of other fields;
7. is able to formulate specialist, scientific, business and public policy information in a comprehensible way, making it understandable to the wider public.

Attitude

1. The student demonstrates problem-sensitive, proactive behavior and takes initiative in order to achieve high-quality work;
2. receptive to receiving new information, new professional knowledge and methodologies, open to new tasks and responsibilities that require cooperation and independence. Strives to improve their knowledge and working relationships;
3. is open to changes in the broader economic and social environment of the given job, work organization, enterprise, strives to follow and understand the changes;
4. receptive to the opinions of others, to sectoral, regional, national and European values (including social, social and ecological, sustainability aspects).

Independence and responsibility

1. The student assumes responsibility for analyses, conclusions and decisions;
2. assumes responsibility for compliance with professional, legal, ethical standards and rules related to work and conduct.

Teaching methodology

Lectures. Oral and written communication, use of IT, optional individual and group assignments and planning.

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 outcomes stated in point 2.2. are evaluated based on performance shown in the written summative assessments (2 mid-term exams).

Performance assessment methods

Detailed description of the evaluations carried out during the study period: Summative assessment: a complex, written evaluation of the knowledge and ability-type competence elements of the subject in the form of a mid-term exam. The mid-term exam focuses on the
assessment of the acquired knowledge and its application. The course material on which the evaluation is based is determined by the lecturer of the subject.

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

- **1st summative assessment**: 50
- **2nd summative assessment**: 50
- **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	92
Very good	85–91
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.

Coursework required for the completion of the subject

Attending contact lessons	28
Preparing for contact lessons	24
Preparing for summative assessments	38
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 The relationship between society and its environment. The allocations and processes scrutinised by environmental economics.

2 The macroeconomic endogenous causes of pollution: (1) growth, (2) making choices due to scarcity, (3) the problem of measurement.

3 The microeconomic endogenous causes of pollution: (4) externalities, (5) common goods and free goods, (6) discounting

4 Pollution as a market failure: Pigovian and Coasian approaches to pollution control

5 General overview of environmental regulatory tools – Coasian approaches

6 Pigovian tools of environmental regulations: direct regulations and indirect regulations/economic incentives

7 Comparing direct and indirect/economic means of environmental regulations – aspects of choosing the appropriate regulatory tool.

8 Optimal use of natural resources: cost-benefit analyses in environmental economics, evaluation of non-market costs and benefits. The valuation of natural capital.

9 The economics of natural resource use. Renewable and non-renewable resources.

Additional lecturers

Dr. Bartus Gábor	egyetemi adjunktus – senior lecturer	bartus.gabor@gtk.bme.hu
Dr. Kósi Kálmán György	címzetes egyetemi tanár - honorary professor	kosi.kalman@gtk.bme.hu

Approval and validity of subject requirements