# SUBJECT DATASHEET

# ENVIRONMENTAL ECONOMICS

# BMEGT42M100

# I. SUBJECT DESCRIPTION

## 1. SUBJECT DATA

**Subject name**
ENVIRONMENTAL ECONOMICS

| **ID (subject code)** | BMEGT42M100 |
|---|---|

**Type of subject**
contact lessons

**Course types and lessons**

| *Type* | *Lessons* |
|---|---|
| Lecture | 4 |
| Practice | 0 |
| Laboratory | 0 |

**Type of assessment**
Examination

**Number of credits**
5

**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; angol - ENG

**Curricular role of the subject, recommended number of terms**
Programme: **Regional and Environmental Economic Studies MSc (in English) from 2019/20/Term 1**
Subject Role: **Compulsory**
Recommended semester: **1**

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Programme: **Regional and Environmental Economics from 2016/17/Term 1, AUTUMN start**
Subject Role: **Compulsory**
Recommended semester: **1**

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**Direct prerequisites**

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|---|---|
| ***Strong*** | None |
| ***Weak*** | mikro- és makroökonómia; micro- and macroeconomics |
| ***Parallel*** | None |
| ***Exclusion*** | None |

**Validity of the Subject Description**
Approved by the Faculty Board of Faculty of Economic and Social Sciences, Decree No: KT 2019. január 30 /8. Valid from 1 February 2019.

# 2. OBJECTIVES AND LEARNING OUTCOMES

**Objectives**

The course unit aims to augment and deepen the students' previously acquired knowledge in micro- and macroeconomics in a more complex manner, such that the objectives of environmental protection and the vision of sustainable development may be exercised as a skill. Having completed this course unit, students will be able to make more balanced, fair, equitable, and socially and environmentally desirable decisions, but also to assess and evaluate decisions taken by others.

**Academic results**

Knowledge

1. The student understands the importance of the economic approach in the transition to sustainable devel-opment.
2. The student is aware of the decision-making approach in economics.
3. The student has a basic knowledge of environmental valuations and its primary methods.
4. The student understands and has an insight into the micro- and macro-level conflicts arising from the in-teraction of the economy and our environment.
5. The student understands the concept of externalities, their causes and effects.
6. The student is familiar with the fundamental theories in environmental economics, the opportunities and limits to their practical applicability.
7. The student understands the theory of environmental regulatory tools and instruments, and is able to compose a mix of instruments for a particular purpose.

Skills

1. The student is sensitive towards and is capable of solidarity with future generations, and is capable of taking future-conscious, fair and equitable decisions.
2. The student is capable of drawing up economic, social and environmental plans for the future, and is competent at assessing these.
3. They are capable of assessing decisions taken from an economic, social and environmental aspect, bearing in mind the impacts on future generations.
4. They are capable of identifying and evaluating the micro and macro-level conflicts of the economy and the environment, and crafting socially and environmentally desirable solutions.
5. They are competent in recognising problems arising from pollution, and are capable of finding appro-priate solutions.
6. The student is capable of implementing environmental economic theory into practice.
7. They are capable of making a well-established choice between environmental regulatory tools, based on the limits of their applicability.

Attitude

1. The students collaborate/cooperate with the lecturer and fellow students on acquiring knowledge
2. The students expand their knowledge by continuous learning
3. The students are open to use IT solutions
4. The student strives to understand the nature and problems associated with environmental and natural resources in the interest of securing the commonwealth of society
5. The student exercises due empathy and interest towards other members of society, and shall act respectfully and cautiously in the shared interest of society.

Independence and responsibility

1. The students are able to work individually: selecting methods and techniques; organizing, planning, coordinating work; collecting, organizing, analysing, evaluating data; developing in general and professionally
2. The students are able to apply system-oriented thinking.
3. The students are able to take responsibility for the analyses, conclusions, decisions made.
4. The students are able to perform tasks individually and with responsibility as a member of a project team.
5. The student aims to overcome all and any shortcomings in any adjoining disciplines and knowledge areas, including natural sciences, philosophy or social and economic studies.

**Teaching methodology**

Lectures, problem discussions and case studies. Oral and written communication, use of IT, optional individual and group assignments and planning.

**Materials supporting learning**

- 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
- Tietenberg, Tom – Lewis, Lynne: Environmental & Natural Resource Economics. 10th Edition. Pearson, 2014
- Phaneuf, D. J. – Requate, T.: A course in environmental economics. Theory, Policy and Practice. Cambridge University Press, 2017.
- Folyóiratcikkek és további, folyamatosan kiadott oktatástámogató anyagok
- A detailed and up-to-date list is provided during classes.

# II. SUBJECT REQUIREMENTS

## TESTING AND ASSESSMENT OF LEARNING PERFORMANCE

**General Rules**

The learning objectives detailed in 2.2 will be assessed by means of 1. A summative assessment during the semester (1 mid-term test); 2. A
formative assessment (individual homework assignment) to establish the level of analytical, evaluational and planning skills.

**Performance assessment methods**

Detailed description of assessment methods: The formative assessment aims to assess the knowledge and skill elements of competences through a complex, individual, written assignment (project paper). The paper focuses on the recognition of theoretical knowledge in real-life situations and its applications, thus revolving around the recognition and solution of problems. The project paper may be completed during the semester through the exam period. Consultation sessions are offered by the lecturer.

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

- **project paper**: 100%
- **total**: 100%

**Percentage of exam elements within the rating**

**Conditions for obtaining a signature, validity of the signature**

**Issuing grades**

| | |
|---|---|
| Excellent | 95 |
| Very good | 87,5–95 |
| Good | 75–87,5 |
| Satisfactory | 62,5–75 |
| Pass | 50–62,5 |
| Fail | 50 |

**Retake and late completion**

• Both assessments may be made up for or retaken as per the provisions of the Code of Educations and Examinations. • Repeated (second) make-up assessments may be attempted upon payment of a fee.

**Coursework required for the completion of the subject**

| | |
|---|---|
| participation in contact classes | 14×4 = 56 |
| preparation for lectures | 12 |
| preparation for formative assessments | 50 |
| autonomous reading | 22 |
| exam preparation | 10 |
| total | 150 |

**Approval and validity of subject requirements**

Consulted with the Faculty Student Representative Committee, approved by dr. Lógó Emma, Vice Dean for Education. Date: 22 January
2019. Valid from 1 February 2019

# 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. to be achieved. The schedule of topics in the course curriculum in each semester may be affected by the calendar and other constraints.

1 Introduction to environmental economics. The origins of enviromnental economics and evolutionary milestones.

2 Economic growth: understanding the conflict between the economy and the environment. Development and environmental protection.

3 Confronting resource scarcity. Limits to growth, the road to sustainable development.

4 Forms of capital. Pollution chain.

5 Measuring macroeconomic performance: indicators and criticisms. The problem of measurement. Attempts to amend indicators. Accounting for sustainability. Development and welfare indicators.

6 Private goods, public goods, common goods. Externalities. Modelling externalities: obstacles and reality.

7 Pigou's theorem.

8 Coase's theorem.

9 The theory of environmental regulations, Pigovian approaches, Coasian approaches.

10 Environmental policy and regulatory tools in practice: Pigovian instruments, Coasian efforts. Evaluation of effectiveness and efficiency of environmental regulatory tools.

11 A Pigou-tételen alapuló környezeti szabályozás. Közvetlen előírások és gazdasági ösztönzők.

12 Választás a szabályzóeszközök között, az egyes szabályzóeszközök előnyei és hátrányai. A szabá-lyozás kormányzati kudarcai. A bizonytalanság hatásai. Vállalati innováció eltérő szabályozási környezetben.

**Additional lecturers**

Dr. György Ádám Horváth egyetemi adjunktus - senior lecturer horvath.gyorgy@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