SUBJECT DATASHEET

Environmental Assessment (sectorial sustainability analysis)

BMEGT42A025

I. SUBJECT DESCRIPTION

1. SUBJECT DATA

Subject name
Environmental Assessment (sectorial sustainability analysis)

ID (subject code)	BMEGT42A025

Type of subject
contact unit

Course types and lessons

Type	*Lessons*
Lecture	4
Practice	0
Laboratory	0

Type of assessment
exam grade

Number of credits
5

Subject Coordinator

Name	*Position*	*Contact details*
Dr. Princz-Jakovics Tibor	senior lecturer	princz-jakovics.tibor@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: **Engineering Management Bachelor's Programme - Environmental Management module for students starting from 2015**
Subject Role: **Compulsory for the specialisation**
Recommended semester: **6**

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 acquaint students with the sectoral interpretations of the concept of sustainability, the possibilities of integrating sustainability aspects in the cases of some economic sectors. The theoretical basis is provided by the description of environmental evaluation and its alternative methods, as well as the presentation of the sectoral application of environmental evaluation methods.

Academic results

Knowledge

1. know the theoretical background of environmental evaluation, including the concept of total economic value,
2. are familiar with cost-based and expressed preference methods and their sectoral application,
3. are familiar with environmental evaluation methods based on identified preferences and their sectoral application,
4. are familiar with CSR corporate practices,
5. are familiar with the sectoral characteristics determining the domestic and EU transport policy and the main strategic ideas for the future development of transport,
6. are familiar with the key indicators of the formation and development of cities and the main strategic directions for the future development of the urban environment;
7. are aware of the environmental, economic and social problems of rural areas and the main strategic ideas for sustainable rural development;
8. are familiar with the principles and practical possibilities of sustainable waste management,
9. are familiar with the sectoral characteristics determining domestic and EU energy policy and the main strategic ideas for the future development of energy management; 1
10. know the market characteristics of the alternative energy source, the advantages and disadvantages of their use.

Skills

1. are able to prepare environmental evaluation case studies using cost-based and stated preference methods,
2. are able to prepare environmental evaluation case studies using revealed preferences methods,
3. are able to identify CSR activities in corporate practice,
4. are able to analyze the sustainability of transport policy and strategy documents,
5. are able to outline the possibilities of urban development and to analyze the sustainability of the documents determining the future development of cities,
6. are able to identify rural development problems and analyze the sustainability of related strategic documents,
7. are able to represent the basic processes of waste management and to determine the factors influencing the efficiency of waste management methods,
8. are able to analyze the sustainability of documents defining energy policy and strategy, including the possibilities of using alternative energy sources,
9. are able to communicate, present, orally and in writing in a professionally adequate manner; 1
10. are able to process and use domestic and international literature.

Attitude

1. are open to learn about the possibilities of applying environmental evaluation methods, to take them into account in decision-making,
2. are open to the practical application of sustainability principles,
3. endeavor to take their decisions taking into account technical, economic and social aspects;
4. endeavor to examine the various sectoral policies and strategic ideas in a comprehensive systems approach;
5. cooperate with the lecturers and fellow students in expanding the knowledge and thinking together in solving the problems raised.

Independence and responsibility

1. prepare the practical task independently during the semester,
2. independently select and apply the relevant problem-solving and analytical methods in solving the analytical tasks belonging to their field.
3. feel responsible for achieving sustainable development.
4. feel responsible for taking greater account of environmental and social aspects in sectoral decision-making in addition to technical aspects

Teaching methodology

In the framework of the lectures, the sectoral processes, characteristics, environmental evaluation and sustainability analysis methods will be presented in the form of presentations. In addition, students independently prepare their practical assignment, in which they process a chosen sector or environmental evaluation method based on given content elements.

Materials supporting learning

- Dr. Szlávik János (szerk.): Környezetgazdaságtan. 3. fejezet. (Csigéné Nagypál Noémi) Budapesti Mű-szaki és Gazdaságtudományi Egyetem. Typotex Kiadó, Budapest, 2007.
- Marjainé Dr. Szerényi Zsuzsanna (szerk.): A természetvédelemben alkalmazható közgazdasági értékelési módszerek. Környezetvédelmi és Vízügyi Minisztérium, Budapest, 2005.

- Princz-Jakovics Tibor: A fenntarthatóság erősítése a vidéki közlekedési rendszerek fejlesztésében. Doktori értekezés, BME, Budapest, 2008
- Illés Iván: Regionális gazdaságtan - területfejlesztés: 6. fejezet, Vidékfejlesztés (pp. 119-137), Typotex Kiadó, Budapest, 2008
- Kengyel Ákos (szerk.): Az Európai Unió közös politikái: 7. fejezet, Közös Agrárpolitika, írta: Halmai Péter (pp. 247-269), Akadémiai Kiadó, Budapest, 2010
- Ajánlott folyóiratok/recommended journals:
- American Journal of Agricultural Economics
- Ecological Economics
- Journal of Agricultural Resource Economics
- Journal of Economic Perspectives
- Journal of Environmental Economics and Management
- Journal of Environmental Planning and Management

II. SUBJECT REQUIREMENTS

TESTING AND ASSESSMENT OF LEARNING PERFORMANCE

General Rules

The evaluation of the learning outcomes stated in point 2.2 is based on 2 mid-term written performance evaluations: summative evaluation
of learning outcomes (summative assessments) and homework.

Performance assessment methods

A. Detailed description of performance evaluations during the instruction period: 1. Summative evaluation of learning outcome (summative
assessment): a complex, written evaluation method of the subject and knowledge and ability-type competence elements in the form of a mid-term exam. In order to successfully write the test, it is necessary to use the acquired knowledge to correctly interpret the concepts and to know the application areas of environmental assessment and sustainability analysis methods. The part of the curriculum that forms the basis of the evaluation represents the topics covered in the lectures before the date of the mid-term exam, the available working time is 60 minutes. A maximum of 15 or 20 points can be obtained per mid-term exam. 2. Formative assessment (homework): a
complex evaluation method of competence elements of the subject knowledge, ability, attitude, independence, and responsibility type, which takes the form of individually prepared homework. Homework content and requirements: approx. 12-15 page essay (according to
the departmental template, with the help of consultations) Sustainability analysis of a selected area from among the topics presented in the course: - Presentation of EU and national policies - presentation and comparison of important policy documents - Characterization
of the direction and trend indicated by the indicator based on indicators selected from the currently published KSH publication entitled "Indicators of sustainable development in Hungary" - characterization of the target system, sustainability evaluation - formulating your own proposals for increased enforcement of sustainability aspects OR Environmental assessment case study for a selected sector Analytical
presentation of an environmental assessment method, based on case studies (at least 2 international examples). General presentation of the method, areas of application, advantages and limitations. Manifestation of the advantages and limitations of the processed case studies. Application practice of environmental assessment methods for a selected country (or environmental asset) (based on at least 2 articles, studies). When, with what purpose, methods and results were the surveys created? How did the advantages and limitations of the methods appear? Homework submission deadline: presentation time of the last week of the instruction period, evaluation method:
maximum 15 points. B. Performance evaluation during the exam period: exam The exam mark is determined based on the result of the written exam Elements of the exam: 1st written performance evaluation (partial exam): it focuses on the complex sectoral application of the concepts learned during the semester, the problems revealed, and the analytical methods presented, it is necessary to answer the questions in the form of an essay.

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

- **1st summative assessment**: 15
- **2nd summative assessment**: 20
- **Formative assessment (homework)**: 15
- **total**: 50

Percentage of exam elements within the rating

- **written exam (in the exam period)**: 50
- **mid-term performance assessments**: 50
- **total**: 100

Conditions for obtaining a signature, validity of the signature

The condition for obtaining the signature is that the student achieves at least 50% of the score that can be obtained during the diligence period. The obtained signature is valid for the period according to CAO. The signatures obtained earlier in the subject and the mid-year results that can be taken into account when determining the exam grade can be accepted for up to 3 semesters.

Issuing grades

Excellent	91
Very good	85–90
Good	72–84
Satisfactory	65–71
Pass	50–64
Fail	0-49

Retake and late completion

1) The two summative assessments can be individually retaken or corrected during the retake-period free of charge. In the case of improvement
during the retake, the more favorable result will be taken into account. 2) Homework can be sent electronically by 12:00 on the last day of the retake-period, subject to payment of the fee specified in the regulations.

Coursework required for the completion of the subject

Attenting contact lessons	56
Preparation for summative assessments	30
Preparation of formative assessment homework	40
Individual studying of course material	10
Preparation for examination	14
total	150

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 cours announced in each semester, these topics are scheduled according to the calendar and other conditions.

1 The theoretical background of environmental assessment, the concept of total economic value
2 Cost-based and declared preference methods and their sectoral application
3 Environmental assessment methods based on revealed preferences and their sectoral application
4 CSR in corporate practice
5 Sustainability analysis of current domestic and EU transport policy
6 Sustainable urban planning, indicators
7 Sustainable rural development
8 Sustainable waste management
9 Analysis of domestic energy policy from a sustainability perspective
10 Characteristics of the use of alternative energy

Additional lecturers

Csigéné Dr. Nagypál Noémi	egyetemi adjunktus / senior lecturer	csigene.noemi@gtk.bme.hu
Dr. Íjjas Flóra	egyetemi adjunktus / senior lecturer	ijjas.flora@gtk.bme.hu
Dr. Szabó Mariann	egyetemi adjunktus / senior lecturer	szabo.mariann@gtk.bme.hu

Approval and validity of subject requirements