SUBJECT DATASHEET

Climate Change – Advanced Level

BMEGT42V500

I. SUBJECT DESCRIPTION

1. SUBJECT DATA

Subject name
Climate Change – Advanced Level

ID (subject code)	BMEGT42V500

Type of subject
Contact lessons

Course types and lessons

Type	*Lessons*
Lecture	1
Practice	0
Laboratory	0

Type of assessment
mid-term grade

Number of credits
3

Subject Coordinator

Name	*Position*	*Contact details*
Dr. Buzási Attila	associate professor	buzasi.attila@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: **Regional and Environmental Economic Studies part-time programme, autumn start**
Subject Role: **Elective**
Recommended semester: **4**

Programme: **Regional and Environmental Economic Studies part-time programme, spring start**
Subject Role: **Elective**
Recommended semester: **3**

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: 580884/8/2023 registration number. Valid from: 29.11.2023.

2. OBJECTIVES AND LEARNING OUTCOMES

Objectives

The main aim of the course is to provide knowledge about environmental, social and economic issues regarding climate change through the basics of physical evidences, international policies, impacts and consequences.

Academic results

Knowledge

1. elements of Earth's climate system and interconnections between them;
2. global and local challenges regarding climate change, associated solutions and innovative opportunities;
3. tools of climate policy;
4. adaptation challenges and options of vulnerable systems.

Skills

1. evaluate main challenges regarding climate change;
2. understand the main connections between Eath's climate system;
3. identify feasible opitons of climate policy to tackle climate-related challenges;
4. define specific local impacts of global climatic processes;
5. reveal and understand local solutions and answers to climate change;
6. explain all the above in an easily understandable way.

Attitude

1. collaborate with their instructors and fellow students during the learning process,
2. gain knowledge and information,
3. use the opportunities offered by IT tools.

Independence and responsibility

1. define answers to climte-related problems independently;
2. are open to accept critical remarks;
3. cooperate with other students.

Teaching methodology

Lectures and written communication, use of ICT tools and techniques.

Materials supporting learning

- Az előadások prezentációinak anyaga, ami a félév során folyamatosan fog feltöltésre kerülni.
- Slideshows of the lectures which will be uploaded continously during the semester.
- Az aktuális irodalmi lista az első órán kerül ismertetésre.
- The actual literature list will be distributed in the first lesson

II. SUBJECT REQUIREMENTS

TESTING AND ASSESSMENT OF LEARNING PERFORMANCE

General Rules

Evaluation of the learning outcomes stated under point 2.2: an act for evaluating the competencies acquired during the semester (1 assignment to be submitted).

Performance assessment methods

A. Detailed description of performance evaluations during the study period: Formative assessment: a complex, written evaluation of the knowledge and ability-type competence elements of the subject in the form of a assignment to be submitted. The topic focuses on the assessment of the acquired knowledge and its application, thus it places the focus on problem recognition and solution. The course material on which the evaluation is based is determined by the lecturer of the subject. At the end of the semester, it is possible to retake, late completion or repeat the formative assessment until the last day of the late completion period.

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

- **formative assessment**: 100

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	73–84
Satisfactory	65–72
Pass	50–64
Fail	0-49

Retake and late completion

1) The formative assessment can be repeated or completed late according to the CoS. 2) The formative assessment can be repeated or completed late once during the late completion period free of charge. In the event of a correction, the new result always overwrites the old one.

Coursework required for the completion of the subject

participation in contact lessons	16
preparation for contact lessons	14
autonomous learning	20
preparation and submission of assignment	40
Total	90

Approval and validity of subject requirements

Consulted with the Faculty Student Representative Committee, approved by the Vice Dean for Education, valid from: 06.11.2023.

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 Introduction: climate system, climate-shaping factors, scientific background of the greenhouse effect
2 Climate changes in the past
3 Future climate scenarios; the evolution of climate modeling
4 Effects and consequences of climate change - international and domestic examples
5 The past, present and future of climate policy
6 The economics of climate change – emissions trading and other innovative economic tools
7 Challenges and engineering responses to climate change in water management
8 Challenges and engineering responses to climate change in energy management
9 Challenges and engineering responses to climate change in the field of transport
10 Challenges and engineering responses to climate change in the field of the built environment

Additional lecturers

Approval and validity of subject requirements