SUBJECT DATASHEET

Climate Change – Advanced Level

BMEGT42V102

I. SUBJECT DESCRIPTION

1. SUBJECT DATA

Subject name
Climate Change – Advanced Level

ID (subject code)	BMEGT42V102

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. 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
angol - ENG

Curricular role of the subject, recommended number of terms
Programme: **Master of Science Program in Regional and Environmental Economic Studies**
Subject Role: **Elective**
Recommended semester: **0**

Direct prerequisites

Strong	None
Weak	None
Parallel	None
Exclusion	None

Validity of the Subject Description

2. OBJECTIVES AND LEARNING OUTCOMES

Objectives

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

Academic results

Knowledge

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

Skills

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

Attitude

1. The student collaborates with their instructors and fellow students during the learning process,
2. gains knowledge and information,
3. uses the opportunities offered by IT tools.

Independence and responsibility

1. The student defines answers to climate-related problems independently;
2. is open to accept critical remarks;
3. cooperates 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

The course is subject to continuous assessment, and 2 (30 points each) summative assessments (mid-term exams) are used to assess knowledge,
which contain topics of almost equal difficulty and weight.

Performance assessment methods

Performance evaluations carried out during the study period: summative assessments: 2 mid-term exams. Each mid-term exam consists of
two parts. The first part asks about the concepts and basic knowledge of the given topic with test questions (25 points). The second part of the mid-term exam tries to assess a more comprehensive and thorough knowledge of the given topic. This part consists of a short explanatory, essay-type question (5 points). The available working time is 60 minutes. The minimum requirement for successfully completing
the mid-term exam is 15 points. The condition for completing the semester is to obtain a total of at least 30 points based on the aggregated
results of the mid-term exams. During the semester, extra points can be earned by completing special tasks and class-activity (which are automatically counted above the minimum 30 points). Regional and Environmental Economics students must give a lecture or write a 15-page essay by the end of the semester.

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

-

Issuing grades

Excellent	90
Very good	85-89
Good	70-84
Satisfactory	60–69
Pass	50–59
Fail	0-49

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

Participation in contact lessons	24
Preparation for contact lessons	20
Self-study of designated written material	16
Preparing for the midterms	30
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 Introduction; elements of the Earth's climate system. Scientific background of the Earth's climate system.
2 Climate change in the past.
3 Climate modelling, climate scenarios.
4 Impacts and consequences of climate change in Hungary and the world.
5 Climate policy and climate negotiations.
6 Economics of climate change – emission trading scheme and other innovative economic solutions.
7 Impacts, solutions and adaptation opportunities – water management.
8 Impacts, solutions and adaptation opportunities – energy management.
9 Impacts, solutions and adaptation opportunities – transport sector.
10 Impacts, solutions and adaptation opportunities – urban areas.

Additional lecturers

Dr. Buzási Attila	egyetemi docens / associate professor	buzasi.attila@gtk.bme.hu
Beszedics-Jäger Bettina Szimonetta	PhD hallgató / PhD student	jager.szimonetta@gtk.bme.hu

Approval and validity of subject requirements