

# SUBJECT DATASHEET

# **Climate Change – Advanced Level**

**BMEGT42V500** 

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# 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 of
Type	Lessons	<u>assessment</u>
Lecture	1	mid-term grade
Practice	0	Number of
Laboratory	0	credits

**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.

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# 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

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

# 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.

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# 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

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