SUBJECT DATASHEET

Artificial Intelligence for Learning Support

BMEGT51XX38454-52

I. SUBJECT DESCRIPTION

1. SUBJECT DATA

Subject name
Artificial Intelligence for Learning Support

ID (subject code)   BMEGT51XX38454-52

Type of subject
contact hour

Course types and lessons

Type	Lessons
Lecture	0
Practice	3
Laboratory	0

Type of assessment
semester grade

Number of credits
3

Subject Coordinator

Name	Position	Contact details
Dr. Manojlovic Heléna	university assistant professor	manoljovic.helena@gtk.bme.hu

Educational organisational unit for the subject
Department of Technical Education

Subject website
https//edu.gtk.bme.hu

Language of the subject
angol - ENG

Curricular role of the subject, recommended number of terms
Direct prerequisites

Strong	Nincs
Weak	Ninc
Parallel	Nincs
Exclusion	Nincs

Validity of the Subject Description

Approved by the Faculty Board of Faculty of Economic and Social Sciences, Decree No: 580466/11/2025registration number. Valid from: 2025.06.25.

2. OBJECTIVES AND LEARNING OUTCOMES

Objectives

The objective of the course is to introduce students to the potential of artificial intelligence (AI) in supporting learning processes. Students will explore contemporary AI tools and learn how to use them effectively to enhance their own learning. Special emphasis is placed on adaptive learning systems, language models, and personalized learning strategies. The course also aims to improve students' digital and AI literacy, critical thinking, and the responsible and ethical use of technology in academic contexts.

Academic results

Knowledge

1. Knows the basic concepts of artificial intelligence and its educational applications.
2. Knows the principles of adaptive learning systems and their role in personalized learning.
3. Knows how large language models (e.g., ChatGPT) function and support learning.
4. Knows the strengths and limitations of AI tools in learning contexts.
5. Knows the fundamental principles of ethical AI use in education.

Skills

1. Is able to select appropriate AI tools for educational purposes.
2. Is able to apply AI tools to support their own learning objectives.
3. Is able to critically evaluate the reliability of AI-generated content.
4. Is able to design a simple AI-supported learning process or strategy.
5. Is able to use AI tools responsibly and ethically in academic settings.

Attitude

1. Is open to applying new technologies for learning support.
2. Demonstrates interest in the conscious and responsible use of AI tools.
3. Is committed to integrating technology into their learning in a reflective and goal-oriented way.
4. Is receptive to critically addressing ethical, social, and educational issues.
5. Supports lifelong learning and the continuous development of digital competencies.

Independence and responsibility

1. Is capable of independently and consciously using AI tools for academic purposes.
2. Assumes responsibility for decisions made using AI tools and their consequences.
3. Strives for ethical, sustainable, and intentional use of technology in learning.
4. Is able to reflect on their own learning processes and the role of AI in shaping them.
5. Is committed to lifelong learning and the continuous development of digital competencies.

Teaching methodology

The course follows an active, student-centered approach. Teaching methods include lectures, interactive seminars, hands-on workshops, and case-based analyses. Through project-based learning (PBL), students apply AI tools to their own learning contexts. Emphasis is placed on reflective learning, collaboration, and experimentation with AI tools.

Materials supporting learning

- Selected academic articles and case studies on AI applications in education (available on the course Moodle site).
- Practice tasks and user guides for AI tools (e.g., ChatGPT, Notion AI, Khanmigo, Grammarly).
- Instructor slides, thematic videos, and case-based video materials.
- Interactive learning modules (e.g., ethical dilemma simulations, formative quizzes).
- Official documentation and help pages for AI tools (e.g., OpenAI, Google AI, Microsoft Education).
- Template and evaluation criteria for the personal learning project.

II. SUBJECT REQUIREMENTS

TESTING AND ASSESSMENT OF LEARNING PERFORMANCE

General Rules

A 2.1 és 2.2. pontban megfogalmazott célok és tanulási eredmények elérése a gyakorlatokon tanúsított aktív részvétel (részteljesítmény értékelés)
alapján történő dokumentálása alapján történik.

Performance assessment methods

Egyéni és csoportmunka feladatokban való aktív részvétel

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

- **részteljesítmény értékelés (házi feladat)**: 60
- **részteljesítmény értékelés (aktív részvétel)**: 40

Percentage of exam elements within the rating

Conditions for obtaining a signature, validity of the signature

Minimum 70% attendance at scheduled classes; active engagement with the course's online platform (e.g., downloading and submitting assignments,
participating in discussion forums); achievement of at least 50% of the total attainable score from all mandatory performance ass

Issuing grades

Excellent	96
Very good	88-95%
Good	76-87%
Satisfactory	63-75%
Pass	50-62%
Fail	0-49%

Retake and late completion

At least one opportunity is provided during the semester to submit missing assignments. Tasks not submitted by the deadline or receiving
a failing grade may be resubmitted or corrected no later than the end of the make-up week. Make-up work must comply with the formats
and deadlines defined in the course requirements

Coursework required for the completion of the subject

részteljesítmény értékelés (házi feladat)	76
részteljesítmény értékelés (aktív részvétel)	14

Approval and validity of subject requirements

Consulted with the Faculty Student Representative Committee, approved by the Vice Dean for Education, valid from: 02.06.2025.

III. COURSE CURRICULUM

THEMATIC UNITS AND FURTHER DETAILS

Topics covered during the term

1 Introduction to Artificial Intelligence and its Applications in Education - Basic concepts, historical context, the role of AI in digital learning.

2 How Large Language Models Work - Foundations of generative AI, typical use cases in student learning.

3 Adaptive Learning Systems and Personalized Education -Learning styles, automated feedback, learning paths.

4 AI Tools for Supporting Self-Directed Learning - Note-taking, quiz generators, translation, and visualization tools.

5 Ethical Issues and the Responsible Use of AI - Plagiarism, bias, data protection, transparency.

6 Workshop: Personal Learning Project with AI Tools -Selecting, applying, and evaluating tools aligned with learning goals.

7 Reflection and Insights: AI in Personal Learning -Personal experiences, changes in learning strategies, feedback.

Additional lecturers

Dr. Saule Anafinova university assistant professor saule.anafinova@edu.bme.hu

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