SUBJECT DATASHEET

PROJECT MANAGEMENT

BMEGT20MN13

I. SUBJECT DESCRIPTION

1. SUBJECT DATA

Subject name
PROJECT MANAGEMENT

ID (subject code)	BMEGT20MN13

Type of subject
contact course

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. Sebestyén Zoltán	associate professor	sebestyen.zoltan@gtk.bme.hu

Educational organisational unit for the subject
Department of Management and Business Economics

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

Language of the subject
magyar - HU; angol - ENG

Curricular role of the subject, recommended number of terms

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: 5881478/13/2024 registration number. Valid from: 11.12.2024.

2. OBJECTIVES AND LEARNING OUTCOMES

Objectives

The course introduces students to project management terminology, basic tools and techniques. The curriculum briefly sum-marizes the knowledge necessary to manage a project within the framework of the subject in a structured way. The course also emphasizes practical solutions.

Academic results

Knowledge

1. Understands the structure and operation of business organizations.
2. Owns modern, theoretically demanding mathematical-statistical and modeling methods of problem recognition, formulation and solution, information collection and processing, he also knows their limitations.
3. Familiar with the most basic graph-theoretic algorithms for management purposes and their solution procedure.
4. Knows the most important monitoring techniques.
5. Understands the resource allocation methods (time and resource-constrained).
6. Understands how a prevalent project management software works.

Skills

1. Formulates independent new conclusions, original ideas, and solutions, can apply demanding analysis and modeling methods, to develop strategies for solving complex problems, to make decisions.
2. Develops an individual position based on one's analysis and can represent it in a debate.
3. Able to develop strategies for solving complex problems, to plan the solution, to make decisions, to provide professional advice to economic actors. It uses an interdisciplinary approach to analysis and practical problem solving, if necessary.
4. Able to formulate and solve a project-oriented network analysis using a graph-theoretic algorithm.
5. Able to formulate network analysis as a linear programming problem.
6. Can perform a comprehensive analysis using standard monitoring techniques (e.g. EVM).
7. Can perform resource allocation.
8. Can plan a project using project management software.

Attitude

1. Open and inclusive to new achievements in economics and practice.
2. Turns with interest to the results and solutions of related disciplines, open to networking.
3. Committed to quality work. In a project, in the case of group tasks determined, constructive, cooperative, proactive, tolerant and inclusive.
4. The planning and organization of one's professional career are motivated by the need to increase professional and social knowledge and social usefulness.

Independence and responsibility

1. Independently selects and applies the relevant problem-solving methods in areas important for organizational policy, strategy and management
2. Performs economic analysis, decision preparation, and consulting tasks independently.
3. Takes responsibility for its work, the organization it manages, its business, and its employees.

Teaching methodology

Lectures, calculations, optional tasks.

Materials supporting learning

- Az oktató által kiadott oktatási segédletek
- Teaching aids issued by the instructor

II. SUBJECT REQUIREMENTS

TESTING AND ASSESSMENT OF LEARNING PERFORMANCE

General Rules

The assessment of the learning outcomes set out in 2.2 is based on a written examination during the examination period, and a case study (partial performance assessment) and classroom activity during the semester.

Performance assessment methods

A. Exam: a test of the theoretical background and practical application of the topics covered during the semester. B. Classroom activity. c. Performance assessment: written assignment (case study) to be submitted and presented to assess the practical application of the theory.

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

- **partial performance measurement (case study)**: 50
- **classroom activity**: 50
- **total**: 100

Percentage of exam elements within the rating

- **written exam**: 80
- **partial performance measurement (case study)**: 10
- **classroom activity**: 10
- **total**: 100

Conditions for obtaining a signature, validity of the signature

Eligibility for the exam and signature is a condition for successful processing of a case study (partial performance measurement).

Issuing grades

Excellent	95
Very good	90–94
Good	75–89
Satisfactory	60–74
Pass	50–59
Fail	0-49

Retake and late completion

In accordance with the rules of the TVSZ.

Coursework required for the completion of the subject

participation in contact classes	48
homework preparation	24
independent acquisition of designated written curriculum	30
exam preparation	48
total	150

Approval and validity of subject requirements

Consulted with the Faculty Student Representative Committee, approved by the Vice Dean for Education, valid from: 04.11.2024.

III. COURSE CURRICULUM

THEMATIC UNITS AND FURTHER DETAILS

Topics covered during the term

The learning outcomes of 2.2 can be achieved by studying the following areas and topics

1 Characteristics of project phases, relationship between the project life cycle and the product life cycle.
2 Processes, process groups.
3 Project Success.
4 Main documents: project definition document, preliminary project scope description, project management plan.
5 Life cycle analysis.
6 Participants, roles.
7 Organizational issues: personnel management plan, organizational forms, human resource planning tools.
8 Network-based plannig: basics of graph theory, work breakdown structure, dependency definition, predecessor and successor activity lists, drawing and analysis of networks.
9 CPM, PERT.
10 MPM, GERT.
11 Estimation: errors, rules, accuracy, three levels, general techniques.
12 Resources: load, S-curve, resource allocation.
13 Tracking: EVM, ES.
14 Risk: qualitative and quantitative risk analysis.
15 Contract types.
16 Competition.
17 Project portfolio management: definition, steps, ranking, tracking.
18 Project management software practice.

Additional lecturers

Approval and validity of subject requirements