SUBJECT DATASHEET

PROJECT MANAGEMENT

BMEGT20M420

I. SUBJECT DESCRIPTION

1. SUBJECT DATA

Subject name
PROJECT MANAGEMENT

ID (subject code)	BMEGT20M420

Type of subject
contact course

Course types and lessons

Type	*Lessons*
Lecture	2
Practice	0
Laboratory	0

Type of assessment
term grade

Number of credits
3

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
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 summarizes 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. Know all the important elements of the project management concept.
2. Know and understand the organization and operation procedures of the technical processes in the field.
3. Understand the connections between the areas of corporate operation and project management.
4. Have an overview of the corporate processes in the field and the possible application of the methods of the field.
5. Have confident methodological knowledge in various areas of project management, see and understand their applicati-on pos-sibilities and perspectives.
6. Are familiar with the most basic graph-theoretic algorithms for management purposes and their solution procedure.
7. Know the most important monitoring techniques.
8. Understand how a prevalent project management software works.

Skills

1. Are able to synthesize the basic theories and concepts of project management, to formulate rational arguments, to form and defend one's opinion during discussions in different fields of project communication.
2. Are able to manage, organize, control and coordinate the development of technical, technological, investment, manufac-turing, logistics, quality assurance and IT processes.
3. In the course of their professional vocabulary, they confidently use the vocabulary of the project management professi-on, the basic scientific concepts of the profession and the elements of the special vocabulary based on them.
4. Are able to formulate network analysis as a linear programming problem.
5. Can perform a comprehensive analysis using standard monitoring techniques (e.g. EVM).
6. Can plan a project using project management software.

Attitude

1. Are critical of their own work and the work of their subordinates, they are innovative and proactive in dealing with economic problems. Are open and inclusive to new advances in economics and practice.
2. Strive to improve its knowledge and working relationships, and encourages, helps and supports its employees and subordinates.

Independence and responsibility

1. Independently select and apply the relevant problem-solving methods in areas of organizational policy, strategy and management.
2. Take responsibility for its own work, the organization it manages, its business, and its employees.
3. Perform economic analysis, decision preparation and consulting tasks independently.
4. Involve in research and development projects, mobilize their theoretical and practical knowledge and skills in the project group in an autonomous way, in cooperation with the other members of the group..

Teaching methodology

Lectures, computational exercises, case studies, guest speakers, optional homework assignments.

Materials supporting learning

- Sebestyén Z.: Projektmenedzsment, oktatási segédlet, 2018
- Egyéb, az oktató által kiadott oktatási segédletek (letölthető: https://edu.gtk.bme.hu)

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 two written mid-terms (summative assessment), a case study (partial assessment) and classroom activity.

Performance assessment methods

A. Performance assessment: a written examination, typically consisting of computational exercises, and to a lesser extent theoretical questions and/or test questions, to assess the practical application of the theory. B. Performance assessment: written assignment (case study) to be submitted and presented to assess the practical application of the subject matter. C. Classroom activity.

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

- **1. partial performance measurement (assignment, case study)**: 10
- **2. classroom activity**: 10
- **1. summary performance measurement** : 40
- **2. summary performance measurement**: 40
- **total**: 100

Percentage of exam elements within the rating

Conditions for obtaining a signature, validity of the signature

Issuing grades

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

Retake and late completion

Based on the Code of Studies

Coursework required for the completion of the subject

participation in contact classes	28
mid-term preparation for internships	0
preparation for performance evaluations	20
homework preparation	30
independent acquisition of designated written curriculum	12
exam preparation	0
total	90

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
10 PERT
11 MPM
12 Estimation: errors, rules, accuracy, three levels, general techniques.
13 Resources: load, S-curve, resource allocation.
14 Tracking: EVM, ES.
15 Risk: qualitative and quantitative risk analysis.
16 Contract types.
17 Tendering.
18 Project portfolio management: definition, steps, ranking.

Additional lecturers

Approval and validity of subject requirements