

Óbuda University Donát Bánki Faculty of Mechanical and Safety Engineering		Faculty / Organizational unit: BGK TAI		
<i>Course name and code: BTXPRE4BNF, Project Work and Project Management Credit: 4 Full-time 2025/2026 academic year 2nd semester</i>				
The courses in which the subject is taught: Mechanical Engineering BSc, Mechatronics Engineer BSc				
Responsible teacher:	Dr. Számadó Róza	Lecturer: Dr. Éva Beke		
Prerequisites: (with codes)	none			
Weekly hours:	Lectures: 2	Classroom practice: 2 Lab: 0		
Exam type (s,v,f):	mid-term grade			
The curriculum				
<i>Educational goal:</i> Preparation of project-based education. Understanding the concept of the project, its main elements, project roles, and management tools, mastering the basics of project planning and management, and working as a project team member. <u>Development of the competencies necessary for project planning and implementation.</u>				
<i>Theme: see the schedule</i>				
Schedule:				
Edu. week (consult.)	Topics of Lectures	Topics of Exercises		
1.				
2	Concept and characteristics of the project <ul style="list-style-type: none"> • Balance of the project triangle • Elements of the project 	Project organization – intuitively. Creating a project team, selecting topics (investment, product, software and organization development)		
3	National holiday break			
4	Project Lifecycle - Project Launch	Elaboration of the lecture related task in the established groups		
5	Planning the project process <ul style="list-style-type: none"> • Organizational forms • Project terms and conditions • The role of the project leader • Select the appropriate project member 	Project management methodology Successful and unsuccessful project Grouping of projects Process, documents, participants, tools of the project		
6	Planning the implementation of the project <ul style="list-style-type: none"> • Roles within the work team • Risk Management • Project planning techniques • Activity and resource plans • Closure Plan 	Computer-assisted processing of a project selected by the group (using a web design program)		
7	Mid-term report on the group project plan.			
8	Project implementation phase. Project control. Completion of the project	Mid-term report on the group project plan (submission).		
9	Computer support for project management tasks. Evaluation of the project			
10	Multidimensional comparison of investment alternatives.	Processing of the project selected by the group (selection) in the established groups		
11	Consultation (at a fixed time)			
12	Consultation (at a fixed time)	Mid-Year Report: Multi-criteria Comparison of Investment Alternatives (Document Submission and Presentation).		
13	Finalization of the PROJECT, evaluation, submission of documentation			
14	Finalization of the PROJECT, evaluation, submission of documentation			

Mid-term requirements (assignment, term, minutes, etc.)	
Educational week	The most important topics of the exercises: minutes, assignments
Biweekly	Verification of group assignments
7. and 11. or 12. week	Submit group assignment solutions
13. or 14. week	Holding a group presentation
<i>Method of replacement: See the study and examination requirements of the subject and the provisions of TVSZ</i>	
Eligibility for examination and conditions for signing:	
<ul style="list-style-type: none"> • participation in workshops (see TVSZ) • Completion of at least 60% of the summary submission 	
Details of tasks to be completed during the semester (by group);	
<p>Design a project with 12-20 activities (e.g. bathroom renovation, machine tool installation, commercial vehicle procurement, research task scheduling). Enter the estimated time of activities in an Excel spreadsheet! Deadline: Week 4 (1x per group per email)</p> <p>Create a Gantt diagram for your project, giving the project lead time, preferably using the Gantt project application! Deadline: Week 6 (by email 1x per group)</p> <p>Provide the logical relationship between the activities before and after the activities. (The project should have one start and one end activity!) Record the data in the web design program! Make sure the project is done! Examine what real-time lead-time reduction can be achieved by transforming your critical activity chain (modifying time data). Allocate resources to carry out the activities! Deadline: Week 8 (2 ". gan" files in email per group)</p> <p>Set up measurable weighted selection criteria with technical and economic criteria for purchasing a product (e.g. tire, bicycle, washing machine, machine tool, mobile phone). (The product should be related to the previous project!) Score, evaluate possible procurement alternatives based on a set of criteria, and decide which procurement is recommended. Deadline: Week 10 (Excel spreadsheet, 1x per group, via email)</p> <p>Beginning in Week 11, groups will present presentations throughout the semester. The subject of the presentation is the project design and selection (1x20 min ppt or prezi presentation).</p> <p>Assessment of semester work:</p> <p>The four subtasks are evaluated by the instructor (timely delivery, quality of the requested solution, uniqueness of the idea, and feasibility of the network plan). This results in 4 grades (F1, F2, F3, F4) from which we calculate an arithmetic mean.</p> <p>Presentations are evaluated by other groups from 1 to 5; we also calculate an arithmetic mean of these.</p> <p>The arithmetic mean of the two means gives the final group grade. The rating is multiplied by the number of people in the group. This number can be distributed to the group at its own discretion (!) As a mid-year grade. (e.g. a group of 4 people can split 14 points in multiple ways:</p> <p>Presentations are evaluated by other groups from 1 to 5; we also calculate an arithmetic mean of these.</p> <p>The arithmetic mean of the two means gives the final group grade. The rating is multiplied by the number of people in the group. This number can be distributed to the group at its own discretion (!) As a mid-year ticket. (e.g. a group of 4 people can split 14 points in multiple ways:</p> <ul style="list-style-type: none"> • 1 pc. outstanding and 3 pieces. you are medium. • 2 pcs. good and 2pcs. you are medium. • 2 pcs. outstanding and 2pcs. you are sufficient. • 1 pc. outstanding and 2 pieces. good and 1pcs. you are inadequate. •) <p>The instructor has a +/- 1 chance of correcting or deteriorating the student's final score (based on observed performance). Content of the two interim reports min. 15, max. 30 points, formal requirements min. 15, max. 30 points, documentation minimum 20 points, maximum 40 points, total max. 100 points. If the group's mid - term performance is less than 50% in any subtasks, then group members do not get signed! The signature can still be replaced by the first 10 days of the exam period as a signature replacement exam. Failure to complete the replacement will result in a permanent refusal to sign.</p>	

Exam type: mid-year grade

Assessment (achievement thresholds and grades for presentations and sub-tasks):

0 - 49.99%: Insufficient (1)

50 - 59.99%: Sufficient (2)

60 - 69.99% Medium (3)

70 - 79.99% Good (4)

80 - 100%: Outstanding (5)

References:

Guide to the Project Management Body of Knowledge (PMBOK guide)

Project Management Institute, 2017. p. 592, 6th edition.

<https://www.ganttproject.biz/download> (Ganttproject 2.8.5 Pilsen (build 2179))

Adrianne Watt: Project Management. The Open University of Hong Kong . 2014.

http://www.opentextbooks.org.hk/system/files/export/15/15694/pdf/Project_Management_15694.pdf