1. Subject name	**Material handling and warehousing processes**				
2. Subject name in Hungarian	Anyagmozgatási és raktározási folyamatok				
3. Code	**BMEKOALM225**	4. Evaluation type	**mid-term grade**	5. Credits	**4**
6. Weekly contact hours	**2 (9) Lecture**	**1 (5) Practice**	**0 (0) Lab**		
7. Curriculum	**Transportation Engineering MSc (K)**	8. Role	**Specialization (sp) at Transportation Engineering MSc (K)**		
9. Working hours for fulfilling the requirements of the subject					**120**
Contact hours	42	Preparation for seminars	8	Homework	45
Reading written materials	13	Midterm preparation	12	Exam preparation	0
10. Department	**Department of Material Handling and Logistics Systems**				
11. Responsible lecturer	Dr. Kovács Gábor				
12. Lecturers	Dr. Kovács Gábor, Sztrapkovics Balázs				
13. Prerequisites					

14. Description of lectures

The specific properties and main groups of the material handling systems. Characteristics of the material handling systems, the main groups, material handling tasks, material flow characteristics. The main groups of material handling machines and techniques. Performance and reliability of the material handling systems. Calculation of the material handling time. Material handling process examination. Secondary analysis, layout planning. Conventional storage systems, high bay warehouse systems. Order picking. Statistical sampling procedures. The functions of the packaging, packaging nation's economic role. The classification of packaging, packaging materials - different materials, packaging materials, packaging accessories. Cargo unit creation. Tenders.

15. Description of practices

Application of material handling and storage system analysis methods through practical examples, and preparation of the solution of the homeworks.

16. Description of labortory practices

17. Learning outcomes

A. Knowledge

- Knowledge of funds related to material handling systems.
- Knowledge of funds related to storage systems.
- Knowledge of funds related to packaging technology.

B. Skills

- Understand of the material handling systems, to describe their operation and to perform simpler related tasks.
- Understand of the storage systems, to describe their operation, and to perform simpler related tasks.
- Carrying out of simpler packaging design tasks.

C. Attitudes

- Strive to maximize their abilities to make their studies at the highest possible level, with a profound and independent knowledge, accurate and error-free, in compliance with the rules of the applicable tools, in collaboration with the instructors.

D. Autonomy and Responsibility

- Take responsibility for the quality of the work and the ethical standards that set an example for the classmates, using the knowledge acquired during the course

18. Requirements, way to determine a grade (obtain a signature)

2 homework (25%-25%), 2 tests (25-25%)

19. Opportunity for repeat/retake and delayed completion

Homeworks can both be resubmitted once. Both tests can be retaken once.

20. Learning materials

Students can download the subject notes in pdf format via Moodle.

Effective date	10 October 2019	**This Subject Datasheet is valid for**	Inactive courses