



1. Subject name	Lean management				
2. Subject name in Hungarian	Lean menedzsment				
3. Code	BMEKOALM322	4. Evaluation type	mid-term grade	5. Credits	4
6. Weekly contact hours	2 (9) Lecture	1 (5) Practice	0 (0) Lab		
7. Curriculum	Logistics Engineering MSc (L)	8. Role	Mandatory (mc) at Logistics Engineering MSc (L)		
9. Working hours for fulfilling the requirements of the subject					120
Contact hours	42	Preparation for seminars	8	Homework	30
Reading written materials	28	Midterm preparation	12	Exam preparation	0
10. Department	Department of Material Handling and Logistics Systems				
11. Responsible lecturer	Dr. Bóna Krisztián				
12. Lecturers	Sztrapkovich Balázs				
13. Prerequisites					
14. Description of lectures					
Introducing the continuous improvement methods. Teamwork, the establishment of a suggestion system, the importance, and techniques of motivating the employee. Creativity techniques, advantages and disadvantages of each technique. Problem-finding tools, failure analysis methods application in practice, defining the required datas for each method. The bases of standardization, the steps to implement standards in the company, PDCA and SDCA cycles. The zero failure concept. The elimination of the failures (Jidoka, Poka-Yoke). Production leveling methods in lean management, mathematical formulas to apply Heijunka in the production. Process improvement techniques, and methods, the schedule of the Kaizen events. The importance of the lead time, Value Stream mapping , element symbols and steps. The bases of ergonomy. The main ergonomy principles durint cell designing. The methods of REBA analysis. Introducing Just in time and Just in Sequence methods, and it's impacts tot he supply chain. The main goal and principles of Six Sigma method, the mathematical and statistical background. The connection between lean and six sigma.					
15. Description of practices					
Application of the methods and techniques which was presented in the lecture. Introducing case studies, and also apply the methods during workshops. The preparation of the solution of the homework, consultations about the homework, and making the presentations, and rating the homeworks.					
16. Description of labortory practices					

17. Learning outcomes					
A. Knowledge					
<ul style="list-style-type: none">• Overview Lean Tools, Techniques & House of Lean• Knowledge of failure mode analysis and problem solving methods.• Knowledge of value stream mapping.• Knowledge of pull production material supply methods					
B. Skills					
<ul style="list-style-type: none">• Analysis of the processes by lean tools.• Planning and developing pull based production systems• Application of complex quality management methods					
C. Attitudes					
<ul style="list-style-type: none">• 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					
<ul style="list-style-type: none">• 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)

The requirement of the complete the subject is to fulfill the homework and two midterm [test](#). The homework (20%), and the tests (40%-40%) are included in the final grade.

19. Opportunity for repeat/retake and delayed completion

Each midterm [test](#) can be retaken once, or one of the tests can be retaken twice if the homework and the other [test](#) is OK.

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
----------------	-----------------	-------------------------------------	------------------