



1. Subject name	Construction of vehicle manufacturing systems I.				
2. Subject name in Hungarian	Járműgyártás és gyártórendszer tervezés I.				
3. Code	BMEKOGGM649	4. Evaluation type	exam grade	5. Credits	4
6. Weekly contact hours	2 (10) Lecture	0 (0) Practice	2 (11) Lab		
7. Curriculum	Vehicle Engineering MSc (J)	8. Role	Specialization (sp) at Vehicle Engineering MSc (J)		
9. Working hours for fulfilling the requirements of the subject					120
Contact hours	56	Preparation for seminars	18	Homework	16
Reading written materials	16	Midterm preparation	4	Exam preparation	10
10. Department	Department of Automotive Technologies				
11. Responsible lecturer	Dr. Markovits Tamás				
12. Lecturers	Dr. Markovits Tamás, Dr. Dömötör Ferenc				
13. Prerequisites					
14. Description of lectures					
<p>Design procedure of typical manufacturing process parameters, based on plastic deformation of structural materials. Design of machine elements (preliminary products, fitting allowance of technology). Sequence of technological process, selection of machines, selection of individual operations, concentration of operations, cost analysis of the procedure. Structure of manufacturing tools, used in automotive industry. Harmony of the requirements (size, dimensions of the tools). Spring type reaction of the structural material, use of deep drawing method in the automotive industry, special features of deep drawing technology.</p> <p>Planning processes and system elements for thermal or beam joining (point, arc, laser welding, soldering) technologies for body, vehicle chassis and vehicle elements.</p> <p>Design steps for system components and processes in welding technology. Introducing internal connections (materials, devices, tools, equipment).</p>					
15. Description of practices					
16. Description of laboratory practices					
Independent design of system, system components and processes in case of plating forming and joining processes.					
17. Learning outcomes					
<p>A. Knowledge</p> <ul style="list-style-type: none"> • Knows the relations in case of forming and welding processes. <p>B. Skills</p> <ul style="list-style-type: none"> • Ability to develop the processes. <p>C. Attitudes</p> <ul style="list-style-type: none"> • Openness to the new possibilities of the field. <p>D. Autonomy and Responsibility</p> <ul style="list-style-type: none"> • Participate in individual problem solving. 					
18. Requirements, way to determine a grade (obtain a signature)					
<p>During the semester 1 midterm test has to be completed with more the 50 % of the maximal points.</p> <p>The requirements for obtaining the signature are the taking part on labs, submit the independent task in satisfactory level, completing the midterm test.</p> <p>The grade can be obtained from the written exam.</p>					
19. Opportunity for repeat/retake and delayed completion					
Midterm exam can be substitute once, the supplementation of the labs and planing tasks is possible once during the					

supplementation week.

20. Learning materials

Presentation notes.

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