



1. Subject name	Mechatronic design of vehicle systems				
2. Subject name in Hungarian	Gépjármű-mechatronikai rendszerek tervezése				
3. Code	BMEKOGGM622	4. Evaluation type	mid-term grade	5. Credits	5
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					150
Contact hours	56	Preparation for seminars	18	Homework	58
Reading written materials	8	Midterm preparation	0	Exam preparation	10
10. Department	Department of Automotive Technologies				
11. Responsible lecturer	Dr. Tihanyi Viktor				
12. Lecturers	Dr. Tihanyi Viktor				
13. Prerequisites					
14. Description of lectures	Elektromechanics fundamentals Electric machine types Construction of electric machines Losses, temperature rise and cooling of electric machines Modeling of electric machines Power electronics Losses, temperature rise and cooling of power electronics Control of actuators Connectors Automotive requirements of mechatronic systems Complex mechatronic systems				
15. Description of practices					
16. Description of laboratory practices	Self chosen mechatronic system evaluation				
17. Learning outcomes	A. Knowledge <ul style="list-style-type: none">• Knowledge of Mechatronics B. Skills <ul style="list-style-type: none">• Ability to develop mechatronic units C. Attitudes <ul style="list-style-type: none">• Openness to new opportunities in the field D. Autonomy and Responsibility <ul style="list-style-type: none">• Participate in solving independent task				
18. Requirements, way to determine a grade (obtain a signature)	An individual task fulfillment is required for the signature. The final mark will be provided taking the exam result and the individual task result into account with weighted average of 60-40%.				
19. Opportunity for repeat/retake and delayed completion	Individual tasks replacement one				
20. Learning materials	Slides				

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