



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 labortory 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 fullfilment is required for the signiture. 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 taks replacement one					
20. Learning materials					
Slides					

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