Electronically controlled vehicle systems PhD

1. Subject name	Electronically controlled vehicle systems PhD				
2. Subject name in Hungarian	Elektronikusan szabályozott járműrendszerek PhD				
3. Code	BMEKOGJD003	4. Evaluation type	exam grade	5. Credits	4
6. Weekly contact hours	4 (0) Lecture	0 (0) Practice	0 (0) Lab		
7. Curriculum	PhD Programme	8. Role	Basic course		
9. Working hours for fulfilling the requirements of the subject					120
Contact hours	28	Preparation for seminars	14	Homework	22
Reading written materials	26	Midterm preparation	30	Exam preparation	0
10. Department	Department of Automotive Technologies				
11. Responsible lecturer	Dr. Tihanyi Viktor				
12. Lecturers	Dr. Tihanyi Viktor				
13. Prerequisites					

14. Description of lectures

Our students can effectively use the knowledge of this subjects during their research on modern, electronically controlled vehicle dynamics systems. Topics: design problem of electronically controlled vehicle dynamics systems used in modern vehicles; different types of suspension control systems; electronically controlled levelling systems of commercial vehicles; electronically controlled steering, braking and driving systems; stablility control system.

15. Description of practices

16. Description of labortory practices

17. Learning outcomes

A. Knowledge
- Familiar with vehicle dynamics fundamentals.

B. Skills
- Ability to research and develop specific processes.

C. Attitudes
- Openness to new opportunities in the field.

D. Autonomy and Responsibility
- Participate in independent research task.

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

The acquisition of the signature of the subject, and, in addition, the condition of taking exam is giving in the complete individual student homework for deadline. The exam is oral.

19. Opportunity for repeat/retake and delayed completion

There is one occasion to retake the exam.

20. Learning materials

1. Hans Pacejka: Tire and Vehicle Dynamics, Elsevier B-ELS-049, ISBN of 9780080970172, 2012.
2. Tire and Wheel Technology, 2011, SAE International SP-2296, ISBN of 978-0-7680-4735-6, 2011.
3. Vehicle Dynamics Stability and Control, 2011, SAE International SP-2297, ISBN of 978-0-7680-4736-3, 2011.
4. Rao V. Dukkipati, Jian Pang, Mohamad S. Qatu, Gang Sheng, Zuo Shuguang, Road Vehicle Dynamics, SAE International, R-366, ISBN of 978-0-7680-1643-7, 2008.

Effective date	27 November 2019	This Subject Datasheet is valid for	Inactive courses