



1. Subject name	Intelligent and autonomous vehicle control system				
2. Subject name in Hungarian	Intelligens és autonóm járműirányítási rendszerek				
3. Code	BMEKOKAD019	4. Evaluation type	exam grade	5. Credits	4
6. Weekly contact hours	2 (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	30	Homework	10
Reading written materials	10	Midterm preparation	0	Exam preparation	42
10. Department	Department of Control for Transportation and Vehicle Systems				
11. Responsible lecturer	Dr. Németh Balázs				
12. Lecturers	Dr. Németh Balázs				
13. Prerequisites					
14. Description of lectures					
Hierarchy in the vehicle control systems. Robust, LPV and MPC vehicle control design methods. Predictive cruise control systems. Interactions of autonomous and human-driven vehicles. Autonomous vehicle control in various traffic scenarios. Machine learning techniques and autonomous vehicles.					
15. Description of practices					
16. Description of laboratory practices					
17. Learning outcomes					
A. Knowledge B. Skills C. Attitudes D. Autonomy and Responsibility					
18. Requirements, way to determine a grade (obtain a signature)					
Final exam and homework.					
19. Opportunity for repeat/retake and delayed completion					
20. Learning materials					
Effective date	27 November 2019	This Subject Datasheet is valid for		Inactive courses	