



1. Subject name	Modern control theory II.				
2. Subject name in Hungarian	Modern irányításelmélet II				
3. Code	BMEKOKAD002	4. Evaluation type	exam grade	5. Credits	5
6. Weekly contact hours	4 () Lecture	0 () Practice	0 () Lab		
7. Curriculum	PhD Programme	8. Role	Basic course		
9. Working hours for fulfilling the requirements of the subject					56
Contact hours	56	Preparation for seminars	0	Homework	0
Reading written materials	0	Midterm preparation	0	Exam preparation	0
10. Department	Department of Control for Transportation and Vehicle Systems				
11. Responsible lecturer	Dr. Bokor József				
12. Lecturers	Dr. Bokor József, Dr. Szabó Zoltán				
13. Prerequisites					
14. Description of lectures	<p>This course provides an introduction to robust control theory. Starting from basics, i.e., signal and system norms, stability, stabilizability and performance measures we develop first the classical LQ theory, followed by the H2 design. We emphasise the role of the small gain approach in the robust analysis and synthesis. The main part of the course is dedicated to the H∞ design, both the two Riccati and the LMI approach. Finally the structured singular value with μ analysis and synthesis is presented.</p>				
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)	The credits are obtained by completing the design task and by passing the oral exam. Prior to be accepted for the exam, students should fulfil the design task and should summarize their results in a report.				
19. Opportunity for repeat/retake and delayed completion					
20. Learning materials					
Effective date	3 February 2020	This Subject Datasheet is valid for	Inactive courses		