



1. Subject name	Air Traffic Management (ATM)				
2. Subject name in Hungarian	Air Traffic Management (ATM)				
3. Code	BMEKOVRM224	4. Evaluation type	mid-term grade	5. Credits	3
6. Weekly contact hours	1 (3) Lecture	0 (0) Practice	1 (4) Lab		
7. Curriculum	Transportation Engineering MSc (K)	8. Role	Specialization (sp) at Transportation Engineering MSc (K)		
9. Working hours for fulfilling the requirements of the subject					90
Contact hours	28	Preparation for seminars	9	Homework	0
Reading written materials	47	Midterm preparation	6	Exam preparation	0
10. Department	Department of Aeronautics and Naval Architectures				
11. Responsible lecturer	Dr. Rohács Dániel				
12. Lecturers	Dr. Rohács Dániel, Gál István				
13. Prerequisites					
14. Description of lectures					
DEFINITION OF ATM - History and evolution of Air Traffic Management. The need for Air Traffic Management. ATM in the complete Air Traffic System. BASIC ELEMENTS - The structure of air traffic. International rules and laws. Air Traffic Flow Management. Air Traffic Control. Air Space Management THE LIMITATIONS OF CURRENT SYSTEM - The history of air traffic growing. Industry crises and their effects. Important traffic hubs and routes. Structure and evolution of air traffic. FUTURE OBJECTIVES AND DOCUMENTS - Traffic analysis and forecasting. Single European Sky. SESAR projects. Clean Sky projects. FlighPath 2050. ADVANCED AND FUTURE SYSTEMS - Separating and collision avoidance systems. Augmented Reality systems. Development of Remote Tower projects. Slot and take-off management. Workload and stress measurement methods.					
15. Description of practices					
16. Description of labortory practices					
During labor courses students become familiar with the basic processes and future developments, especially with rTower and stress monitoring methods.					
17. Learning outcomes					
A. Knowledge <ul style="list-style-type: none">Knows and understands the basic methods and necessities of Air Traffic Management.Knows the system of ATM and its subprocesses, related methods and technologies, and their capabilities.Get familiar with the current important research areas and objectives, and with actual projects. B. Skills <ul style="list-style-type: none">Based on the knowledge above the student can master the deeper, more specific knowledge of ATM activities and subprocesses quickly and easily. C. Attitudes <ul style="list-style-type: none">Interested, responsive. D. Autonomy and Responsibility					
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18. Requirements, way to determine a grade (obtain a signature)					
Performing laboratory practice and 1 mid-term exam (measuring the theoretical knowledge). The final grade is the result of the mid-term exam.					
19. Opportunity for repeat/retake and delayed completion					

Retake possibility of a laboratory exercise or the mid-term exam

20. Learning materials

The presentation about the lectures

Literature

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