



1. Subject name	Air Traffic Control				
2. Subject name in Hungarian	Air Traffic Control				
3. Code	BMEKOVVM235	4. Evaluation type	exam grade	5. Credits	4
6. Weekly contact hours	2 (9) Lecture	0 (0) Practice	1 (5) 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					120
Contact hours	42	Preparation for seminars	11	Homework	0
Reading written materials	53	Midterm preparation	4	Exam preparation	10
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					
<p>ELEMENTS OF AIR TRAFFIC CONTROL - History of ATC. Elements of ATC. Aerodrome Control (TWR). Approach Control (APP). Area Control (ACC).</p> <p>AIRSPACE CLASSES AND CATEGORIES - Definition of airspace. Classes of airspace. Elements of airspace. Hungarian airspace. Sectorization. Special airspace types.</p> <p>MODERN ATC METHODS - Limitations of previous methods. National and European characteristic. Functional Airspace Block project. Flexible Use of Airspace. Free Route Airspace. HUFRA (Hungarian Free Route Airspace)</p> <p>SUPPORT SYSTEMS - Tasks and work structure of Air Traffic Control Officers. Separation. Dangerous situations. Short- and Mid Term Conflict Alert (STCA & MTCA). Proximity Warning methods (MSAW & APW).</p> <p>HUMAN FACTORS OF ATC - Minimum skills and basic knowledge. Methods of assessing abilities, FEAST test. Psychological factors. Health factors. Human factors. Case studies.</p>					
15. Description of practices					
16. Description of laboratory practices					
During labor courses students become familiar with ATC procedures and methods and effects of measuring human factors.					
17. Learning outcomes					
<p>A. Knowledge</p> <ul style="list-style-type: none"> Knows and understands the work of ATC. Knows the elements of airspaces, the elements, methods and support systems of the Air Traffic Control. Knows the requirements of ATCOs, the concept of workload and human factors, their measurement capabilities. <p>B. Skills</p> <ul style="list-style-type: none"> Based on the knowledge above the student can master the deeper, more specific knowledge of ATC activities, elements and subprocesses quickly and easily. <p>C. Attitudes</p> <ul style="list-style-type: none"> Interested, responsive. <p>D. Autonomy and Responsibility</p> <ul style="list-style-type: none"> Is able to independently further propagate in various special fields of the learned field. 					
18. Requirements, way to determine a grade (obtain a signature)					
Mid-term requirement: Performing laboratory exercises and 1 mid term exam					
Final grade: 1 exam measuring the theoretical knowledge. The final grade is the result of the exam					
19. Opportunity for repeat/retake and delayed completion					
Retake possibility of a laboratory exercise or the mid-term exam					
Retake exam possible according to the general rules of BME					

20. Learning materials

The presentation about the lectures
Literature

Effective date	10 October 2019	This Subject Datasheet is valid for	2024/2025 semester II
-----------------------	-----------------	--------------------------------------------	-----------------------
