



1. Subject name	Safety in air traffic control				
2. Subject name in Hungarian	Safety in air traffic control				
3. Code	BMEKOKAM243	4. Evaluation type	mid-term grade	5. Credits	3
6. Weekly contact hours	2 (7) Lecture	0 (0) Practice	0 (0) 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	4	Homework	0
Reading written materials	40	Midterm preparation	18	Exam preparation	0
10. Department	Department of Control for Transportation and Vehicle Systems				
11. Responsible lecturer	Dr. Meyer Dóra				
12. Lecturers	Dr. Meyer Dóra				
13. Prerequisites					
14. Description of lectures					

Organizational and regulatory environment of Air traffic control. Basic concepts of aviation safety.  
Safety assesment model (SAM, phase breakdown, tasks for each phase, FHA, PSSA, SSA, process for requesting relevant system requirements, hazard and risk analysis, system specification, system architecture definition, testing, commissioning, monitoring, verification and validation of the change process, certification, licensing, documentation).  
Flight safety criteria: system requirements, safety requirements, safety certification.  
Security Analysis Methodologies for Air Traffic Control Security Verification:  
Hazard Analysis Methodologies. Risk analysis. Consequences of faulty operation - determination of severity.  
Risk classification. Human factors of aviation safety.  
Safety requirements for software used in air traffic control.  
Hardware redundancies used in air traffic control.  
Event reporting systems.  
Event Investigation Process.  
Operational areas highlighted in terms of aviation safety.

#### **15. Description of practices**

#### **16. Description of labortory practices**

#### **17. Learning outcomes**

##### **A. Knowledge**

- knows the aviation safety strategy policies and methods;
- knows the principles and procedures of hazard and risk analysis of aviation safety;
- knows the EUROCONTROL SAM process and tools;
- knows the legal background of aviation related incident investigation and the incident investigation process;
- knows the incident reporting processes, systems, surfaces;
- knows the ATM SMS with legal background;
- knows the ICAO defined safety promotion activities;
- knows the ISQMS;

##### **B. Skills**

- Is capable of analyzing, specifying, developing safety management systems, subsystems in the field of air traffic control;

##### **C. Attitudes**

- is interested in modern aviation safety solutions;
- capable of thinking in support of algorithmic safety hazard and risk analysis, which can be applied in other high

security areas;

- participates in solving aviation safety problems in the field of air traffic control, works efficiently and willingly to work with specialists in other fields;

D. Autonomy and Responsibility

- is also able to apply the knowledge acquired here to other systems unknown to it.

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

Three midterm exams, all must be sufficient , final semester mark is the rounded up average of the three midterm exams.

#### **19. Opportunity for repeat/retake and delayed completion**

Two midterm exams can be retried

#### **20. Learning materials**

Lecture Notes

<b>Effective date</b>	10 October 2019	<b>This Subject Datasheet is valid for</b>	Inactive courses
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