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| 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

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