Security issues of Intelligent transportation systems PhD

1. Subject name	Security issues of Intelligent transportation systems PhD				
2. Subject name in Hungarian	Intelligens közlekedési rendszerek védelmi kérdései PhD				
3. Code	BMEKOGGD801	4. Evaluation type	exam grade	5. Credits	2
6. Weekly contact hours	2 (0) Lecture	0 (0) Practice	0 (0) Lab		
7. Curriculum	PhD Programme	8. Role	Specific course		
9. Working hours for fulfilling the requirements of the subject					60
Contact hours	28	Preparation for seminars	14	Homework	5
Reading written materials	5	Midterm preparation	8	Exam preparation	0
10. Department	Department of Automotive Technologies				
11. Responsible lecturer	Dr. Török Árpád				
12. Lecturers	Dr. Török Árpád				
13. Prerequisites					

14. Description of lectures

Critical evaluation of the scientific and professional background of IT systems. Identifying the evolution of communication channels, data formats and processes. Identifying the main developmental relationships of infections and adverse effects and identifying novel patterns of possible prevention strategies. Analysis of threats related to IT systems and implementation of new technological solutions (autonomous transport) in macroscopic traffic model.

15. Description of practices

16. Description of labortory practices

17. Learning outcomes

A. Knowledge
- Familiar with security questions of ITS frameworks.

B. Skills
- Ability to research and develop specific processes.

C. Attitudes
- Openness to new opportunities in the field.

D. Autonomy and Responsibility
- Participate in independent research task.

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

The acquisition of the signature of the subject, and, in addition, the condition of taking exam is giving in the complete individual student homework for deadline. The exam is oral.

19. Opportunity for repeat/retake and delayed completion

20. Learning materials

Stübing, H. (2013). Multilayered security and privacy protection in Car-to-X networks: solutions from application down to physical layer. Springer Science & Business Media.
Delgrossi, L., & Zhang, T. (2012). Vehicle safety communications: protocols, security, and privacy (Vol. 103).

Effective date	27 November 2019	This Subject Datasheet is valid for	Inactive courses