



1. Subject name	Biometric identification in networked computer systems				
2. Subject name in Hungarian	Biometrikai személyazonosítás számítógépes rendszerekben				
3. Code	BMEKOALD004	4. Evaluation type	exam grade	5. Credits	3
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	6	Homework	8
Reading written materials	2	Midterm preparation	6	Exam preparation	10
10. Department	Department of Material Handling and Logistics Systems				
11. Responsible lecturer	Dr. Szirányi Tamás				
12. Lecturers	Dr. Szirányi Tamás				
13. Prerequisites					
14. Description of lectures					
The aim of the course is to provide students with independent observance of regularities in the following semester: principles of operation of personal identification systems, engineering feasibility and practical systems; complex identification systems for intelligent vehicles, operational interfaces, computer security systems; measurable physical characteristics of individuals; legal issues in biometrics.					
15. Description of practices					
16. Description of laboratory practices					
17. Learning outcomes					

A. Knowledge

- Knowing the biometrics of persons and their mathematical description.
- Having comprehensive knowledge about the topic of fingerprint identification.
- Knowing the mathematical methods of face recognition.
- Knowing the basics of shape recognition.
- Knowing the basic properties of recognition based on iris and retina.
- Knowing the topic of hand and handwriting recognition.
- Knowing the identification based on DNA.
- Knowing the topics of gait recognition, identification based on typewriting and dynamic features.
- Has comprehensive knowledge about complex identification systems.

B. Skills

- Being able to apply the knowledge in tasks related identification and recognition.
- Application of decision making methods.
- Being able to apply of different shape recognition algorithms.
- Being able to solve recognition problems based on biometrics.
- Being able to solve the problems alone or in group and efficiently transfer the knowledge.
- Having original/innovative ideas.

C. Attitudes

- Working efficiently alone and in group.
- Seeking for relations to other subjects.
- Being open to use mathematical and informatic tools.
- Seeking to know and learn the necessary tools.
- Seeking to solve the problems accurately and error-free.

D. Autonomy and Responsibility

- Finding solutions alone.
- Taking into considerations the effects of the decisions.
- Applying systematic approach.

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

The evaluation of the learning results is based on the written (homework) and oral (oral exam) performance.

19. Opportunity for repeat/retake and delayed completion

The homework can be corrected until the end of the week of examinations.

The oral exam can be re-take first free of charge. The second and higher re-take of the same subject has charge regulated by the university.

20. Learning materials

Online notes provided by the department; Anil K. Jain, Patrick Joseph Flynn, Arun A. Ross: Handbook of Biometrics, ISBN 978-0-387-71040-2.

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