

Faculty of Fundamental Problems of Technology						
COURSE CARD						
Name in polish	:	Systemy Identyfikacyjne				
Name in english	:	Identification Systems				
Field of study	:	Computer Science				
Specialty (if applicable)	:					
Undergraduate degree and form of	:	masters, stationary				
Type of course	:	optional				
Course code	:	E2_W25				
Group rate	:	Yes				
		Lectures	Exercides	Laboratory	Project	Seminar
Number of classes held in schools (ZZU)		30	30			
The total number of hours of student work-load (CNPS)		60	120			
Assesment		pass				
For a group of courses final course mark		X				
Number of ECTS credits		3	3			
including the number of points corresponding to the classes of practical (P)			3			
including the number of points corresponding occupations requiring direct contact (BK)		3	3			
PREREQUISITES FOR KNOWLEDGE, SKILLS AND OTHER POWERS						
COURSE OBJECTIVES						
<p>C1 presentation of identification techniques with personal identity documents, biometric methods</p> <p>C2 getting skills in designing solutions based on identity documents and biometrics</p>						

COURSE LEARNING OUTCOMES

The scope of the student's knowledge:

W1

W2

W3

W4

W5

The student skills:

U1

U2

U3

U4

The student's social competence:

K1

K2

K3

COURSE CONTENT

Type of classes - lectures

Wy1	electronic identification documents	8h
Wy2	graphical protection of identification documents	2h
Wy3	overview of biometric systems	4h
Wy4	reliability issues for biometric systems	6h
Wy5	protection of biometric data	6h
Wy6	physical monitoring based on identification systems	4h

Type of classes - exercises

Ćw1	protocol analysis of protocols for electronic identification documents	4h
Ćw2	design of applications based on electronic identity documents	6h
Ćw3	analysis of biometrics	4h
Ćw4	design of solutions based on biometric methods	6h
Ćw5	management of sensitive information	6h

Applied learning tools		
<ol style="list-style-type: none"> 1. Traditional lecture 2. Multimedia lecture 3. Solving tasks and problems 4. Solving programming tasks 5. Consultation 6. Self-study students 		
EVALUATION OF THE EFFECTS OF EDUCATION ACHIEVEMENTS		
Value	Number of training effect	Way to evaluate the effect of education
F1	W1-W5, K1-K3	
F2	U1-U4, K1-K3	
$P = \%*F1 + \%*F2$		
BASIC AND ADDITIONAL READING		
<ol style="list-style-type: none"> 1. 2. 		
SUPERVISOR OF COURSE		
dr Przemysław Kubiak		

RELATIONSHIP MATRIX EFFECTS OF EDUCATION FOR THE COURSE

Identification Systems

WITH EFFECTS OF EDUCATION ON THE DIRECTION OF COMPUTER SCIENCE

Course training effect	Reference to the effect of the learning outcomes defined for the field of study and specialization (if applicable)	Objectives of the course**	The contents of the course**	Number of teaching tools**
W1	K2_W01 K2_W02 K2_W04 K2_W05 K2_W06 K2_W07 K2_W08 K2_W09	C1	Wy1-Wy6	1 2 5 6
W2	K2_W01 K2_W02 K2_W04 K2_W05 K2_W06 K2_W07 K2_W08 K2_W09	C1	Wy1-Wy6	1 2 5 6
W3	K2_W01 K2_W02 K2_W04 K2_W05 K2_W06 K2_W08 K2_W09	C1	Wy1-Wy6	1 2 5 6
W4	K2_W01 K2_W02 K2_W04 K2_W05 K2_W07 K2_W08 K2_W09 K2_W11	C1	Wy1-Wy6	1 2 5 6
W5	K2_W01 K2_W02 K2_W04 K2_W05 K2_W06 K2_W07 K2_W08 K2_W09	C1	Wy1-Wy6	1 2 5 6
U1	K2_U01 K2_U02 K2_U03 K2_U08 K2_U09 K2_U10 K2_U12 K2_U15 K2_U16 K2_U17 K2_U18 K2_U19 K2_U20 K2_U21	C2	Ćw1-Ćw5	3 4 5 6
U2	K2_U01 K2_U02 K2_U03 K2_U08 K2_U09 K2_U10 K2_U12 K2_U15 K2_U16 K2_U17 K2_U18 K2_U19 K2_U20 K2_U21	C2	Ćw1-Ćw5	3 4 5 6
U3	K2_U01 K2_U03 K2_U08 K2_U09 K2_U10 K2_U12 K2_U13 K2_U14 K2_U15 K2_U16 K2_U18 K2_U19 K2_U21	C2	Ćw1-Ćw5	3 4 5 6
U4	K2_U01 K2_U02 K2_U09 K2_U12 K2_U15 K2_U16 K2_U17 K2_U18 K2_U19 K2_U20 K2_U21 K2_U22	C2	Ćw1-Ćw5	3 4 5 6
K1	K2_K01 K2_K03 K2_K04 K2_K05 K2_K10 K2_K14 K2_K15 K2_K16	C1 C2	Wy1-Wy6 Ćw1-Ćw5	1 2 3 4 5 6
K2	K2_K03 K2_K04 K2_K07 K2_K09 K2_K10 K2_K14 K2_K15 K2_K16	C1 C2	Wy1-Wy6 Ćw1-Ćw5	1 2 3 4 5 6
K3	K2_K01 K2_K02 K2_K03 K2_K04 K2_K05 K2_K10 K2_K14 K2_K15 K2_K16	C1 C2	Wy1-Wy6 Ćw1-Ćw5	1 2 3 4 5 6