Faculty of Fundamental Problems of Technology
COURSE CARD

Name in polish	:	**Bazy Danych**
Name in english	:	**Databases**
Field of study	:	Computer Science
Specialty (if applicable)	:	
Undergraduate degree and form of	:	masters, stationary
Type of course	:	optional
Course code	:	E2_W13
Group rate	:	Yes

	Lectures	Exercides	Laboratory	Project	Seminar
Number of classes held in schools (ZZU)	15	15	30		
The total number of hours of student work-load (CNPS)	30	30	120		
Assesment	pass				
For a group of courses final course mark	X				
Number of ECTS credits	1	2	3		
including the number of points corresponding to the classes of practical (P)		2	3		
including the number of points corresponding occupations requiring direct contact (BK)	1	2	3		

PREREQUISITES FOR KNOWLEDGE, SKILLS AND OTHER POWERS
It is required to pass the following module: Databases and Information Management

COURSE OBJECTIVES

C1 Presentation of the techniques related to the designing of database applications, data warehouses and research directions

C2 Discussing of the problems related to the designing of database applications and data warehouses

C3 Creating of the database application and data warehouse

COURSE LEARNING OUTCOMES

The scope of the student's knowledge:

W1 Knows the basic rules and procedures of creating database applications

W2 Knows the basic rules and procedures of creating data warehouse

W3 Knows different databases models

W4 Knows the current trends of databases development

The student skills:

U1 Can create database applications

U2 Can create data warehouses

U3 Can use languages and tools needed for using non-relational databases

The student's social competence:

K1 Can work in a project group creating the advanced database applications

COURSE CONTENT

Type of classes - lectures		
Wy1	Creating Database Application	4h
Wy2	Data Warehauses	4h
Wy3	MDX- the language supporting OLAP cubes	2h
Wy4	XML Databases	2h
Wy5	The new trends in databases	3h
Type of classes - exercises		
Ćw1	The Basic Aspects of Databases	3h
Ćw2	Designing Database Applications	4h
Ćw3	Designing Data Warehouse	4h
Ćw4	OLAP Cubes	h
Ćw5	XML Databases	h
Type of classes - laboratory		
Lab1	The Project Teams and the Application Scope	2h
Lab2	The Project of Database Application	4h
Lab3	The Implementation of the Database Application	8h
Lab4	The Presentaion of the Database Application	4h
Lab5	The Data Warehouse Project	4h
Lab6	The Implementation of the Data Warehouse	4h
Lab7	The Presentation of Data Warehouse	h

Applied learning tools
1. Traditional lecture 2. Multimedia lecture 3. Self-study students

EVALUATION OF THE EFFECTS OF EDUCATION ACHIEVEMENTS		
Value	Number of training effect	Way to evaluate the effect of education
F1	W1-W4, K1-K1	
F2	U1-U3, K1-K1	
F3	U1-U3, K1-K1	
P=%*F1+%*F2+%*F3		

BASIC AND ADDITIONAL READING
1. R. Muller, Database design for Smarties. Using UML for Data Modelling, Morgan Kaufmann Publishing 1999 2. R. Kimball, The Data Warehouse Toolkit: The Complete Guide to Dimensional Modeling, John Wiley and Sons, 2002 3. WWW papers

SUPERVISOR OF COURSE
dr Wojciech Macyna

RELATIONSHIP MATRIX EFFECTS OF EDUCATION FOR THE COURSE
Databases
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_W06 K2_W07	C1	Wy1-Wy5	1 2 3
W2	K2_W01 K2_W06	C1	Wy1-Wy5	1 2 3
W3	K2_W04 K2_W07	C1	Wy1-Wy5	1 2 3
W4	K2_W01 K2_W05	C1	Wy1-Wy5	1 2 3
U1	K2_U17 K2_U22	C2 C3	Ćw1-Ćw5 Lab1-Lab7	3
U2	K2_U22	C2 C3	Ćw1-Ćw5 Lab1-Lab7	3
U3	K2_U01 K2_U15	C2 C3	Ćw1-Ćw5 Lab1-Lab7	3
K1	K2_K01 K2_K06 K2_K07	C1 C2 C3	Wy1-Wy5 Ćw1-Ćw5 Lab1-Lab7	1 2 3