

FACULTY OF ELECTRICAL  
ENGINEERING**SUBJECT CARD**

Name in Polish: **Bazy danych**  
 Name in English: **Databases**  
 Main field of study (if applicable): **Electrical Engineering**  
 Specialization (if applicable):  
 Level and form of studies: **1st level, part-time**  
 Kind of subject: **optional**  
 Subject code: **ELR041365**  
 Group of courses: **NO**

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU):			10		
Number of hours of total student workload (CNPS):			108		
Form of crediting:			crediting with grade		
For group of courses mark (X) final course:					
Number of ECTS points:			4		
including number of ECTS points for practical (P) classes :			4		
including number of ECTS points for direct teacher-student contact (BK) classes:			2.80		

**PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES**

1. has basic computer literacy
2. has basic knowledge about searching for technical information
3. is able to write computer programmes based on given algorithm

**SUBJECT OBJECTIVES**

- C1. introduction to design data bases of data-centric systems  
 C2. introduction to technological aspect of using modern data-centric systems  
 C3. acquisition of decision-making skills in respect of designing databases

**SUBJECT EDUCATIONAL EFFECTS***relating to knowledge:**relating to skills:*

PEK\_U01 is able to source information about designing relational databases from literature and other sources

PEK\_U02 is able to design and program a database in MS ACCESS

*relating to social competences:*

PEK\_K01 is able to think and action in a creative and enterprising manner

**PROGRAMME CONTENT**

<b>Form of classes - laboratory</b>			<b>Number of hours:</b>
Lab 1	Stage 0 -choice of subject actual database and the identification of the entity to determine the relationship and the initial data flow		2
Lab 2	Stage 1 - identification of attributes for all entities established system and to determine the types of data		2
Lab 3	Stage 2 - establish relationships explicit and unambiguous and one-reduction many-to-many. Programming SQL queries		2
Lab 4	Stage 3 - interface user base - creating forms. Data entry		2
Lab 5	Stage 4 - Creating the sample reports and summaries		1
Lab 6	Laboratory assessment		1
Total hours:			<b>10</b>

### TEACHING TOOLS USED

- N1. students code case-based programmes both individually and in teams  
 N2. remote self-education - <http://eportal.eny.pwr.edu.pl>  
 N3. consultation

### EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation <i>F – forming (during semester) P – concluding (at semester end)</i>	Educational effect number	Way of evaluating educational effect achievement
F1(L)	PEK_U01 PEK_U02 PEK_K01	Development of a relational database in electronic form. E-learning platform: <a href="http://eportal.eny.pwr.edu.pl">http://eportal.eny.pwr.edu.pl</a>
P(L)	P=F1	

### PRIMARY AND SECONDARY LITERATURE

#### PRIMARY LITERATURE:

- [1] Bazy danych, W. Harris, WNT (any edition)  
 [2] Wprowadzenie do systemów baz danych, C.J. Date, WNT (any edition)  
 [3] E-learning platform: <http://eportal.eny.pwr.edu.pl>  
 [4] Net-literature

#### SECONDARY LITERATURE:

- [1] SQL Język relacyjnych baz danych, Wellesley Software, WNT (any edition)  
 [2] Programowanie w PHP, Helion, (any edition)  
 [3] JAVA Kompendium programisty, Helion, (any edition)

### SUBJECT SUPERVISOR

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### MATRIX OF CORRELATION BETWEEN EDUCATIONAL EFFECTS FOR SUBJECT **ELR041365 - Databases** AND EDUCATIONAL EFFECTS FOR MAIN FIELD OF STUDY **Electrical Engineering**

Subject educational effect	Correlation between subject educational effect and educational effects defined for main field of study and specialization (if applicable)	Subject objectives	Programme content	Teaching tool number
PEK_U01	K1ETK_U13	C.1 C.2	Lab1 Lab2 Lab3 Lab4 Lab5	N.1 N.2 N.3
PEK_U02	K1ETK_U13	C.2 C.3	Lab1 Lab2 Lab3 Lab4 Lab5	N.1 N.2 N.3
PEK_K01	K1ETK_K05 K1ETK_K06	C.2 C.3	Lab4 Lab6	N.1 N.2 N.3