

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, full-time**  
 Kind of subject: **optional**  
 Subject code: **ELR051309**  
 Group of courses: **NO**

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU):			15		
Number of hours of total student workload (CNPS):			60		
Form of crediting:			crediting with grade		
For group of courses mark (X) final course:					
Number of ECTS points:			2		
including number of ECTS points for practical (P) classes :			2		
including number of ECTS points for direct teacher-student contact (BK) classes:			1.40		

**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 LEARNING OUTCOMES***relating to knowledge:**relating to skills:*

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

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

*relating to social competences:*

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

**PROGRAMME CONTENT**

Form of classes - laboratory		Number of hours:
Lab 1	Stage 0 - the choice of topic of the real database	2
Lab 2	Stage 1 - Identification of the entity and the initial data flow definition of the relationship	2
Lab 3	Stage 2 - identification of attributes for all entities established system and to determine the types of data	2
Lab 4	Stage 3 - establish relationships explicit and unambiguous and one-reduction many-to-many	2
Lab 5	Stage 4 - Programming SQL: queries simple, complex and parametric	2
Lab 6	Stage 5 - interface of user base - create simple and complex forms	2
Lab 7	Stage 6 - entering data into the database and user interface testing. Creating the sample reports based on queries	2
Lab 8	Laboratory assessment	1
Total hours:		15

**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 LEARNING OUTCOMES ACHIEVEMENT**

<b>Evaluation</b> <i>F - forming (during semester)</i> <i>P - concluding (at semester end)</i>	<b>Educational effect number</b>	<b>Way of evaluating educational effect achievement</b>
F1(L)	PEU_U01 PEU_U02 PEU_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] Platforma edukacyjna: <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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