

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Relational databases		Code 1010342611010347332
Field of study Mathematics	Profile of study (general academic, practical) (brak)	Year /Semester 1 / 1
Elective path/specialty -	Subject offered in: Polish	Course (compulsory, elective) obligatory
Cycle of study: Second-cycle studies	Form of study (full-time, part-time) full-time	
No. of hours Lecture: 30 Classes: - Laboratory: 30 Project/seminars: -		No. of credits 5
Status of the course in the study program (Basic, major, other) (brak)		(university-wide, from another field) (brak)
Education areas and fields of science and art the sciences Mathematical sciences		ECTS distribution (number and %) 5 100% 5 100%
Responsible for subject / lecturer: Marian Dondajewski Ph.D. email: marian.dondajewski@put.poznan.pl tel. +4861 665 2805 Faculty of Electrical Engineering ul. 3A, 60-965 Poznan Piotrowo		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	Basic knowledge of mathematics in the fields of mathematical logic and abstract algebra. Basic knowledge of operating systems.
2	Skills	Familiar with basics of computers. Can uses of MS Office (Word and Excel). Knows how to formulate the problem and sees a variety of methods to address it.
3	Social competencies	Understands the need to gather information and computer processing. Is aware of the role of teamwork and continuous self-education.
Assumptions and objectives of the course: -Introduce the concept of database and database management system. -Familiar with the principles of database design. Formal requirements for effective database - the database normal forms. -Learning basic operations on databases: projection, selection and join. -Create a database in MS Access. -Familiarizing with database objects: tables, forms, reports, queries, macros. Knowledge of SQL language elements.		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. have the ability to draw and interpret relational database schemas - [K_W06 + + + K_W07 + +]		
2. can optimize the relationship schemas - [K_W011 + + K_W02 + +]		
3. understand basic SQL - [K_W011 + +]		
Skills:		
1. can design a simple database system using on the relational model - [K_U16 + + K_U19 + + K_U04 +]		
2. know how to implement this system with MS Access - [K_U21 + +]		
Social competencies:		
1. He can discuss with a potential customer database system and clarity expectations - [K_K02 + + +]		
2. Is able to work in a team - [K_K03 + + +]		
3. Can use a technical documentation and search for required information in the literature (including foreign language) - [K_K06 + + +]		

Assessment methods of study outcomes		
<p>-Lectures:</p> <ul style="list-style-type: none"> - Assess the knowledge and skills listed on writing exam (student can use any printed materials), - Control of perception during lectures. <p>Laboratory:</p> <ul style="list-style-type: none"> - Test and rewarding knowledge necessary to perform of the laboratory tasks - Continuous evaluation class - rewarding gain skills - Assess the knowledge and skills associated with the implementation of the tasks <p>Get extra points for the activity in the classroom, and in particular for:</p> <ul style="list-style-type: none"> - Propose to discuss new aspects of the subject; - The effectiveness of the application of the knowledge gained during solving a given problem; - Comments for improvement of teaching materials; - Developed aesthetic diligence reports and jobs - in the self-study. 		
Course description		
<p>-Introduction to databases and database management systems. Methods for creating database schemas and relationships forms a normal base, to ensure their good properties. Basic database objects: tables, queries, forms and reports. Create a database in MS Access user interface. The basic elements of the SQL language.</p>		
Basic bibliography:		
<ol style="list-style-type: none"> 1. C.Delobel, M.Adiba: Relacyjne bazy danych, WNT, W-wa 1989. 2. Jeffrey D. Ullman, Jennifer Widom: Podstawowy wykład z baz danych, WNT 1999. 3. J.Kierko: Język SQL, PWN, W-wa 1994. 4. C.N. Prague, M.R. Irwin, J. Reardon: Access 2003 PL. Biblia. HELION, Gliwice 2004. 5. C.Delobel, M.Adiba: Relacyjne bazy danych, WNT, W-wa 1989. 6. Jeffrey D. Ullman, Jennifer Widom: Podstawowy wykład z baz danych, WNT 1999. 7. J.Kierko: Język SQL, PWN, W-wa 1994. 8. C.N. Prague, M.R. Irwin, J. Reardon: Access 2003 PL. Biblia. HELION, Gliwice 2004. 9. C.Delobel, M.Adiba: Relacyjne bazy danych, WNT, W-wa 1989. 10. Jeffrey D. Ullman, Jennifer Widom: Podstawowy wykład z baz danych, WNT 1999. 11. J.Kierko: Język SQL, PWN, W-wa 1994. 12. C.N. Prague, M.R. Irwin, J. Reardon: Access 2003 PL. Biblia. HELION, Gliwice 2004. 		
Additional bibliography:		
<ol style="list-style-type: none"> 1. C.J. Date: Wprowadzenie do systemów baz danych, WNT, Warszawa 2000. 2. T. Pankowski: Podstawy baz danych, PWN, W-wa 1992. 3. B. Czogalik: Access 2002- Tworzenie baz danych, HELION, Gliwice 2002. 4. C.J. Date: Wprowadzenie do systemów baz danych, WNT, Warszawa 2000. 5. T. Pankowski: Podstawy baz danych, PWN, W-wa 1992. 6. B. Czogalik: Access 2002- Tworzenie baz danych, HELION, Gliwice 2002. 7. C.J. Date: Wprowadzenie do systemów baz danych, WNT, Warszawa 2000. 8. T. Pankowski: Podstawy baz danych, PWN, W-wa 1992. 9. B. Czogalik: Access 2002- Tworzenie baz danych, HELION, Gliwice 2002. 		
Result of average student's workload		
Activity	Time (working hours)	
1. Participation in lectures, exercises, preparation of programs for laboratory classes and individual work with manual	130	
Student's workload		
Source of workload	hours	ECTS
Total workload	130	6
Contact hours	70	4
Practical activities	60	2

