

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Databases		Code 1010334461010330220
Field of study Information Engineering	Profile of study (general academic, practical) (brak)	Year /Semester 3 / 6
Elective path/specialty -	Subject offered in: polish	Course (compulsory, elective) obligatory
Cycle of study: First-cycle studies	Form of study (full-time,part-time) part-time	
No. of hours Lecture: 20 Classes: - Laboratory: 8 Project/seminars: 8		No. of credits 4
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 technical sciences		ECTS distribution (number and %) 4 100%
Responsible for subject / lecturer: dr inż. Andrzej Sikorski email: andrzej.sikorski@put.poznan.pl tel. +48(61)6653730 Wydział Elektryczny ul. Piotrowo 3A 60-965 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	Programming languages (preferably C++/java), basic knowledge of combinatorics and data retrieval, formal logic and set theory
2	Skills	Proficiency in some OOP language. Basic skills in Operating System API Ability to solve basic problems in data retrieval.
3	Social competencies	basic social skills expected
Assumptions and objectives of the course: SQL programming, data base modelling, proficiency in Visual studio and c# programming within the scope of ADONET		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
Skills:		
Social competencies:		
Assessment methods of study outcomes		
examination, reports and tests the knowledge of the student will be verified,		
Course description		
Security and session management. Querying with SQL. Relational operators : projection, selection , grouping and relational join, cross product. Data manipulation statements. Relational division. New and non-standard construct of SQL. Basic DB client applications in c#.		

Basic bibliography:		
1. J.D. Ullman, J.Widom, Podstawowy wykład z systemów baz danych, Wydawnictwo Naukowo-Techniczne, Warszawa, 2000		
2. R. Elmasri, S.B. Navathe, Fundamentals of Database Systems, The Benjaming/Cummings, Redwood City, 1994		
Additional bibliography:		
1. L. Banachowski, Bazy danych. Tworzenie aplikacji, Akademicka Oficyna Wydawnicza PLJ, Warszawa, 1998		
2. P. DeBetta, Wstęp do Microsoft SQL Server 2005 dla programistów, Microsoft Press, Promise, Warszawa, 2004		
Result of average student's workload		
Activity	Time (working hours)	
1. Wykład	30	
2. Ćwiczenia	15	
3. Konsultacje	5	
4. Praca z podręcznikiem	20	
5. Przygotowanie do lab	15	
6. Sprawozdania	15	
Student's workload		
Source of workload	hours	ECTS
Total workload	100	4
Contact hours	50	2
Practical activities	50	2