

<b>STUDY MODULE DESCRIPTION FORM</b>		
Name of the module/subject <b>Databases</b>		Code <b>1010334471010330220</b>
Field of study <b>Information Engineering</b>	Profile of study (general academic, practical) <b>(brak)</b>	Year /Semester <b>4 / 7</b>
Elective path/specialty <b>-</b>	Subject offered in: <b>polish</b>	Course (compulsory, elective) <b>obligatory</b>
Cycle of study: <b>First-cycle studies</b>	Form of study (full-time, part-time) <b>part-time</b>	
No. of hours Lecture: <b>16</b> Classes: <b>-</b> Laboratory: <b>-</b> Project/seminars: <b>8</b>		No. of credits <b>4</b>
Status of the course in the study program (Basic, major, other) <b>(brak)</b>		(university-wide, from another field) <b>(brak)</b>
Education areas and fields of science and art <b>technical sciences</b>		ECTS distribution (number and %) <b>4 100%</b>
<b>Responsible for subject / lecturer:</b> dr inż. Andrzej Sikorski email: andrzej.sikorski@put.poznan.pl tel. (61)6653730 Wydział Elektryczny ul. Piotrowo 3A 60-965 Poznań		
<b>Prerequisites in terms of knowledge, skills and social competencies:</b>		
1	<b>Knowledge</b>	Database course in preceding semester.
2	<b>Skills</b>	As covered in preceding course.
3	<b>Social competencies</b>	standard social skills
<b>Assumptions and objectives of the course:</b> SQL and c# programming. Multi-tier architectures. Implementation of complex business rules with SQL and application servers.		
<b>Study outcomes and reference to the educational results for a field of study</b>		
<b>Knowledge:</b>		
<b>Skills:</b>		
<b>Social competencies:</b>		
<b>Assessment methods of study outcomes</b>		
test and problem assignments verifying proficiency in SQL and c# programming		
<b>Course description</b>		
Business application programming. Client -server and multi-tier architectures. Complex business rules implementation/specification. Distributed and multi-tier programming. Component oriented transactional servers. CLR/.NET support for distributed programming. Transaction processing.		

<b>Basic bibliography:</b>		
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		
<b>Additional bibliography:</b>		
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		
<b>Result of average student's workload</b>		
<b>Activity</b>	<b>Time (working hours)</b>	
1. wykład	30	
2. laboratoria	15	
3. konsultacje	5	
4. Praca z podręcznikiem	20	
5. przygotowanie do ćwiczeń	10	
6. projekt	20	
<b>Student's workload</b>		
<b>Source of workload</b>	<b>hours</b>	<b>ECTS</b>
Total workload	100	4
Contact hours	50	2
Practical activities	50	2