

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Information Technology in Management		Code 1011101331011163576
Field of study Engineering Management - Full-time studies -	Profile of study (general academic, practical) general academic	Year /Semester 2 / 3
Elective path/specialty -	Subject offered in: Polish	Course (compulsory, elective) obligatory
Cycle of study: First-cycle studies	Form of study (full-time, part-time) full-time	
No. of hours Lecture: 30 Classes: - Laboratory: 45 Project/seminars: -		No. of credits 4
Status of the course in the study program (Basic, major, other) other		(university-wide, from another field) from field
Education areas and fields of science and art technical sciences Technical sciences		ECTS distribution (number and %) 3 75% 3 75%
Responsible for subject / lecturer: dr inż. Aleksander Jurga email: aleksander.jurga@put.poznan.pl tel. 616653388 Faculty of Engineering Management ul. Strzelecka 11 60-965 Poznań		Responsible for subject / lecturer: dr inż. Zbigniew Włodarczak email: zbigniew.wlodarczak@put.poznan.pl tel. 616653387 Faculty of Engineering Management ul. Strzelecka 11 60-965 Poznań
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	Positive assessment from lectures and classes of the previous semester
2	Skills	Ability to program in VB. Designing the structure of databases.
3	Social competencies	Independent ability to work in a project team and the ability to run a project.
Assumptions and objectives of the course: The course is aimed at presenting students knowledge on designing database for information management systems.		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. The student knows methods and instruments for data collecting, processing and selecting, as well as methods for distributing information - [K1A_W11]		
2. The student knows basic methods, techniques and instruments and materials used for solving simple engineer tasks from the area of the construction and exploitation of machines - [K04-lnzA_W02]		
Skills:		
1. The student is able to plan and realize experiments, including measurements, computer simulations, and interpret obtained results and draw conclusions of them - [K01-lnzA_U1]		
2. The student is able to use methods of analysis, simulations and experiments for formulation and creation of engineer solutions - [K01-lnzA_U2]		
Social competencies:		
1. Student is aware of the importance of the knowledge on information technologies, which is applied in engineering activity - [K01-lnzA_K1]		
2. Student is aware and takes under consideration information issues as a form of support in the process of creating products - [K01-lnzA_K2]		
Assessment methods of study outcomes		

<p>Formative assessment:</p> <p>a) in the field of lectures: written test at the end of the lecture cycle.</p> <p>b) in the field of laboratory classes: implementation of partial tasks and final project.</p> <p>Summary:</p> <p>a) in the field of lectures: score based on scores for each question.</p> <p>b) in the field of laboratory classes: the average score of partial tasks and the entire project.</p>		
Course description		
<p>Lectures:</p> <p>Elements of information systems in management. Relational data model. BD normalization methodology, CDM models and physical PDM database models. The practice of using declarative SQL to manipulate databases.</p> <p>Laboratories:</p> <p>Database structure design (conceptual, ERD and physical model). Physical design of BD system interfaces. Using SQL to manipulate data. Reporting project of selected data. Launch and test the entire relational data system project model.</p> <p>Didactic methods:</p> <ul style="list-style-type: none"> -Information lecture. -Work with a book. -Demonstration method with instruction. -Individual design method. 		
<p>Basic bibliography:</p> <ol style="list-style-type: none"> 1. Jurga A., Rozwój systemów informatycznych. [w]: Adamczyk M. i inni, Projektowanie systemów informacyjnych zarządzania, Wyd. Politechniki Poznańskiej, Poznań, 2010. 2. Ragin-Skorecka K., Włodarczak Z., Gry kierownicze, Wydawnictwo Politechniki Poznańskiej, Poznań 2011. 3. Connoly T., Begg C., Systemy baz danych, praktyczne metody projektowania, implementacji i zarządzania, Wyd. RM, 2006. 4. Kopertowska M., Sikorski W., Bazy danych. Poziom zaawansowany, PWN, Warszawa, 2006 5. Mendrala D., Szeliga M., Access 2013 PL: bazy danych? Z programem MS Access to nic trudnego!, Wydawnictwo, Helion, Gliwice 2013. 6. Rogulski M., Bazy danych dla studentów : [podstawy projektowania i języka SQL], WITKOM (Salma Press), Warszawa 2012. 		
<p>Additional bibliography:</p> <ol style="list-style-type: none"> 1. Wilton P., Colby J., SQL. Od podstaw., Helion, 2005. 2. Hernande M.J., Projektowanie baz danych dla każdego : przewodnik krok po kroku; [tł. Żarnowska K., i inni, Wyd. Helion, Gliwice 2014. 		
Result of average student's workload		
Activity	Time (working hours)	
1. Lectures	30	
2. Laboratory classes	45	
3. Preparation for laboratory classes	16	
4. Consultation	5	
5. Preparation for passing lectures	10	
6. Passing lectures	2	
7. Passing laboratory classes	2	
Student's workload		
Source of workload	hours	ECTS
Total workload	110	4
Contact hours	84	3
Practical activities	26	1