



MODULE DESCRIPTION

Module code	
Module name	Bazy danych 2
Module name in English	Databases 2
Valid from academic year	2012/2013

MODULE PLACEMENT IN THE SYLLABUS

Subject	Computer Science
Level of education	1st degree <i>(1st degree / 2nd degree)</i>
Studies profile	General <i>(general / practical)</i>
Form and method of conducting classes	Full-time <i>(full-time / part-time)</i>
Specialisation	
Unit conducting the module	The Department of Control and Management Systems
Module co-ordinator	Paweł Sitek, PhD, Eng.
Approved by:	

MODULE OVERVIEW

Type of subject/group of subjects	Basic <i>(basic / major / specialist subject / conjoint / other HES)</i>
Module status	Compulsory <i>(compulsory / non-compulsory)</i>
Language of conducting classes	Polish
Module placement in the syllabus - semester	4th semester
Subject realisation in the academic year	Summer semester <i>(winter / summer)</i>
Initial requirements	Databases 1 <i>(module codes / module names)</i>
Examination	No <i>(yes / no)</i>
Number of ECTS credit points	5

Method of conducting classes	Lecture	Classes	Laboratory	Project	Other
Per semester	30		15	15	

TEACHING RESULTS AND THE METHODS OF ASSESSING TEACHING RESULTS



Projekt współfinansowany ze środków Unii Europejskiej w ramach Europejskiego Funduszu Społecznego

Module target	The aim of the module is to present basic designing and implementing problems concerning new generations of database systems. Extensions with reference to conventional relational databases will be discussed. These problems will be discussed in relation to distributed systems, XML document databases, and data warehouses.
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Effect symbol	Teaching results	Teaching methods (I/c/l/p/other)	Reference to subject effects	Reference to effects of a field of study
W_01	A student knows basic notions and new generation models concerning databases (in particular, distributed ones, data warehouses, XML databases, and elements of administering databases).	I	K_U01 K_W14	T1A_W01 T1A_W02 T1A_W03 T1A_U01
W_02	A student is knowledgeable as regards basic the principles of modelling and designing new generations of databases.	I	K_W14 K_W15	T1A_W03 T1A_W04 T1A_U09
W_03	A student is familiar with extensions concerning a standard SQL language as well as other languages of new generations concerning databases, including script solutions for multi-layer architectures.	I	K_U12	T1A_W03 T1A_U09
U_01	A student is able to design a distributed database, data warehouses, an XML database, a multi-layer interface, etc.	I/l/p	K_U20 K_U21	T1A_U09 T1A_U07 T1A_U16
U_02	A student is able to implement databases on the basis of a design on the SQL environment (or other).	I/l/p	K_U20	T1A_U09 T1A_U07
U_03	A student can construct complex queries to databases, perspectives, program blocks, and scripts.	I/l/p	K_U20	T1A_U09 T1A_U16
K_01	A student can determine activity priorities.	I/p	K_K03	T1A_K04
K_02	A student is capable of teamwork and solving tasks collectively.	I/p	K_K03	T1A_K03

Teaching contents:

Teaching contents as regards lectures

Lecture number	Teaching contents	Reference to teaching results for a module
1	Introduction to the subject of new generation databases.	W_01
2,3	Data dictionary – the elements of administering databases.	W_01 W_02
4,5	Distributing databases.	W_01 W_02
6	Analytical databases – data warehouses.	W_01 W_02
7,8	The ROLAP model – designing, implementation, and applications.	W_01 W_02 U_01
9	SQL language extensions in relations to OLAP.	W_03 U_03
10,11	Server Pages class script languages.	W_03 U_03
12,13	XML databases.	W_01
14	Other sample advanced databases.	W_01
15	A final test.	



Teaching contents as regards laboratory classes

Laboratory classes are conducted in teams of two students.

Laboratory class number	Teaching contents	Reference to teaching results for a module
1	Introduction to the subject of laboratory classes, familiarising with the laboratory environment and the principles of work.	K_01
2	Advanced SQL and PL/SQL in using a data dictionary.	U_03
3	Implementing the ROLAP model – SQL, DLL, determining constraints.	U_03 K_02
4	Preparing data and filling data warehouses – external tables, sqlloader.	U_03 K_02
5	Query structure in an extended SQL and snapshots to analyse databases.	U_03
6	Applying PSP to generate dynamic www – multi-layer application of databases.	U_03
7	A final test.	

Teaching contents as regards project classes

Project class number	Teaching contents	Reference to teaching results for a module
1	Drawing a project subject, discussing basic assumptions and requirements.	K_01
2	Designing a schema of data warehouses and its transformation to a relational model.	U_02
3	Designing an analysis set to data warehouses.	U_02 K_02
4	Implementing data warehouses (data loading, implementing analytical queries and snapshots).	U_03 K_02
5,6	A design and implementation of data warehouse interface in the form of dynamic generating www.	U_02 U_03 K_02
7	Defending a project.	K_01 K_02

The methods of assessing teaching results

Effect symbol	Methods of assessing teaching results <i>(assessment method, including skills – reference to a particular project, laboratory assignments, etc.)</i>
W_01	A final test on the lectures
W_02	A final test on the lectures, reports in laboratory classes (2), project defence
W_03	A final test on the lectures, reports in laboratory classes (3-6), project defence
U_01	A final test on the lectures, reports in laboratory classes (2), project defence
U_02	A final test on the lectures, reports in laboratory classes (3), project defence
U_03	A final test on the lectures, reports in laboratory classes (4-6), project defence
K_01	Project defence
K_02	Project defence



STUDENT'S INPUT

ECTS credit points		
	Type of student's activity	Student's workload
1	Participation in lectures	30
2	Participation in classes	
3	Participation in laboratories	15
4	Participation in tutorials (2-3 times per semester)	2
5	Participation in project classes	15
6	Project tutorials	3
7	Participation in an examination	
8		
9	Number of hours requiring a lecturer's assistance	65 <i>(sum)</i>
10	Number of ECTS credit points which are allocated for assisted work <i>(1 ECTS credit point=25-30 hours)</i>	2.5
11	Unassisted study of lecture subjects	15
12	Unassisted preparation for classes	
13	Unassisted preparation for tests	
14	Unassisted preparation for laboratories	10
15	Preparing reports	5
16	Preparing for a final laboratory test	5
17	Preparing a project or documentation	15
18	Preparing for an examination	10
19	Preparing questionnaires	
20	Number of hours of a student's unassisted work	60 <i>(sum)</i>
21	Number of ECTS credit points which a student receives for unassisted work <i>(1 ECTS credit point=25-30 hours)</i>	2.5
22	Total number of hours of a student's work	125
23	ECTS credit points per module <i>1 ECTS credit point=25-30 hours</i>	5
24	Work input connected with practical classes <i>Total number of hours connected with practical classes</i>	60
25	Number of ECTS credit points which a student receives for practical classes <i>(1 ECTS credit point=25-30 hours)</i>	2.5