

DESCRIPTION OF THE COURSES

- Course code: ARR1305
- Course title: Database Systems
- Language of the lecturer: Polish

<i>Course form</i>	<i>Lecture</i>	<i>Classes</i>	<i>Laboratory</i>	<i>Project</i>	<i>Seminar</i>
<i>Number of hours/week*</i>	<i>1</i>			<i>1</i>	
<i>Number of hours/semester*</i>	<i>15</i>			<i>15</i>	
<i>Form of the course completion</i>	<i>test</i>			<i>problem tasks</i>	
<i>ECTS credits</i>	<i>1</i>			<i>1</i>	
<i>Total Student's Workload</i>	<i>30</i>			<i>30</i>	

- Level of the course (basic/advanced): basic
- Prerequisites: informatics fundamentals.
- Name, first name and degree of the lecturer/supervisor:
- JAROSŁAW SZYMAŃDA, DSc., PhD.
- Names, first names and degrees of the team's members:
 1. KAZIMIERZ WILKOSZ DSc. PhD., prof.
 2. LESZEK WOŹNY , PhD.,
 3. JACEK REZMER, PhD.,
 4. ROBERT LIS, PhD.,
 5. LESŁAW ŁADNIAK, PhD.,
- Year:...II.... Semester:...3.....
- Type of the course (obligatory/optional): obligatory
- Aims of the course (effects of the course): The course acquaints students with bases aspects of using modern database systems. Purchase of the skill of making the projecting the relationship of the bases of the data in the use to the automation of the procedures of steering, monitoring and the acquisition of the data is the basic effect of the education.
- Form of the teaching (traditional/e-learning): traditional
- Course description:
 Introduction fundamental comprehensive in computers storage and retrieval of data with data processing. Modern database engine using IDS 7.31 (Informix Dynamic Server) on the Windows NT Server. Operatives on package MS ACCESS 2000. Creating a new (local) database. Tables and attributes of entity – main and foregin keys, table joins, perspectives. Overview of same technique engineering design of relational database (entity-relationship diagram) Samples of formulas and reports. Navigating database using query language SQL (Structured Query Language), queries and transactions. Configuration of database driver using ODBC (Open Database Connectivity). Terminals application in the unix systems, multiaccessing and open distributed processing of databases. Breadboard models with data logging by users coding in high level programming languages (DELPHI, Visual Basic, PHP, PERL). Role of database chief

programmer DBA (Database Administrator) in database systems: communications and resource security, reliability.

- Lecture:

<i>Contents of particular lectures</i>	<i>Number of hours</i>
1. Database objectives and tasks of engineering operations . Multi tasks in modern computer's systems. Informatics and information resource sharing.	2.0
2. Data structures. Database relationship. Object-oriented modeling in stewardships of automatic technical processes. Entity-relationship diagram. Entity-relationship model. Multi, one- and one-univocally relationship	2.0
3. Professional administration systems based on IDS server (Informix Dynamic Server) using Windows NT Server. Configuration of database driver using ODBC (Open Database Connectivity)	2.0
4. Operatives on package MS ACCESS 2000 MS ACCESS 2000. Tables, setting main and foreign keys. Table joins. Queries and transactions	2.0
5. Standard SQL (Structured Query Language): queries and perspectives provisos and transactions.	2.0
6. Creating of formulas and reports. Generators in the packed MS ACCESS 2000.	2.0
7. Multiprocessing. Blockades. Elements of direct of networks databasesystems, confidence and data protection. Security protections in database systems.	2.0
8. Test	1.0

- Classes – the contents:
- Seminars – the contents:
- Laboratory – the contents:
- Project – the contents:

Laboratory is realized of the second part of semester (advisable) in basic limit of two hours per week. Students individually put into practice, under controlling by the leader, six topics amount to lecture's problem.

Laboratory topics:

Introduction

1. Creating exemplary structure of local database programs :
MS Word and MS Excel – elements of DDE (Dynamic Data Exchange).
Usage of MS ACCESS packed
 2. Operatives on package MS ACCESS 2000. Creating a simple two-entities databases.
Establishing of main. Indexing with and without repetitions.
 3. Entity reduction of wildcard relation. Data modification using query language SQL and linkages-queries. Indirect tables and perspectives. Filters and corrective rules.
 4. Creating of formulas and reports. Service event procedure using Visu-al Basic for Application (VBA) elements. Reports. Samples of laboratory reports.
 5. Complementing individual project of local database following leader recommendation
 6. Connecting into networks database system. Table joins by ODBC. Extending data of individual project. Protocols and intranet pages (PHP4, Javascript)
- Basic literature:
 1. Bazy danych, W. Harris, WNT 1994
 2. Wprowadzenie do systemów baz danych, C.J. Date, WNT 1981

3. MS Access dla Windows, wersje 97 i późniejsze, wydawnictwo dowolne

- Additional literature:

1. SQL Język relacyjnych baz danych, Wellesley Software, WNT 1995

2. Visual Basic, William J. Orvis, READ ME 19942

3. Opracowania i materiały firm: Informix, Hewlett Packard, Microsoft

- Conditions of the course acceptance/creditation: Derivation affirmative grade of lecture test and laboratory tasks.

* - depending on a system of studies