

Subject Code : 2CS1010203	Subject Title: Database Management Systems
Pre-requisite:	-

Course Objective:

This course is intended to up skill students with fundamental concepts of Data Base Management System, Data Models and Different Data Base tools. This course is to make the student familiar with different database operations also students able to analyze the different between traditional file system and DBMS.

Teaching Scheme (Hours per week)				Evaluation Scheme (Marks)				
Lecture	Tutorial	Practical	Credit	University Assessment		Institutional Assessment		Total
				Theory	Practical	Mid-term Evaluation	Continuous Assessment	
4	1	2	6	70	30	30	20	150

Subject Contents			
Sr. No	Topic	Total Hours	Weight (%)
1	Database Concepts: Database and DBMS, Comparison between traditional file V/s DBMS, Characteristics of data in database, Components of database system environment, Functions of DBMS, Advantages and disadvantages of the DBMS	9	20
2	Database Concepts, Database Design and Architecture: DBMS users, Database administrator, Role of DBA, Data administrator v/s Database administrator Database Design and Architecture: Essentials of Database Design, Three levels Architecture of Database- external, conceptual and internal, mapping.	9	20
3	Data Models concepts: Hierarchical, Network and Relational, Operators, relations, Domains and attributes, keys, traditional set operations, special relational operations The E/R model: Entity, E-R Diagram, Attributes, Relationship, Types of Relationship, Development stages of E-R Diagram, Examples of E-R Diagram	9	20
4	Normalization: Introduction, Types of Normal form, 1 st Normal Form, 2 nd Normal Form, 3 rd Normal Form, and BCNF. Denormalization.	9	20
5	MS-Access, Objects: Introduction of MS-Access, Data type: Text, Number, Auto number, Currency, Boolean, Date/Time, Memo Objects: Table, Query, Forms, Reports, Macro. Controls use in form and report	9	20

Course outcomes:

At the end of this course, the student would be able

- To have knowledge of Database Concepts.
- To understand how DBMS is better than traditional File Processing Systems.
- To define data independence, data models for database systems and database schema.
- To familiar with Database Design Architecture.
- To draw Data Flow and Entity Relationship Diagrams.
- To construct a query in Database.
- To normalize a database
- To have command over MsAccess.

List of References:

1. An Introduction to Database Systems - [C. J. Date](#) - Pearson/Addison Wesley publisher
2. Database System Concepts – Abraham Silberschatz, Henry F.Korth, S.Sudarsha – McGraw-Hill Publication
3. An Introduction to Database System –By Bipin C.Desai, Asian students Edition-Galgotia Publication
4. Microsoft Access Fundamentals – Rudy LeCorp-RGL publication

E-Resource / Web Links:

- <http://inpics.net/tutorials/access2007/basics.html>

List of Experiments

Note: The experiment list provided beneath is for reference only. The course teacher may change/formulate it as per his/her methodology and requirement.

1. Design a simple database using Ms Access.
2. Create table like Student, Employee using design view and wizard.
3. Query a database using different methods.
4. Create a form using design view and wizard.
5. Generate a report using design view and wizard.
6. Create Macros to Automating Tasks.