VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)

9-5-81, Ibrahimbagh, Hyderbad-500031, Telangana State

DEPARTMENT OF INFORMATION TECHNOLOGY

SYLLABUS FOR B.E. IV SEMESTER
INTRODUCTION TO DATABASE MANAGEMENT SYSTEMS
(Open Elective-III)
(for other Branches)

Instruction: 2 Hrs /week	SEE Marks : 60	Course Code :OE420IT
Credits : 2	CIE Marks: 40	Duration of SEE : 3 Hrs

Course Objectives	**Course Outcomes**
The course will enable the students to:	**At the end of the course student will be able to:**
The objective of the course is to explain the need of database for storing, accessing and updating the data, eliminate redundant data, allow multiple users to be active at one time and protect the data from unauthorized access.	1. Develop ER model for a given problem and understand functional components of the DBMS. 2. Devise queries using SQL. 3. Design a normalized database schema using different normal Forms. 4. Comprehend the properties of a transaction and understand the concept of transaction processing.

UNIT – I

Introduction: Database System Applications, Purpose of Database Systems, View of Data, Database Languages, Relational Databases, Databases Design, Database Architecture.

Database Design and the E-R Model: Overview of the Design Process, The E-R Model, Constraints, E-R Diagrams, Reduction of E-R model to relational schema.

UNIT – II

Relational Algebra: Fundamental Relational-Algebra Operations.

Structured Query Language: Data Definition, Basic Structure of SQL Queries, Set Operations, Aggregate Functions, Null Values, Nested Sub queries, Joined Relations, Integrity Constraints.

UNIT – III

Relational Database Design: Features of Good Relational Design, Functional-Dependency Theory, Normalization-Decomposition Using Functional Dependencies.

UNIT – IV

Transactions: Transaction Concepts, Transaction State, Implementation of Atomicity and Durability.

Learning Resources:

1. Abraham Silberschatz, Henry F Korth, S. Sudarshan, Database System Concepts, Sixth Edition, McGrah-Hill International Edition, 2010.
2. Ramakrishnan, Gehrke, Database Management Systems, Third Edition, McGrah-Hill International Edition, 2003.
3. ElmasriNavathe, Somayajulu, Fundamentals of Database System, Fourth Edition, Pearson Education, 2006.
4. http://www.nptelvideos.in/2012/11/database-management-system.html