

PROGRAM	Master of Business Administration
SEMESTER	3
COURSE TITLE	Database Management Systems
COURSE CODE	04MB0339
COURSE CREDITS	03
COURSE DURATION	42 Hrs (42 sessions of 60 minutes each)

COURSE OUTCOMES:

- * Understand the major DBMS concepts
- * Learn effective ways of building a model of the real world and optimizing it through normalization algorithms
- * Study of database concepts with emphasis on network, CODASYL, and relational models and their application to business systems.
- * Realize what database system is and list its characteristics
- * Write basic SQL statements for data creation

COURSE CONTENTS:

Unit No	Unit / Sub Unit	Sessions
I	Introduction to Databases and Transaction: What is Database system, Purpose of Database System, view of data, Relational Databases, Database Architecture, Transaction Management Data Models: The importance of Data Models, Basic Building Blocks, Business Rules, The evolution of Data Models, Degrees of Data Abstraction. Object Oriented Data Model	08
II	Database Design, ER-Diagram and Unified Modelling Language: Database Design and ER Model: Overview, ER-Model, Constraints, ER-Diagrams, ERD Issues, Weak Entity Sets, Codd's rules, Relational Schemas, Introduction to UML	08
III	Relational Algebra and Calculus: Relational Algebra: Introduction, Selection and Projection, Set Operations, Renaming, Joins, Division, Syntax, Semantic. Operators, grouping and ungrouping, Relational Comparison. Calculus: Tuple Relational Calculus, Domain Relational Calculus, Calculus vs Algebra, Computational Capabilities.	10
IV	Constraints, Views and SQL: What is Constraints, types of Constrains, Integrity Constraints Views: Introduction to views, Data independence, security, updates on views, comparison between tables and views SQL: Data definition, Aggregate function, Null Values, Nested sub Queries, Joined relations, and Triggers	10
V	Relational database model: Logical view of data, keys, and Integrity rules: Relational Database design: Features of good Relational Database Design, Atomic Domain and Normalization (1NF, 2NF, 3NF, BCNF)	06

EVALUATION:

The students will be evaluated on a continuous basis and broadly follow the scheme given below:

		Weight age
A	Assignment & Presentation	20%
B	Internal Assessment	30% (I.A.)
C	End-Semester Examination	50% (External Assessment)

SUGGESTED READINGS:**Text Books:**

Sr. No	Author/s	Name of the Book	Publisher	Edition & Year
T1	A Silberschatz, H Korth, and S Sudarshan	“Database System and Concepts	McGraw-Hill	fifth Edition
T2	Rob, Coronel	Database Systems”	Cengage Learning	Seventh Edition

Reference Books:

Sr. No	Author/s	Name of the Book	Publisher	Edition and Year
R-01	Rini Chakrabarti, Shilbhadra Dasgupta	Advanced Database Management System	Wiley	First Edition
R-02	Arun K. Majumdar, Pritimoy Bhattacharyya	Database Management Systems	McGraw Hill Education	2017
R-03	C.J. Date	An Introduction to Database Systems	Pearson	8 th Edition