

## **SYLLABUS for MST**

**Introduction:** Data, data processing requirement, desirable characteristics of an ideal data processing system, traditional file-based system, its drawbacks, concept of data dependency, Definition of database, database management system, 3-schema architecture, database terminology, benefits of DBMS.

**Relational Database:** Relational data model: Introduction to relational database theory: Definition of relation, keys, relational model integrity rules.

**Database Analysis:** Conceptual data modeling using E-R data model -entities, attributes, relationships, generalization, specialization, specifying constraints, Conversion of ER Models to Tables, Practical problems based on E-R data model.

**Database Design:** Normalization-Functional Dependency, Attribute Closure, Candidate Keys Identification using Attribute Closure.

**Database Implementation:** Introduction to SQL, DDL aspect of SQL, DML aspect of SQL – update, insert, delete & various forms of SELECT- simple, using special operators, aggregate functions, group by clause, subquery, joins, co-related sub query, union clause, exist operator.