

Textbook chapters are listed with the associated topics.

Also, consider the associated Links and References (Canvas, On-Line) provided in the class schedule.

Introduction of Database and SQL

- **Ch 1: Introduction**

- Databases (What?, Why?, How?)
- Relational Data Model and Databases
- Database Design
- Database Architecture

- **Ch 2: Introduction to the Relational Model**

- Structure of Relational Databases
- Database Schema
- Keys
- Schema Diagrams
- Relational Query Languages
- The Relational Algebra
 - Select and Project Operators, Expressions, Set Operators, Join, Cartesian Product, Renaming, Natural (Inner) Join.

- **Ch 3: Introduction to SQL**

- Overview of The SQL Query Language
- SQL Data Definition
- Basic Query Structure of SQL Queries
 - Select, Insert, Update, Delete
- Order By
- Set Operations
- Null Values
- Aggregate Functions
- Grouping, Having Clause
- Introduction to Subqueries (Nested Queries)

- **Ch 6: Database Design Using The E-R Model**

- The Entity-Relationship Data Model
- Different type of Attributes
- Mapping Cardinalities