

Course outline
CSE 303 : Database
Ref. Book: Database System Concepts (4th Edition)

Chapter: 1 : Introduction	Database System Applications Database system versus File Systems View of Data Data Abstraction Data Independence Instances and Schemas Data Models The E-R model Relational model Network model Hierarchical model Database Languages DDL, DML Database Users Database Administrator Transaction management Storage manager
Chapter: 2 : Entity Relationship model	Entity sets Relationship sets Mapping cardinalities Participation constraints Keys Strong/Weak Entity sets Reduction of an E-R schema to Tables Tabular Representation of Strong/Weak/Relationship sets
Chapter: 3 : Relational model	Up to <i>Modification of the Database</i> (inclusive)
Chapter: 4 : SQL	Follow Class Notes and Lab
Database Normalization	Follow Class Notes

Chapter :12: Indexing and Hashing	<ul style="list-style-type: none"> Basic Concepts Ordered Indices Primary Index Dense/Sparse Index Multilevel Indices Index Update
Chapter: 15: Transactions	<ul style="list-style-type: none"> Transaction concepts Transaction State Implement of Atomicity and Durability Concurrent Executions Serializability Conflict Serializabilty
Chapter: 19: Distributed Database	<ul style="list-style-type: none"> Homogenous and Heterogeneous database Distributed Data Storage Data Fragmentation Transparency Distributed Transaction System structure System failure modes Commit Protocols 2PC Handling of Failure

Course Teacher: Mohammad Moinul Hoque
Assistant Professor, CSE Dept, AUST
<http://www.aust.edu/cse/moinul>