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**Faculty of Computers & Information Technology****Database Design and Implementation****Information :****Course Code :** ISY 413**Level :** Undergraduate**Course Hours :** 3.00- Hours**Department :** Department of Information Systems**Description :**

Phases of database design, Conceptual database design, Classification, specialization, and aggregation abstraction, The Entity-Relationship model, Extended Entity-Relationship model, View design in conceptual schema, Conceptual schema integration, Transforming conceptual schema to relations, Logical database design, Characteristics of good relation schema, Anomalies in relational schema, Functional dependencies, Inference rules for functional dependencies, Closure and minimal covers for functional dependencies, Normal forms, Transforming relations into third and Boyce-Codd normal forms, Multivalued dependencies and fourth normal form.

The main objective of this course is to provide students with the background to design implement, and use database management systems.

Topics include: Evolution of database management systems, Relational data model and relational algebra structured query language, Entity relationship modeling and design, ERM to RM conversion, Tables, Normalization, forms/ Reports/ Menus implementation upon successful completion of this course, students will have the skills to analyze business requirements and produce a viable model and implementation of a database to meet such requirements.

