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Department of Computer Engineering	
Database Systems (66315)	
Total Credits	**3**
major compulsory	
Prerequisites	P1 : Object Oriented Programming (66212)

Course Contents

Fundamental concepts, system organization, and implementation of database systems. Relational, hierarchical, and network data models; file organizations and data structures; query languages; query optimization; database design; concurrency control; security; issues involving distributed database systems.

	Intended Learning Outcomes (ILO's)	Student Outcomes (SO's)	Contribution
1	The ability to work with, and describe the functionality of the database management system. (Fundamental concepts, system organization, and implementation of database systems. Relational, hierarchical, and network data models; file organizations and data structures) C 40 %	C	40 %
2	The ability to develop and design a database and the applications related to the database (query languages; query optimization; database design; concurrency control; security; issues involving distributed database systems.)	E	40 %
3	The ability to work in a team to apply what has been taught in a project	D	20 %

Textbook and/ or Refrences

Fundamentals of Database systems, sixth edition by ELMASRI.

Assessment Criteria	Percent (%)
First Exam	20 %
Second Exam	20 %
Projects	20 %
Final Exam	40 %

Course Plan

Week	Topic
1	Basic Concepts (Objectives of DBMSs, Database environment, Database and DBMSs, and Database Architecture)
2- 3	Data Modeling
4- 5	Database Design
6- 7	Structured Query Language (SQL) and views
8- 10	Normalization Process
11- 12	Forms and reporting
13- 14	Database maintenance and reliability
15- 16	Contemporary issues