

CIS2101 Database Systems

COURSE INFORMATION

Prerequisites	Academic Year & Level		Teaching Methods			Credit Hrs.
	Year	Semester	Lecture	Tutorial	Laboratory	
CCS1302	2	3	2	2	0	3

COURSE AIM

- Understand the fundamental concepts of database and database management systems, and historical roots of database
- Understand conceptual database design using Entity-Relationship modeling.
- Understand database design methodology using normalization.
- Design a database system for a real-world problem.
- Learn about SQL data modification and data definitions.
- Write SQL queries and sub queries.
- Implement and verify a database system.

COURSE WEEKLY CONTENTS

- 1 Course Description and Introduction
- 2 The Entity Relationship Model
- 3 Constraints in ERMs
- 4 The Relational Model
- 5 SQL and Relational Algebra
- 6 SQL DDL and DML
- 7 SQL Queries and Sub Queries
- 8 Functional Dependencies and Normalization part 1
- 9 Functional Dependencies and Normalization part 2
- 10 Semi-Structured Data and XML part 1
- 11 Semi-Structured Data and XML part 2
- 12 Transaction Management part 1
- 13 Transaction Management part 2
- 14 Projects Discussion
- 15 Revision

STUDENT GRADING & ASSESSMENT

Weeks	Exams	Assign.	Quizzes	Reports	Present.	Lab.	Total
1 to 7	←		30	MARKS		→	30
8 to 12	←		20	MARKS		→	20
1 to 15	←		10	MARKS		→	10
16 or 17	40	Final					40

REFERENCES

Textbook Hector Garcia-Molina, Jeffrey D. Ullman, Jennifer Widom, Database Systems: The Complete Book, Prentice Hall.