



**Al-Imam Muhammad Ibn Saud Islamic University**  
College of Computer and Information Sciences

**Information Technology**

**Course Syllabus [Introduction to Databases]**

<i>Course Code</i>	<i>Course Name.</i>	<i>Credit Hours</i>	<i>Lec.</i>	<i>Lab</i>	<i>Prerequisites</i>
<i>IT 320</i>	<i>Introduction to Databases</i>	<i>3</i>	<i>2</i>	<i>2</i>	<i>IT 281 IT Systems</i>

**Course Description:**

This course covers a wide range of topics related to database theory, starting from the description of basic concepts of the field of data modelling using Entity Relationship Diagram and its mapping to relational schema.

The course will also introduce the students to normalization, SQL and Oracle Database PL/SQL Language. This project-oriented course will enable the students to use Oracle Developer Suite 11g for windows for writing Cursors, Exceptions, Procedures, Functions, Packages, Triggers building and applications.

**Course Topics:**

<b>Week</b>	<b>Tentative Schedule</b>
Week 01	Introduction to database and DBMS
Week 02	Database concepts and architecture
Week 03	High-Level Conceptual Data Model
Week 04	Entity-Relationship Model I
Week 05	Entity-Relationship Model II
Week 06	Relational Model
Week 07	+ <b>Mid-term exam</b>
Week 08	SQL (Structured Query Language) I
Week 09	SQL (Structured Query Language) II
Week 10	SQL (Structured Query Language) III
	Database dependencies
Week 12	Normalization I .+ <b>Mid-term exam</b>
Week 13	Normalization II
Week 14	Database Design Process I
Week 15	Database Design Process II
Week 16	<b>[Final Exam]</b>

## **Textbook and Resources:**

### **Main Textbook:**

- Fundamentals of Database Systems (6th Edition) by Ramez Elmasri and Shamkant Navathe (Apr 9, 2010)

### **Other Resources**

- Database Concepts, Silberschatz, Korth, and Sudarshan, 3rd edition, McGraw-Hill, 1996.
- An Introduction to Database Systems, Date, Benjamin-Cummings Publishing Company, 2001.

## **Project and Assignments**

- Every student assigned to have one project during the semester to practice the Database Design and implementation using DB tools & ER module

## **Grade Distribution**

Quizzes	10 %
Midterm Exam	20 %
Assignments	10 %
Lab contribution and Exams	20 %
Final Exam	40 %