Course Profile

Course Name:-	**Fundamentals of Database**
Course Code:-	**IS 231**
Academic Year:-	**2014-2015**
Semester:-	**1**

Course Overview

This course is introducing the following topics

1) Understand the basics and concepts of database systems.
2) Design, implement and evaluate a computer-based DB system to meet desired users' needs.
3) Use professionally Structured Query Language (SQL) and understand SQL processing.

Course Details	
Level:-	5
Credit:-	3 (3+0+1)
Pre-Requisites:-	CS 120
Co- Requisites:-	CS 210

Learning Outcomes of Course

After successful completion of this course, student will be able to-

1. To understand how to use databases in day to day applications.
2. To be familiar with a broad range of data management issues including data integrity and security.
3. Be able to create databases and use complex SQL queries in relational databases.
4. Be able to write and modify SQL query.
5. Be able to design a table by applying suitable normal forms

Course Assessment

Name of Assessment Task	Weight of Assessment	Week Due
1. Midterm Exam-1	**20%**	**Week 7**
2. Midterm Exam-2 – Quizzes	**10%**	**Week 13**
3. Assignments/Report/Seminar	**10%**	**Week 14**
4. Practical	**20%**	**Every Week**
5. Final Exam	**40%**	**Week 16/17**

Assessment Task and Learning Outcomes Alignment

Assessment Task Name	Course Learning Outcomes				
	1	2	3	4	5
1. Midterm Exam-1	√	√			
2. Midterm Exam-2 -Quizzes			√	√	
3. Assignments/Report/Seminar					√
4. Practical			√	√	
5. Final Exam	√	√	√	√	√

Teaching Contact Details

Name of Course Coordinator:-	Prof. Saravanan
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Lab/Tutorial Instructor:-	Mr. Abdul Kadher Jilani
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Office Hours:-	Sunday: 10 am to 11 am Tuesday: 8 am to 12 pm
Office Number:-	024-1-18-3
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Details of Required Text Book

Book Name	Authors Name	Publisher	Year	Edition
Database Principles: Fundamentals, Design, Implementation, and Management	Carlos Coronel, Steven Morris, and Peter Rob	Cengage Learning	2013	10

Details of Required Reference Books

Book Name	Authors Name	Publisher	Year	Edition
1. A first course in Database Systems	Jeffry D Ulman, Jenifer Widom	Pearson New International Edition,	2007	**3**
2. Database Management Systems	Ramakrishnan, Gehrke	Mc Graw Hill	2002	**3**

IT Resources

The following IT Resources will require to access-

- Internet
- http://faculty.mu.edu.sa/stirumalai/

Course Schedule

Course Topics	Book's Chapter	Event Name	Week Due
Database concepts and architecture	Carlos Coronel, Steven Morris, and Peter Rob, "Database Principles: Fundamentals, Design, Implementation, and Management " - Chapter 1		Week-1
Data models, database schemes and instances	Chapter 1		Week-2
DBMS and the concept of program-data independence	Chapter 3		Week-3
Database languages and interfaces	Chapter 3		Week-4
Database models, relational data model and relational algebra, relational model constraints	Chapter 4		Week-5
Domains, keys, and integrity constraints, Structured query language (SQL); data definition, queries	Chapter 7		Week-6
		Mid Term 1	Week-7

Update, statements	Chapter 7		Week-8
DCL Statements	Chapter 6		Week-9
Views in SQL	Chapter 6		Week-10
Database design	Chapter 7		Week-11
		Mid Term 2 - Quizzes	Week-12
Functional dependencies	Chapter 7		Week-13
Normal forms and Examples	Chapter 9		Week-14
Revision		**Assignment Submission**	Week-15
			Exam Week

Referencing Style

The **American Psychological Association (APA)** referencing style must be use for all submissions of this course.

Course Assessment Task

Assessment Name	Midterm Exam-1
Description of Task Assessment	This assignment is aligned to learning outcomes 1 & 2. In that regard, the assignment contains questions that assess: 1) students' thorough understanding in the concepts of database systems 2) issues in database management systems
Task Assessment Due Week/Date	Week 7
Return Week/Date to Students	Week 8
Weight of Task Assessment	10%
List Learning Outcomes Assessed	**1.** To understand how to use databases in day to day applications. **2.** To be familiar with a broad range of data management issues including data integrity and security.

Assessment Name	Mid Term 2 - Quizzes
Description of Task Assessment	This assignment is aligned to learning outcomes 3 & 4. In that regard, the assignment contains questions that assess students' thorough understanding in SQL queries
Task Assessment Due Week/Date	Week 13
Return Week/Date to Students	Week 14
Weight of Task Assessment	20%
List Learning Outcomes Assessed	**3.** Be able to create databases and use complex SQL queries in relational databases. **4.** Be able to write and modify SQL query.

Assessment Name	Assignment
Description of Task Assessment	This assignment is aligned to learning outcome 5. In that regard, the assignment contains questions that assess: students' thorough understanding in applying normal forms
Task Assessment Due Week/Date	Week 15
Return Week/Date to Students	Week 15
Weight of Task Assessment	10%
List Learning Outcomes Assessed	**5.** Be able to apply normal forms

Assessment Name	Practical
Description of Task Assessment	This assignment is aligned to learning outcomes 3 & 4. In that regard, the assignment contains questions that assess students' thorough understanding SQL queries
Task Assessment Due Week/Date	Every week as prescribed
Return Week/Date to Students	Every week as prescribed
Weight of Task Assessment	20%
List Learning Outcomes Assessed	**3.** Be able to create databases and use complex SQL queries in relational databases. **4.** Be able to write and modify SQL query.

Assessment Name	Final Exam
Weight of Task Assessment	40%
Duration	180 Minutes
Warning	No Calculator Permitted Closed Books
Learning Outcomes Assessed	1. To understand how to use databases in day to day applications. 2. To be familiar with a broad range of data management issues including data integrity and security. 3. Be able to create databases and use complex SQL queries in relational databases. 4. Be able to write and modify SQL query. 5. Be able to design a table by applying suitable normal forms