

## Course Syllabus

1. **Name of Curriculum,** Bachelor of Science Program in Computer Science
2. **Course Code** ICCS 411: Database Management Systems
3. **Number of Credits** 4 (3-2)
4. **Prerequisite** ICCS: 321: Data Structure and Algorithm Analysis
5. **Type of Course** Required major course for computer science students
6. **Trimester/ Academic Year**

### 7. Course Description

Basic database concepts, data models, data normalization, data description languages, query facilities, file organization, index organization, file security, data integrity and reliability. Practical exercises are included

### 8. Course Objectives

Go through the database design concept including: Conceptual, Logical and Physical Design. Hands on the database environment using Oracle software including database, SQL Plus, Forms and Reports. Students will create simple database application as a group project

### 9. Course Outline

week	Topic		Instructor
	Lecture/Seminar	Hour	
1	Introduction: What is database?	4	
2	Entity-Relationship Data Modeling: Tools and Techniques	4	
3	The Entity Relationship Model	4	
4	UML Style Class Diagrams	4	
5	The Relational Model and Normalization	4	
6	Midterm Examination	4	
7	Database Design	4	
8	Managing Multi-User Databases	4	
9	ODBC, OLE DB, ADO, and ASP, JDBC, Java Server Pages, and MySQL	4	
10	Object-Oriented Database	4	
11	Sharing Enterprise Data	4	
12	Final Exam	4	

**10. Teaching Methods** Lecture, labs and demonstration

**11. Teaching Media** Power Point Slide, Database Tools

## 12. Course Achievement

90% or more	A
85% - 89%	B+
80% - 84%	B
75% - 79%	C+
70% - 74%	C
65% - 69%	D+
60% - 64%	D
Below 60%	F

## 13. Course Evaluation

Final Exam	30 %
Midterm Exam	25 %
Project and Assignment	30 %
Quiz and Attendance	15 %
<b>Total</b>	<b>100%</b>

## 14. References

- An Introduction to database Systems by C.J. Date
- Fundamentals of Database Systems by Ramez Elmasri and Shamkant B. Navathe
- Database Systems A Practical Approach to design, Implementation, and management by Thomas Connolly and Carolyn Begg
- Database System Concepts 4<sup>th</sup> Edition by Silberschatz, Henry F.Korth, S.Sudarshan

## 15. Instructors

## 16. Course Coordinator