

Kingdom of Saudi Arabia
Ministry Of Higher Education
Majmaah University
Deanship of Quality assurance
and Human Development



Course Specification

Database (2) CIS-326-Z

1431/1432

Course Specification

Institution <i>Majmaah University</i>
College/Department : <i>College of Science in AL-Zulfi / Computer Science & Information</i>

A- Course Identification and General Information

1. Course title and code: <i>Database (1) CIS-326-Z</i>
2. Credit hours 4
4. Name of faculty member responsible for the course <i>Mohammed Talat Hasan Mubarak</i>
5. Level/year at which this course is offered : <i>5 level / 3 year</i>
6. Co-requisites for this course (if any) <i>Database(1) CIS 125</i>
7. Location if not on main campus <i>College of Science in AL-Zulfi</i>

B- Objectives

<p>The main objective of this course is to provide students with the theoretical background and practical experience relating to the design and implementation of relational databases. The main objectives of the course are:</p> <ol style="list-style-type: none">1. Learn the fundamental Database Design Theory and Introduction to Normalization.2. Understand Database File Organization: Unordered, Ordered, and Hashed Files of Records3. Understand Query Processing and Query Optimization Techniques4. Understand Protocols for Concurrency Control in Databases <p>Understand functional dependencies and database normalization (15%).</p>

C- Course Description (Note: General description in the form to be used for the Bulletin or Handbook should be attached)

1. Topics to be Covered		
List of Topics	No of Weeks	Contact hours
<i>Database Design Theory: Introduction to Normalization Using Functional & Multivalued Dependencies</i>	1	5
<i>Database Design Theory: Normalization Algorithms</i>	1	5
<i>Database File Organization: Unordered, Ordered, and Hashed Files of Records</i>	2	10
<i>Database File Indexing Techniques, B-Trees, and B+-Trees</i>	3	15
<i>Introduction to Query Processing and Query Optimization Techniques</i>	2	10
<i>Foundation of Database Transaction Processing</i>	2	10
<i>Introduction to Protocols for Concurrency Control in Databases</i>	3	15

2. Course components (total contact hours per semester):				
Lecture: 42	Tutorial:	Laboratory 28	Practical/Field work/Internship	Other:

3. Additional private study/learning hours expected for students per week. (This should be an average

:for the semester not a specific requirement in each week)

4. Schedule of Assessment Tasks for Students During the Semester

D- E Learning Resources.

1. Required Text(s) : Fundamentals of Database Systems

- 2. Essential References : Modern Database Systems, Jeffrey A. Hoffer, Mary Prescott, Fred McFadden, 7th Ed., Prentice Hall, 2004

3- Recommended Books and Reference Material (Journals, Reports, etc) (Attach List):

- Database Systems Concepts, Silberschatz, Korth and Sudarshan, McGraw Hill, 4th ed., 2002

“An Introduction to Database Systems”, C. J. Date, 6th Edition, Addison Wesley, 1995.

4- Electronic Materials, Web Sites etc :

<http://www.aw-bc.com/elmasri>

5- Other learning material such as computer-based programs/CD, professional standards/regulations

E- Assessment

Assessment Policy		
Assessment Type	Week	Weight
First Exam	6	20%
Second Exam	12	20%
Final Exam		60%
Total		100%