

# COURSE FILE SUMMARY

COURSE INFORMATION			
<b>College / Institute / Center:</b>	Management & Technology	<b>Department:</b>	BIS Dept
<b>Program Title:</b>	Bachelor of Business Administration	<b>Program Code:</b>	AS, ES
<b>Course Title:</b>	<b>Projects Information systems (Advanced DB)</b>	<b>Course Code:</b>	<b>S325</b>
<b># Hours:</b>	----- 2 hr ----- Lecture	----- 2 hr ----- Lab / <u>Tutorial</u>	-----3 hr ----- Credit
<b>Pre Requisites: S225 / Java1</b>			

COURSE AIM
Provides the student majoring MIS with in-depth understanding of the design and implementation of modern database systems.

COURSE OBJECTIVES
<ul style="list-style-type: none"> <li>• Present advanced concepts in ER modeling.</li> <li>• Explain the fundamentals of object oriented modeling and object oriented database development.</li> <li>• Provide in-depth understanding of query optimization techniques.</li> <li>• Present topics related to transaction processing and recovery.</li> <li>• Thorough elaboration of the data warehousing technology.</li> <li>• Thorough elaboration of the data mining techniques.</li> <li>• Train the student to become proficient in modeling databases at conceptual and physical levels of design.</li> </ul>

STAFF REQUIREMENTS			
	Qualifications	Special Skills	Number
Lectures	Ph.D. in CS or MIS	Practical Experience in Advanced DB	1
Tutorials			
Laboratories / Workshops	Bsc.CS or Ms.C.	Practical Experience in Advanced DB	1

## LECTURE SCHEDULE

Lecture			Description
#	Week	Hrs	
1	1 <sup>st</sup> .	2	Fundamental database concepts' review and the ER-Model
2	2 <sup>nd</sup> .	2	Enhanced ER-Model
3	3 <sup>rd</sup> .	2	Relational database
4	4 <sup>th</sup> .	2	SQL
5	5 <sup>th</sup> .	2	Advanced SQL
6	6 <sup>th</sup> .	2	Relational Algebra
7	7 <sup>th</sup> .	2	<b>Mid Term Exam</b>
8	8 <sup>th</sup> .	2	Query Processing
9	9 <sup>th</sup> .	2	Optimization
10	10 <sup>th</sup> .	2	Transaction Management and Recovery
11	11 <sup>th</sup> .	2	Object-oriented database - OODB and OODBMS
12	12 <sup>th</sup> .	2	<b>12<sup>th</sup> week exam</b>
13	13 <sup>th</sup> .	2	Introduction to Database for Decision Support
14	14 <sup>th</sup> .	2	Data Warehouse Technology
15	15 <sup>th</sup> .	2	Introduction to Data Mining
16	16 <sup>th</sup> .	2	<b>Final Exam</b>

## TEXT BOOKS

Code*	Description
<b>TB</b>	<b>Fundamentals of DataBase Systems</b> by Ramez ELmasri, shamkant B. Navathe <b>Publisher:</b> Pearson Addison Wesley; 5 <sup>th</sup> edition

## REFERENCE BOOKS

Code*	Description

## TUTORIAL SCHEDULE

Tutorial			Topic
#	Week	Hrs	
			<b>Oracle SQL Tutorial</b> <a href="http://www.db.cs.ucdavis.edu/teaching/sqltutorial/">http://www.db.cs.ucdavis.edu/teaching/sqltutorial/</a> <b>Oracle PLSQL Tutorial:</b> <a href="http://www-db.stanford.edu/~ullman/fcdb/oracle/or-plsql.html">http://www-db.stanford.edu/~ullman/fcdb/oracle/or-plsql.html</a>

## LABORATORY WORKSHOP SCHEDULE

Laboratory				Description
#	We ek	Hrs.	Code	
1	2 <sup>nd</sup>	2	<b>S325</b>	Introduction/Schema Builder
2	3 <sup>rd</sup>	2	<b>S325</b>	Introduction to Structured Query Language.
3	4 <sup>th</sup>	2	<b>S325</b>	Continuing SQL
4	5 <sup>th</sup>	2	<b>S325</b>	Continuing SQL
5	6 <sup>th</sup>	2	<b>S325</b>	SQL Evaluation
6	7 <sup>th</sup>	2	<b>S325</b>	Introducing Form Builder
7	8 <sup>th</sup>	2	<b>S325</b>	Continuing Form Builder
8	9 <sup>th</sup>	2	<b>S325</b>	Continuing Form Builder
9	10 <sup>th</sup>	2	<b>S325</b>	Continuing Form Builder
10	11 <sup>th</sup>	2	<b>S325</b>	Report Builder
11	12 <sup>th</sup>	2	<b>S325</b>	Introducing PLSQL
12	13 <sup>th</sup>	2	<b>S325</b>	Continuing PLSQL
13	14 <sup>th</sup>	2	<b>S325</b>	Continuing PLSQL
14	15 <sup>th</sup>	2	<b>S325</b>	Continuing PLSQL
15	16 <sup>th</sup>	2	<b>S325</b>	Final Evaluation

## COMPUTER USAGE

PCs networked in client-server architecture with a server-based database engine. Client workstations are provided with front-end software tools to provide hands on practice for different topics covered in lectures.

Students may be provided with a licensed copy of software tools for in-house practice.

Week #	Points	Written	Oral	Term Paper	Practical	Continuous	Project
7	30	30					
12	20	20					
1-15	10						10
16	40	40					

## READING MATERIAL

Code*	Description








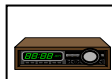
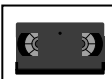
\* TB : Text Book      RB: Reference Book      ST: Standards / Codes      LN: Lecture Notes

## SUPPLEMENTARY MATERIAL

Code*	Description
OS SW	Slides will be used along with the Lab sessions Oracle Suit (Oracle Developer) Online Oracle and SQL Tutorials

\*PR: Periodical      SW: Software      VT: Video Tape      OS: Overhead Slide Projector  
 MD: Model      AC: Audio Cassette

## EDUCATIONAL RESOURCES

								
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**Prepared by:**

**Name:** Mrs. Sara ElKheshin

**Signature:**

**Date:** 11/7/2010

**Approved by:**

**Name:** Dr. Walid AbdelMoez

**Signature:**

**Date:** 11/7/2010