



KINGDOM OF SAUDI ARABIA
 IMAM MOHAMMAD IBN SAUD ISLAMIC UNIVERSITY
 COLLEGE OF COMPUTER AND INFORMATION SCIENCES
 INFORMATION SYSTEMS DEPARTMENT
 BACHELOR IN INFORMATION SYSTEMS

المملكة العربية السعودية
 جامعة الإمام محمد بن سعود الإسلامية
 كلية علوم الحاسب والمعلومات
 قسم نظم المعلومات
 بكالوريوس نظم المعلومات

SYLLABUS

IS1221: Database Management Systems

CREDIT HOURS	4 (3hrs Lec + 2 hrs Lab)
---------------------	---------------------------------

PREREQUISITE	IS1220 – Introduction to Databases
---------------------	---

Instructor:
Contact information and office hours
Office No: To be announced (TBA)
Office Hours: TBA
E-mail: _____@imamu.edu.sa

COURSE DESCRIPTION
The aim of the course is to prepare students familiar with different database system architectures, their advantages and disadvantages, transaction processing, concurrency control protocols, recovery management techniques and indexing structures. Apart from these students acquire the skills of database management and administration using Oracle.

COURSE LEARNING OUTCOMES (CLOs)		Aligned SOs
1	Knowledge and Understanding	
1.1	Describe the different database system architectures and their advantages and disadvantages	1(P)
1.2	Define transaction processing and recognize the manner in which database systems support atomicity, concurrency, isolation and durability.	1(I)
1.3	Recognize the various concurrency control protocols.	1(P)
1.4	Describe different recovery management techniques.	1(P)
1.5	Describe the different Indexing and Hashing techniques	1(I)
2	Skills :	



2.1	Summarize the basics of database management and administration.	2(P)
2.2	Apply basic level functionality provided by typical database management systems, to an extent sufficient to select and utilize a DBMS to support real world applications	2(P)
2.3	Summarize the basics of database management and administration.	1 (P)
2.4		
2.5		
3	Values:	
3.1		
3.2		
3.3		
3.4		
3.5		

TEACHING Strategies
Lectures Self-Learning

No	List of Topics	Contact Hours	Self-Learning
1	DBMS Architecture- classroom teaching Examples: self-learning	10	2
2	Transactions - classroom teaching Examples: self-learning	10	2
3	Concurrency Control- classroom teaching Examples: self-learning	12	2
4	Recovery Management- classroom teaching Examples: self-learning	8	1
5	Indexing Structures- classroom teaching Examples: self-learning	4	1
6	Oracle Database Administration and Project Discussions - classroom teaching Practice: self-learning	16	2
7			
8			



9			
10			
11			
12			
Total		60	10

TEXT BOOK

Database System Concepts, 7/E, Abraham Silberschatz, Henry Korth, S. Sudarshan, McGraw-Hill , Pub. Company, 2019. ISBN-13: 978-0078022159.
Oracle Database 11g The Complete Reference (Oracle Press, Kevin Loney, McGraw-Hill Osborne,2009, ISBN-10: 0071598758 , ISBN-13: 978-0071598750

REFERENCES

Fundamentals of Database Systems, 7/E, RamezElmasri and Shamkant Navathe, Pearson,2015. ISBN-13: 9780133970777.
Expert Oracle Database 11g Administration, 1/E, Sam R. Alapati, Apress, 2010. ISBN: 978-1430220176.

Course Assessment Methods			
No	Assessment Method	Due Week	% of Total Assessment
1	Quiz	4	10
2	Assignment	9	10
3	Midterm	7	20
4	Project / Lab Exam	11	20
5	Final Exam	13	40