

١- بيانات المقرر		
المستوى: الثالث	اسم المقرر : Database Management Systems	كود المادة : Math 342
عدد الوحدات الدراسية: ٣ ساعة معتمدة نظري: ٢ تمارين: ٠ عملي: ١		التخصص : الإحصاء وعلوم الحاسب

For students undertaking this course, the aims are to: <ul style="list-style-type: none"> Understand the basic concepts of DBMS: models, instances and schemes, data independence, DDL, DML, DB manager, DB administrator, DB users, database system architecture. Understand the techniques of implementation of : Crash Recovery, Concurrency Control, Transaction Recovery, Security & Integrity. Design a DB with different methods (EER model and the Relational model) Querying a DB using SQL Protect data in DB system. 		٢- هدف المقرر:
٣- المستهدف من التدريس المقرر:		
a- Knowledge and Understanding : On completing this course, students will be able to: a1- Understanding Advantages of a DBMS, Describing and Storing Data in a DBMS and different Data Structures. Concurrent Execution of Transactions. Understanding how to build a Conceptual Design With the ER Model a2- Understanding How to create and Modify Relations Using SQL, Querying Relational Data, a3- Understanding RELATIONAL ALGEBRA AND CALCULUS a4- Understanding referential integrity a5-To learn the basic techniques of computer simulation and programming. a6-To solve a wide range of equations and inequalities using methods from algebra, analysis and stochastic; especially using numerical algorithms.		أ- المعلومات والمفاهيم:
b- Intellectual Skills: On completing this course, students will be able to: b1- Ability to define the enterprise problems b2- Ability to drive different solution alternatives for the enterprise problems b3- Ability to use SQL for building QUERIES, CONSTRAINTS and TRIGGERS b4- Ability to use row and column functions		ب- المهارات الذهنية
c-Professional and Practical Skills: On completing this course, students will be able to: c1- Ability to use DBMS c2- Getting information from a table, ability to use and evaluate SQL queries, Using the Oracle Data dictionary c3- query a DB using SQL c4- familiarize with protecting data in DB system c5-Using computers and appropriate software to solve mathematical problems. c6-Using statistical techniques and related software packages.		ج- المهارات المهنية الخاصة بالمقرر:
d-General and Transferable Skills:		د- المهارات العامة :

On completing this course, students will be able to: d1- Ability to work in a team d2- Manage time effectively d3- .manage team capabilities in proper way d4- Use information and communication technology effectively. d5-Understand the relevance of Science to national development.			
–Basic principles of database management systems (DBMS) and of DBMS application development. –DBMS objectives, –systems architecture, database models with emphasis on Entity-Relationship and Relational models, –data definition and manipulation languages, –the Structured Query Language (SQL), –database design, application development tools, –access methods interfaces, –security, concurrency control and recovery, –query processors and optimizers			٤- محتوى المقرر:
4.1 Discussions 4.2 Quizzes 4.3 Reports and search on net 4.4 Lectures: 2 Hours per week (2H/W) 4.5 Practical: 2 Hours per week (2H/W)			٥- اساليب التعليم والتعلم:
The same as normal students, only skeletal disabilities are allowed in the Faculty of Science.			٦- أساليب التعليم والتعلم للطلاب ذوي القدرات المحدودة:
٧- تقويم الطلاب :			
Final Exam	to assess	a1-a4, b1-b3	أ- الأساليب المستخدمة :
Midterm Exam	to assess	a1,a2,b1,b2	
Practical Exam	to assess	a1,b1,c1	
Oral Exam	to assess	d1,a2,b2,c2	
Report	to assess	b2,b3,b4	
Assessment 1	Week #	14	ب- التوقيت :
Assessment 2	Week #	8	
Assessment 3	Week #	4	
Assessment 4	Week #	6	
Assessment 5	Week #	10	
<i>Weighting of Assessments</i>			ج- توزيع الدرجات :
Final-Term Examination	60%		
Midterm Examination	10%		
Practical Examination	20%		
Oral Examination	10%		
Total	100		
٨- قائمة الكتب الدراسية والمراجع :			
			أ- مذكرات:
a) DATABASE MANAGEMENT SYSTEMS, Raghu Ramakrishnan, Johannes Gehrke, , McGraw-Hill Higher Education2003 (b) SQL FUNDAMENTALS, John J. Patrick, 2009 Pearson Education, Inc			ب- كتب ملزمة

FUNDAMENTALS OF DATABASE SYSTEMS, Ramez Elmasri, Shamkant B. Navathe	ج- كتب مقترحة :
	د- دوريات علمية أو نشرات..

(أ) مصفوفة المعارف والمهارات المستهدفة من المقرر الدراسي

المحتويات للمقرر	اسبوع الدراسة	المعارف الرئيسية	مهارات ذهنية	مهارات مهنية	مهارات عامة
Basic principles of database management systems (DBMS) and of DBMS application development.					
DBMS objectives,					
systems architecture, database models with emphasis on Entity-Relationship and Relational models,					
data definition and manipulation languages,					
the Structured Query Language (SQL),					
database design, application development tools,					
access methods interfaces,					
security, concurrency control and recovery,					
query processors and optimizers					

أستاذ المادة : د./حازم مختار مختار البكري

رئيس مجلس القسم العلمي : ا.د./ مجدى الياس فارس