University / Academy: Menoufia University

College / Institute: Faculty of Electronic Engineering

Department: Computer Science and Engineering

Course Specification

1- Course basic information:		
Course Code: CSE 362	**Course Title:** Database and Information Systems	**Academic year: 2011/2012** **Level (3) – Semester : 1**
Faculty requirement	**Teaching hours: Lecture** 3 **Tutorial** 1 **Lab** 1	

2- Aim of the course	_ To understand general goals of data base and information systems. _ To understand the fundamental characteristic of database approach and categories. _ To understand the modern database architectures. _ To understand the basis required to design and implement a database system. _ To know the advantages and disadvantages of some kinds of database language. _ To have acquired some practical skills to operate and solve some problems of data base systems using high level languages (SQL and Oracle).
3- Intended Learning Outcomes:	
A- Knowledge and Understanding:	a1. Concepts and theories of mathematics and sciences, appropriate to the computer science and engineering. a14. Quality assessment of computer systems. a16. Related research and current advances in the field of computer software and hardware.

	a17. Technologies of data, image and graphics representation and organization on computer storage media.
B- Intellectual Skills	b1. Select appropriate mathematical and computer-based methods for modeling and analyzing problems. b2. Select appropriate solutions for engineering problems based on analytical thinking. b3. Think in a creative and innovative way in problem solving and design. b4. Combine, exchange, and assess different ideas, views, and knowledge from a range of sources. b7. Solve engineering problems, often on the basis of limited and possibly contradicting information.
C- Professional Skills	c1. Apply knowledge of mathematics, science, information technology, design, business context and engineering practice integrally to solve engineering problems. c8. Apply safe systems at work and observe the appropriate steps to manage risks. c9. Demonstrate basic organizational and project management skills. c10. Apply quality assurance procedures and follow codes and standards. c14. Use appropriate specialized computer software, computational tools and design packages throughout the phases of the life cycle of system development. c15. Write computer programs on professional levels achieving acceptable quality measures in software development.
D- General Skills	d2. Work in stressful environment and within constraints. d6. Effectively manage tasks, time, and resources. d8. Acquire entrepreneurial skills.
4- Course Contents	Demonstrate an understanding of the role and importance of information bases in organisations - Pprinciples and objectives of data management - Concepts of Database systems - Conceptual design using ER model - Relational Database, Relational constraints, and Relational Algebra - SQL – Standard Database

	Language - ER – to- Relational database mapping .
5- Teaching and Learning Methods	- **Lectures** - **Experiments in the laboratory** - **Exercises and tutorials** - **Research assignments** - **Work a project**
6- Teaching and Learning Methods for disable students	**NA**
7- Student Assessment	
a- Assessment Methods	**- Reports, assignments, exercises, and final written exam to assess knowledge and understanding** **- Regular oral and written quizzes to assess intellectual skills.** **- Project for design and implement database modeling.**
b- Assessment Schedule	**- Exercise sheet/ Lab assignment : Weekly** **- Quizz-1: Week no 5** **- Mid-Term exam: Week no 8** **- Quizz-2: Week no 11** **- Lab exam: Week no 14** **- Final – term examination: Week no 15**
c- Weighting of Assessment	**- Class tutorial and quizzes : …0… %** **- Mid-term examination: …20… %** **- Case study and/or practical exam: …20… %** **- Final – term examination: …60… %** **- Other types of assessment: …0… %** **Total 100 %**
8- List of text books and references:	
a- Course notes	There are lectures notes prepared in the form of a book authorized by the department.
b- Text books	None
c- Recommended books	Tomas Connolly, Carolyn BEGG, "Database System" fourth edition, person education 2005. Elmasr, Navathe, "Fundamentals of Database Systems" fourth edition, person education 2003. Ramakrishnan.Gehrke," Database Management System" Third edition ,

	McCRAW.HILL, 2003.
d- Periodicals, Web sites ……etc	None

Course Contents - ILOs Matrix

Content Topics	Week	A- Knowledge & Understanding	B- Intellectual skills	C- Professional and practical skills	D- General and transferable skills
Demonstrate an understanding of the role and importance of information bases in organizations - Principles and objectives of data management	1, 2	a1, a14, a16, a17	b1, b2	c1	
- Concepts of Database systems -	3, 4	a16	b1, b2	c1	
Conceptual design using ER model -	5, 6	a1, a14, a16, a17	b1, b2, b3	c9, c10	d2,d6, d8
Relational Database, Relational constraints, and Relational Algebra -	7, 8, 9	a16, a17	b1, b2, b3	c9, c10	d2,d6, d8
Standard Database Language - ER – to-Relational database mapping.	10, 11	a16, a17	b2, b3, b4, b7	c1,c8, c9, c10, c14, c15	d2,d6, d8
SQL –	12, 13,14	a16, a17		c8, c9, c10, c14, c15	d2, d8

Course coordinator: **Head of Department:**

Dr. Mervat Mosa **Prof. Nawal Ahmed El-Fishawy**

Date: / /