



Course Specifications

Program(s) on which this course is given:	Systems and Biomedical Engineering Undergraduate Program
Department offering the program:	Systems and Biomedical Engineering Department
Department offering the course:	Systems and Biomedical Engineering Department
Academic Level:	Undergraduate
Date	
Semester (based on final exam timing)	<input checked="" type="checkbox"/> Fall <input type="checkbox"/> Spring

A- Basic Information

1. Title:	Computers and systems (III)		Code:	SBE 306 A				
2. Units/Credit hours per week:	Lectures	3	Tutorial	2	Practical	0	Total	5

B- Professional Information

1. Course description:	By the end of the course the student should learn about Database Systems and File Structures. The student should understand the main component of the different phases of building a database system. This includes the design phase and the implantation phase and testing phase. Moreover, the student should be able to design and implement a complete database for an organization. In the file structures part the student studies the principles of the different structures and organizations of the files on the secondary storage devices.
2. Intended Learning Outcomes of Course (ILOs):	a) Knowledge and Understanding
	Explain the principles of Computer Hardware and Software, programming, interfacing, networking engineering and telecommunications. (K8)
	Identify current and modern Systems and Biomedical engineering issues such as bioinformatics, biometrics, tissue engineering, artificial organs, medical imaging, bio-acoustical engineering, medical optics, man machine interfacing and advanced topics in the Systems and Biomedical engineering discipline. (K16)
	b) Intellectual Skills
	Solve substantial range of engineering problems, some of a complex nature, based on analytical thinking. (I1)
	Evaluate and interpret information and data from a wide range of sources. . (I11)
	c) Professional and Practical Skills
Demonstrate a comprehensive understanding of design methodologies related to Systems and Biomedical engineering, apply and adapt such a design to unfamiliar situations. (P3)	
d) General and Transferable Skills	Manipulate and sort data. (T1)

3. Contents

Topic	Total hours	Lectures hours	Tutorial/ Practical hours
Introduction	5	3	2
Entity Relationship Model	5	3	2

Relational Model	5	3	2
Relational Algebra	5	3	2
Relational Algebra	5	3	2
Structured Query Language	5	3	2
Structured Query Language	5	3	2
Mid Exam	5	3	2
File Structures Concept	5	3	2
File Organization	5	3	2
4. Teaching and Learning Methods	Lectures (Classical lecturing using the white board)	Practical Training/ Laboratory (None)	Seminar/Workshop (None)
	Class Activity (None)	Case Study (None)	Projects (1)
	E-learning (None)	Assignments /Homework (Weekly)	Other:
5. Student Assessment Methods			
• Assessment Schedule		Week	
-Assessment 1;Class test		Every week	
-Assessment 2; Project Assignment		Twelfth week	
-Assessment 3; Presentations			
-Assessment 3; Midterm Exam		Ninth week	
-Assessment 4; Final Exam		Fifteenth week	
• Weighting of Assessments			
-Mid-Term Examination		20	
-Final-term Examination		85	
-Project		15	
-Class Test		5	
-Presentation			
-Total		125	
6. List of References			
1-” -Fundamentals of Database Systems”, by RamezElmasri and ShamkantB.Navathe , Addison - Wesly, 2000, Third edition			
2- “Database Systems” by Thomas Connolly and Carolyn Begg, Addison-Wesley , 2002,Third edition			

7. Facilities Required for Teaching and Learning	
<ul style="list-style-type: none">• Computer• Data show• Lab	
Course Coordinator:	Dr. Ahmed H. Kandil
Head of Department:	Dr. Ahmed M. Badawy