

Course Name	Introduction to Computing			مقدمة علم الحاسب			
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	CS110	0901110	3		3	1.5	4.5
Track	<input type="checkbox"/> University Requirement <input checked="" type="checkbox"/> College Requirement <input type="checkbox"/> Core <input type="checkbox"/> Elective <input checked="" type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	1 st Semester		Prerequisite				
Course Description:							
<p>This course introduces the main concepts of computer science. It includes the basics of computing: hardware, Software, Connectivity, and users, the different types and features of computers. It presents also the data types and data Representation. A simple Computer System architecture is presented so to emphasize on main components, secondary storage devices, types of memory, Hardware, software and people. The principal Peripheral Devices are also presented: Input, Output and storage, Data preparation, Factors affecting input, Input Devices, Output Devices, Secondary Storage devices, Communication between CPU and input/output devices. Software aspects are introduced like Problems-Solving and programming: Algorithm development, Flowcharts, Looping, Some programming Features, Pseudo code, Some structured programming concepts, Documentation, as well as Programming Languages: Machine language and assembly language, High-Level and Low-Level languages, assemblers, compilers and Interpreters. Finally, the course presents the computer and communication aspects, as well as different features of operating Systems.</p>							
Course Objectives:							
<p>After completing this course, students are expected to:</p> <ol style="list-style-type: none"> 1. Have a complete background about the main aspects of computing systems especially for hardware and software, 2. Develop skills in hardware basics: computer architecture, peripheral devices, 3. Develop skills in software basics: data types and representations, problem solving concepts, compilers, assemblers, and programming languages, 4. Understand the main concepts of Computer networking and communication, 5. Understand the main concepts of operating systems and their role in a computer system. 							
Grading	<input checked="" type="checkbox"/> Mid-term	20%	<input type="checkbox"/> Project		<input checked="" type="checkbox"/> Quizzes	10%	
	<input checked="" type="checkbox"/> Final	40%	<input checked="" type="checkbox"/> Lab	25%	<input checked="" type="checkbox"/> Participation	5%	
Textbook:							
<p>G.Anderson, D.Ferro, R.Hilton, "Connecting with Computer Science" course Technology, 1st ed. (January 6,2005) - 061921290x</p>							
Reference Book:							
<p>Raymond P. Canale, "<u>Introduction To Computing for Engineers</u>", McGraw-Hill, 3rd ed., 2000, ISBN: 0079116094.</p>							

Course Name	Fundamentals of Information Systems		مبادئ نظم المعلومات				
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	IS111	0902111	3		3	0	3
Track	<input type="checkbox"/> University Requirement <input checked="" type="checkbox"/> College Requirement <input type="checkbox"/> Core <input type="checkbox"/> Elective <input checked="" type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	1 st Semester		Prerequisite				
Course Description:							
<p>This course aims to introduce students to the basic concepts and topics related to Information Systems (IS). It covers topics such as: systems concepts; system components and relationships; cost/value and quality of information; competitive advantages of information; specification, design, and re-engineering of IS; application versus system software; package software solutions; procedural versus non-procedural programming languages; object oriented design; database features, functions, and architecture; networks and telecommunication systems and applications; characteristics of IS professionals and IS career path; information security, crime, and ethics. Practical exercises may include developing macros, designing and implementing user interface and reports; developing a solution using database software.</p>							
Course Objectives:							
<p>The course objectives aim :</p> <ol style="list-style-type: none"> 1. To provide an introduction to the Organizational uses of information to improve overall quality. 2. To present hardware, software, and related information technology concepts. 3. To provide concepts and skills for the specification and design or the re-engineering of organizationally related systems of limited scope using information technology. 4. To show how information technology can be used to design, facilitate, and communicate organizational goals and objectives. 5. To explain the concepts of individual decision making, goal setting, trust worthiness, and empowerment. 6. To show career paths in information system. To present and discuss the professional and ethical responsibilities of the IS practitioner 							
Grading	<input checked="" type="checkbox"/> Mid-term	30%	<input type="checkbox"/> Project		<input checked="" type="checkbox"/> Quizzes	15%	
	<input checked="" type="checkbox"/> Final	50%	<input type="checkbox"/> Lab		<input checked="" type="checkbox"/> Participation	5%	
Textbook:							
<p>Ralph, M. Stair, "Principles of Information Systems", Thomson Learning, 2003, ISBN 0619216077.</p>							
Reference Book:							
<ol style="list-style-type: none"> 1) Ralph, M. Stair, George W. Reynolds, and George Reynolds, "Fundamentals of Information Systems", Course Technology Inc, 2nd ed., 2003, ISBN 0619064919. 2) Steven A., "Information Systems Foundation of E-Business", 4th edition, 2002. 							

Course Name	Calculus			التفاضل والتكامل			
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	Math111	0817111	3		3	0	3
Track	<input type="checkbox"/> University Requirement <input checked="" type="checkbox"/> College Requirement <input type="checkbox"/> Core <input type="checkbox"/> Elective <input checked="" type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	1 st Semester		Prerequisite				
Course Description:							
The limit. Continuity, the intermediate value theorem. Definition of derivatives. Rules for differentiation. Applications of the derivative. The mean value theorem. L'hospital rule. The definition of the integral. The indefinite integral and the of calculus. Applications of the integral. Sequences. Convergence and limits of sequences. Series. Convergence of series. Power series. The formal power series of rational functions							
Course Objectives:							
Upon completing this course the student should be able to: <ol style="list-style-type: none"> Solve problems involving computing limits Identify continuous functions and their properties Understand and use the definition of derivate, and compute derivatives using the rules of differentiation Apply the derivative in problems involving graphing and in problems involving maximization and minimization Understand the concept of integral and use the basic techniques of integration to compute integrals Apply integrals in solving some geometric problems Understand the relationship between the integral and derivative (the fundamental theorem of calculus) Understand the concept of sequence and compute limits of sequences Understand the concept of series and some of the tests for convergence Find the (formal) series expansion for rational functions 							
Grading	<input checked="" type="checkbox"/> Mid-terms	30%	<input checked="" type="checkbox"/> Assignment	10%	<input checked="" type="checkbox"/> Quizzes	15%	
	<input checked="" type="checkbox"/> Final	40%	<input type="checkbox"/> Lab		<input checked="" type="checkbox"/> Participation	5%	
Textbook:							
Earl W. Swokowski “Calculus” Brooks/Cole, 5 th edition, 1991 ISBN 0534924921							
Reference Book:							
George B. Thomas, “Calculus” Addison Wesley, 11 th edition, 2008 ISBN 0321526791							

Course Name	Physics			الفيزياء			
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	PHY132	0814132	4		4	0	4
Track	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Core <input type="checkbox"/> Elective <input checked="" type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	1 st Semester		Prerequisite				
Course Description:							
Charges and electrical forces. Charge quantization and conservation. Insulators, conductors and semiconductors. Electric field and principle of superposition for electric field. Electric dipoles and the effect of electric field on it. Electric potential due to charges and potential difference. Equipotential surfaces. Magnetic field and magnetic force. Introductory to modern physics and semiconductors. N-type and P-type crystals. Semiconductor carrier properties and action. Depletion layer and electric potential through it. Diode and types of diodes.							
Course Objectives:							
The student will be able to <ol style="list-style-type: none"> 1. develop an understanding of electrical phenomena, 2. develop an understanding of the magnetic phenomena, 3. give the student the basic principles needed to study electronic courses, and 4. give the student good background and experience in solving and dealing with problems. 							
Grading	<input checked="" type="checkbox"/> Mid-term		<input type="checkbox"/> Project		<input checked="" type="checkbox"/> Quizzes		
	<input checked="" type="checkbox"/> Final		<input type="checkbox"/> Lab.		<input checked="" type="checkbox"/> Participation		
Textbook:							
Haliday, Resnic and Walker, " Fundamental of Physics ", 2002.							
Reference Books:							
<ol style="list-style-type: none"> 1) John D. Cutnell ,"Problems Version Physics", Volume 1, 2003. 2) Haliday, Resnic and Walker "Fundamentals of Physics", Volume 1, Chapters 1 - 21, Enhanced, 2002. 							

Course Name	Fundamental of Programming			مبادئ البرمجة			
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	CS120	0901120	3		3	1.5	4.5
Track	<input type="checkbox"/> University Requirement <input checked="" type="checkbox"/> College Requirement <input type="checkbox"/> Core <input type="checkbox"/> Elective <input checked="" type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	2 nd Semester		Prerequisite	0901110			
Course Description							
<p>This knowledge area consists of those skills and concepts that are essential to programming practice independent of the underlying paradigm and programming language. Specific topics covered include: an overview of algorithms and problem-solving (problem solving strategies, role of algorithms in the problem-solving process, etc), fundamental programming constructs (variables, types, expressions, simple I/O, conditional and iterative control structures, functions, recursion, pointers, etc.). The study of programming language features and programming paradigms. Control, run-time environments, and semantics are examples of procedural, functional, logical, and object oriented programming. In practice the programming language used is ANSI-C, the syntax aspect of language and some pragmatic aspects such as comparison of interpreters and compilers and language translation phases must be studied in laboratory.</p>							
Course Objectives:							
<ol style="list-style-type: none"> 1. Discussing the importance of algorithms in the problem-solving process and using pseudo-code. 2. Describing the phases of program translation from source code to executable code and the files produced by these phases. 3. Designing, implementing, testing, and debugging a program that uses fundamental programming constructs. . 4. Familiarizing students with the taxonomy of programming language characteristics and their effect upon the structure. 5. Familiarizing students with some accepted models of programming language semantics. This should include models for both an imperative and a functional language. 6. Acquiring a sound understanding of the theory and practice behind procedural, Object-oriented, functional and logic programming languages. 							
Grading	<input checked="" type="checkbox"/> Mid-term	20%	<input type="checkbox"/> Project		<input checked="" type="checkbox"/> Quizzes	10%	
	<input checked="" type="checkbox"/> Final	40%	<input checked="" type="checkbox"/> Lab	25%	<input checked="" type="checkbox"/> Participation	5%	
Textbook:							
Robert Sedgewick, "Algorithms in C: Fundamentals, data structures, sorting, searching, and graph algorithms", Addison-Wesley 2001, ISBN: 0201756080							
Reference Book:							
Herbert Schildt, "C: the complete reference", McGraw-Hill 2000, ISBN:0-07-212124-6							

Course Name	Electronics			الإلكترونيات			
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	CE121	0903121	4		4	1.5	5.5
Track	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Core <input type="checkbox"/> Elective <input checked="" type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	2 nd Semester		Prerequisite	0814132			
Course Description:							
DC Circuits : Circuit Variables (Voltage, Current, Power, and Energy), DC Circuit Elements (Resistors, DC Voltage Sources), Simple Resistive Circuits(Resistors in Series, Resistors in Parallel, Voltage and Current Dividers) , Circuit Analysis (Ohm’s Law, Kirchhoff Laws , Node-Voltage Method, Mesh Current Method, Source Transformation, Thevinin and Norton Equivalent), Maximum Power Transfer and Superposition. AC Circuits: AC Circuit Components and Simple AC Circuit Analysis . Diodes: Diode Structures, Diode Circuits, Diode Types (Zener Diode, Varactor Diode, Schottky Diodes), Diode Clippers, Diode Limiters, Diode Clampers, and Diode Rectifications. Transistors: Bipolar Junction Transistors, N-P-N Structures, P-N-P Structures, Modes Of Operations (Active Mode, Reverse Mode and Saturation Mode), CB, CE, CC Connections, Field Effect Transistors (FET), (JFET, MESFET, MISFET, and MOSFET) , Transistor Circuits And Applications, Transistor Switching. Opto Electronics Devices: Photodiodes, LED, Lasers, Semiconductor Lasers. Integrated Circuits: Background, Advantages of Integration, Types of Integration, Monolithic And Hybrid Circuits, Evolution of Integrated Circuits, CMOS ICs, TTL ICs. Operational Amplifiers and applications. Student will be trained on the available software such as: Circuit maker 2000, EWB50a, MultiSim 6.01, CirCAD, DCCAD, and DCCHALING in addition with the products and components of Heathkit educational systems (EWS-3600 analog modules)							
Course Objectives:							
Making the student to							
<ol style="list-style-type: none"> 1. Understand the fundamentals of basic DC and AC circuit elements, 2. Be able to tackle the analysis of DC and AC circuits, 3. Study the basics of diodes, transistors, and optical devices, 4. Understand the principles and types of integration, 5. Study the evolution of integrated circuits, and 6. Understand the operational amplifies and their applications. 							
Grading	<input checked="" type="checkbox"/> Mid-term	20%	<input type="checkbox"/> Project		<input checked="" type="checkbox"/> Quizzes	10%	
	<input checked="" type="checkbox"/> Final	40%	<input checked="" type="checkbox"/> Lab.	25%	<input checked="" type="checkbox"/> Participation	5%	
Textbook:							
Thomas L. Floyd, “ Electronics Fundamentals: Circuits, Devices, and Applications ”, Prentice Hall , 7 th edition, 2004, ISBN 0-13-199585-5							
Reference Books:							
<ol style="list-style-type: none"> 1) Thomas L. Floyd ,“Principles of Electric Circuits : Conventional Current Version”, 7th Edition, 2002. 2) Richard Drof,” Introduction to Electric Circuits”, John Wiley , 6th edition, 2004, ISBN 0471447951. 							

Course Name	Biology			الأحياء			
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	Bio101	0816101	4		4	1.5	5.5
Track	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Core <input type="checkbox"/> Elective <input checked="" type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	2 nd Semester		Prerequisite				
Course Description:							
Introduction to biology, structure, function and division of plant and animal cell. Classification of living beings into kingdoms. Study of biological activities (nutrition, digestion, respiration, reproduction and secretion).							
Course Objectives:							
To fulfill the information about the science of life and understand the activity of living beings.							
Grading	<input checked="" type="checkbox"/> Mid-term		<input type="checkbox"/> Project		<input checked="" type="checkbox"/> Quizzes		
	<input checked="" type="checkbox"/> Final		<input checked="" type="checkbox"/> Lab.		<input checked="" type="checkbox"/> Participation		
Textbook:							
Biology Sixth Edition By: Campbell & Reece. Benjamin Cummings 2002 (www.aw.com)							
Reference Books:							
Peter Raven & George Johnson " Biology ", 6 th Edition, C. Brown Publishers, 2002							

Course Name	Introduction to Statistics & Probability Theory		مقدمة في الإحصاء ونظرية الاحتمالات				
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	Math208	0817208	3		3	0	3
Track	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Core <input type="checkbox"/> Elective <input checked="" type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	2 nd Semester		Prerequisite	0817111			
Course Description:							
<p>Counting. Introduction to probability. Conditional probability and statistical independence. Bayes theorem. Random variables. Mathematical expectation. Variance. Covariance and the correlation coefficient for two random variables. Some important discrete distributions</p>							
Course Objectives:							
<p>Upon completing this course a student should be able to:</p> <ol style="list-style-type: none"> 1. Identify some counting techniques 2. Know the concept of event and probability of events 3. Know the concept of conditional probability and statistical independence and apply Bayes rule 4. Understand the concept of random variable , expectation, variance, and the covariance of two random variables 5. Know some of the important discrete distributions 							
Grading	<input checked="" type="checkbox"/> Mid-terms	60%	<input type="checkbox"/> Project		<input type="checkbox"/> Quizzes		
	<input checked="" type="checkbox"/> Final	40%	<input type="checkbox"/> Lab		<input type="checkbox"/> Participation		
Textbook:							
David S. Moore: " Introduction to the Practice of Statistics "							
Reference Book:							
Arnold Allen:" Probability, Statistics, and Queing Theory with Computer Science Applications "							

Course Name	Object Oriented Programming (1)		البرمجة كائنة التوجه (١)				
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	CS210	0901210	3		3	1.5	4.5
Track	<input type="checkbox"/> University Requirement <input checked="" type="checkbox"/> College Requirement <input type="checkbox"/> Core <input type="checkbox"/> Elective <input checked="" type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	3 rd Semester		Prerequisite	0901120			
Course Description:							
<p>The purpose of this course is to provide students with fundamental knowledge of object oriented programming (OOP). It emphasizes good software engineering principles and developing programming skills. Specific topics covered include: fundamental concepts of object oriented (classes, methods, instantiation, communication by message, encapsulation, inheritance, overriding, dynamic dispatch, polymorphism, etc.), advanced techniques of OOP (exceptions, multithreaded programming, etc.) and some interesting packages (I/O, strings, etc.). As an OOP programmer, student will be able to translate solution problem into object oriented form, he should acquire some understanding of object oriented concepts and tools such as the Unified Modeling Language (UML), this will give student a firm foundation on which to build high-quality software systems. In practice the programming language used is JAVA, as an introduction to JAVA language; students should acquire some understanding of abstraction mechanisms, JAVA Virtual Machines (JVM) and the byte code notion.</p>							
Course Objectives:							
<ol style="list-style-type: none"> 1. Describe the importance and power of abstraction in the context of virtual machines and explain the benefits of intermediate languages in the compilation process. 2. Justify the philosophy of object-oriented design and the concepts of encapsulation, inheritance and polymorphism. 3. Explain how abstraction mechanisms support the creation of reusable software components. 4. Acquire basics of how translate solution problem into object oriented form. 5. Design and implement simple programs in an object-oriented programming language. 6. Design and implement program that use exceptions and multithreads. 							
Grading	<input checked="" type="checkbox"/> Mid-term	20%	<input checked="" type="checkbox"/> Project	15%	<input checked="" type="checkbox"/> Quizzes	10%	
	<input checked="" type="checkbox"/> Final	40%	<input checked="" type="checkbox"/> Lab	15%	<input checked="" type="checkbox"/> Participation		
Textbook:							
Bruce E. Wampler, "Essence of Object Oriented Programming with JAVA and UML", Addison Wesley 2001, ISBN: 0-201-73410-9							
Reference Book:							
Herbert Schildt, "JAVA 2: The complete reference", McGraw-Hill, 5 th edition 2002, ISBN: 0072224207							

Course Name	Data Structure			هيكلية البيانات			
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	CS211	0901211	2		2	1	3
Track	<input type="checkbox"/> University Requirement <input checked="" type="checkbox"/> College Requirement <input type="checkbox"/> Core <input type="checkbox"/> Elective <input checked="" type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	3 rd Semester		Prerequisite	0901120			
Course Description							
<p>This course is complementary to the course “Fundamentals of Programming”. The aim of this course is to provide the fundamentals of data structures and algorithm design needed in the remainder of the curriculum, to introduce algorithm analysis tools, and to develop students’ problem solving and computer programming skills.</p> <p>Topics covered include: basic elements, data types, internal representation (Arrays, records, strings, stacks, queues, trees, lists and linked lists, records and files, pointers) and data structure manipulation such as array manipulations, sorting, searching, trees and files manipulations, string processing, stacks ,queues, and list manipulations, pointer operations...</p> <p>The data structures representation and manipulations are exercised using ANSI-C language.</p>							
Course Objectives:							
<p>The student will be able to:</p> <ol style="list-style-type: none"> 1. Describe, construct, and use various implementations for fundamental data abstractions such as lists, stacks, queues, trees, and graphs. 2. Design and implement efficient algorithms for manipulating data Structures. 3. Compare the efficiency of various data structures and algorithms and to choose the most appropriate ones for a given application. 4. Describe the internal representation of numeric and nonnumeric data. 5. Describe the internal representation of basic and advanced data structures 6. Write programs by using fundamental and advanced data structures 							
Grading	<input checked="" type="checkbox"/> Mid-term	20%	<input type="checkbox"/> Project		<input checked="" type="checkbox"/> Quizzes	10%	
	<input checked="" type="checkbox"/> Final	40%	<input checked="" type="checkbox"/> Lab	25%	<input checked="" type="checkbox"/> Participation	5%	
Textbook:							
Robert Sedgewick, “Algorithms in C: Fundamentals, data structures, sorting, searching, and graph algorithms”, Addison-Wesley 2001, ISBN: 0201756080							
Reference Book:							
Herbert Schildt, “C: the complete reference”, McGraw-Hill 2000, ISBN:0-07-212124-6							

Course Name	Technical Reports			كتابة التقارير التقنية			
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	IS212	0902212	2		2	0	2
Track	<input type="checkbox"/> University Requirement <input checked="" type="checkbox"/> College Requirement <input type="checkbox"/> Core <input type="checkbox"/> Elective <input checked="" type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	3 rd Semester		Prerequisite	0902111			
Course Description:							
<p>This course is designed to help students develop an effective method of planning and completing writing tasks so that student can meet professional writing demands. Since succeeding in the professional world requires not only technical knowledge but also effective writing skills. This course focuses on the writing skills necessary for advanced academic and professional writing, tailored specifically to student academic career work as professional in a technical field. Successful technical communicators know how to organize and present complex information so that the ideas are understandable to many readers, viewers, and listeners. In this course, students will complete several small technical and recommendation reports on a topics related to IT related majors. Indeed, this course requires intensive writing, reading, and peer commentary.</p>							
Course Objectives:							
<p>Upon successfully completing this course, students will understand how to:</p> <ol style="list-style-type: none"> 1. Examine sources in your field for their relevance and credibility, 2. Identify and analyze different audiences for particular types of writing, 2. Organize and present arguments effectively, 3. Write memos, letters, abstracts, short reports, and long, formal reports , 4. Edit your own work and the work of your peers for content, organization, and style, 5. Use graphics and page layout to support and enhance your written message, 6. Present your research findings to your peers. 							
Grading	<input checked="" type="checkbox"/> Mid-term	25%	<input checked="" type="checkbox"/> Project	20%	<input checked="" type="checkbox"/> Quizzes	15%	
	<input checked="" type="checkbox"/> Final	35%	<input type="checkbox"/> Lab		<input checked="" type="checkbox"/> Participation	5%	
Textbook:							
<p>Woolever, K., "Writing for the Technical Professions", N.Y., Fourth Ed. Longman, 2007, ISBN: 0205597882.</p>							
Reference Books:							
<ol style="list-style-type: none"> 1. Hannigan Carrie, "Kaplan Technical Writing: A Resource for Technical Writers at All Levels", Kaplan Pub, 2008, ISBN: 1427797218 2. Alred , "Handbook of Technical Writing", 7th ed., Published by Bedford, 1997 							

Course Name	Digital hardware			الأجهزة الرقمية			
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	CE213	0903213	3		3	1.5	4.5
Track	<input type="checkbox"/> University Requirement <input checked="" type="checkbox"/> College Requirement <input type="checkbox"/> Core <input type="checkbox"/> Elective <input checked="" type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	3 rd Semester		Prerequisite	0903121			
Course Description:							
<p>Digital Systems: digital computer and digital systems, binary, decimal, octal and hexadecimal number systems, number base conversion, complements, signed and unsigned numbers, binary codes, binary storages and registers, and binary logic. Boolean algebra and logic gates: basic definitions, axioms definitions of Boolean algebra, basic theorem and properties of Boolean algebra, Boolean functions, canonical and standard forms, logic operations, and digital logic gates. Simplification of Boolean functions: the map methods, product of sum simplification, NAND and NOR implementation, and the tabulation method. Combinational logic circuits: adders, subtractors, decoders, encoders, multiplexers, de-multiplexers, look-up table, function implementation using multiplexers/ decoders and memories . Sequential logic circuits: flip-flops, synchronous and asynchronous circuits, counters (types of counters), registers, memories, design of counters, design of sequential circuits, analysis of counters, and analysis of sequential circuits. Analog-to-digital converters and digital-to-analog converters. Programmable logic devices (PLD) : PLA, PAL and FPGA. Student will be trained on the available software such as: Circuit maker 2000, EWB50a, and MultiSim 6.01 in addition with the products and components of Heathkit educational; systems (EWS-3700 analog modules)</p>							
Course Objectives:							
<p>The student are introduced to</p> <ol style="list-style-type: none"> 1. study the fundamentals of digital systems, Boolean algebra, and logic expressions, 2. simplify and implement Boolean functions using elementary logic gates, 3. study the combinational and sequential digital circuits, 4. design and analysis of combinational and sequential logic circuits, and study briefly the advanced mask and field programmable logic devices. 							
Grading	<input checked="" type="checkbox"/> Mid-term	20%	<input type="checkbox"/> Project		<input checked="" type="checkbox"/> Quizzes	10%	
	<input checked="" type="checkbox"/> Final	40%	<input checked="" type="checkbox"/> Lab.	25%	<input checked="" type="checkbox"/> Participation	5%	
Textbook:							
<p>Ronald J, Tocci, Neal S. Widmer, and Gregory L. Moss, “ Digital Systems: Principles and Applications”, Prentice Hall, 10th edition, 2004, ISBN 0-13-173969-7</p>							
Reference Books:							
<p>M. Morris Mano,” Logic Computer Design Fundamentals and Xilinx Student Edition 4.2 Package”, Prentice Hall, 3rd Edition , 2004, ISBN 0-13-124711-5.</p>							

Course Name	Communication and Network Fundamentals			أساسيات الاتصالات والشبكات			
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	CN214	0904214	3		3	1.5	4.5
Track	<input type="checkbox"/> University Requirement <input checked="" type="checkbox"/> College Requirement <input type="checkbox"/> Core <input type="checkbox"/> Elective <input checked="" type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	3 rd Semester		Prerequisite	0901110			
Course Description:							
<p>Fundamentals of data communications: Essential Elements Of Data Communications : Simplex, Half-Duplex and Full Duplex Transmission, Analogue And Digital Signals, Periodic and Non Periodic Signals , Signal Parameters, Time and Frequency Domains Concepts, Types of Channels, Transmission Impairment). Transmission Media: Guided Media, Unguided Media, and Types of Propagation. Basic concepts of networking: network concepts, network criteria, and network applications and benefits. Configurations, topologies and categories of networks: line configuration, network topologies (mesh, star, tree, bus, ring, hybrid), scopes of networks (LAN, WAN, MAN), internetwork or internet, types of network connection(peer-to-peer network, server based network, combined network), intranet and extranet. Introduction to OSI and TCP/IP models: The OSI Model The OSI layers, TCP/IP Protocol Suite. Error detection and correction techniques: VRC, LRC, CRC, Checksum, and Hamming code techniques. Circuit and packet switching. Data link layer control: framing, error control, and flow control. Networking and internetworking devices. Student will be trained on the existing components and product related to Cisco such as wireless networking, Switches, routers, etc. in addition with the products ,components and software of Heathkit educational systems for wireless networking</p>							
Course Objectives:							
<p>Making the student understand the main concepts of:</p> <ol style="list-style-type: none"> 1. Fundamentals of data communication, and transmission media, 2. Fundamentals of Networking, , Network protocols, and networking devices, 3. Circuit and packet switching, 4. Data link layer concepts and control, 5. Error detection and correction techniques, 6. Networking and internetworking devices, and 7. Net centric computing circuits. 							
Grading	<input checked="" type="checkbox"/> Mid-term	20%	<input type="checkbox"/> Project		<input checked="" type="checkbox"/> Quizzes	10%	
	<input checked="" type="checkbox"/> Final	40%	<input checked="" type="checkbox"/> Lab.	25%	<input checked="" type="checkbox"/> Participation	5 %	
Textbook:							
Behrouz A Forouzan, ”Data Communications and Networking, 4th Edition, McGraw-Hill, 2007, ISBN 0072967757.							
Reference Books:							
<ol style="list-style-type: none"> 1. William Stallings, ”Data and Computer Communication”, Pearson Education, 7th Edition, 2003, ISBN 0131006819. 2. Andrew S. Tanenbaum, “Computer Networks”, Prentice Hall and Pearson Education, 5th edition, 2003, ISBN 0-13-066102-3. 							

Course Name	Discrete math			رياضيات متقطعة			
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	Math301	0817301	3		3	0	3
Track	<input type="checkbox"/> University Requirement <input checked="" type="checkbox"/> College Requirement <input type="checkbox"/> Core <input type="checkbox"/> Elective <input checked="" type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	3 rd Semester		Prerequisite	0817208			
Course Description:							
Integer functions. Equivalence modulo n, and its uses. The binomial theorem. Permutations and combinations. Counting methods: generating functions and recurrence relations. Computing generating functions. Using generating functions in counting. Graph theory. Paths and circuits. Shortest paths. Trees, binary trees, search trees, matrices and matrix operations concepts.							
Course Objectives:							
Upon completing this course the student should be able to							
1. Identify integer functions and some important relations on the integers 2. Know counting permutations and combinations 3. Know generating functions and their role in counting and the method for computing these functions 4. Know graphs and paths and their applications 5. Know trees and their use in searching 6. Know the matrices and matrix operations							
Grading	<input checked="" type="checkbox"/> Mid-term	30%	<input checked="" type="checkbox"/> Assignments	10%	<input checked="" type="checkbox"/> Quizzes	15%	
	<input checked="" type="checkbox"/> Final	40%	<input type="checkbox"/> Lab		<input checked="" type="checkbox"/> Participation	5%	
Textbook:							
Seymour Lipschutz and Mark Lipson, "Discrete Mathematics" McGraw-Hill, second edition, 1997 ISBN 0070380457							
Reference Book:							
Kenneth Rosen "Discrete Mathematics and its Applications", McGraw Hill, fourth edition, 1999, ISBN 0072899050							

Course Name	Object Oriented Programming (2)		البرمجة كائنة التوجه (٢)				
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	CS220	0901220	3		3	1.5	4.5
Track	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Core <input type="checkbox"/> Elective <input checked="" type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	4 th Semester		Prerequisite	0901210			
Course Description							
<p>Students should be able to move on to more advanced programming techniques after taking the first object oriented programming course. The main purpose of course consists of the advanced object-oriented programming techniques such as: applets, event-driven programming, application programming interfaces (APIs) and the object oriented graphical user interfaces using SWING. Students should acquire some understanding to create a simple application that supports a graphical user interface and implement simple procedures that perform simple graphical transformations (graphics API, color models, affine transformation), design and implement event-driven programs that respond to user events (event-handling methods, event propagation, exception handling). Finally, the software validation and the testing techniques is studied (test plan creation, test case generation, black-box and white-box testing techniques, object-oriented testing), emphasis will be placed on how create, evaluate, and implement a test plan for a medium-size object oriented code.</p>							
Course Objectives:							
<ol style="list-style-type: none"> 1. Describe the appropriateness of graphics architectures for given applications. 2. Explain the value of APIs in software development and Create images using a standard graphics API. 3. Implement applets and programs that use large-scale API packages and create images using a standard graphics API. 4. Use SWING to create a simple application that supports a graphical user interface. 5. Distinguish between program validation and verification and between the different types and levels of testing. 6. Discuss the issues involving the testing of object-oriented software 							
Grading	<input checked="" type="checkbox"/> Mid-term	20%	<input type="checkbox"/> Project	15%	<input checked="" type="checkbox"/> Quizzes	10%	
	<input checked="" type="checkbox"/> Final	40%	<input checked="" type="checkbox"/> Lab	15%	<input checked="" type="checkbox"/> Participation		
Textbook:							
Kathy Walrath, "The JFC Swing Tutorial: A Guide to constructing GUIs", Addison-Wesley, 2 nd edition 2004, ISBN: 0201914670							
Reference Book:							
Herbert Schildt, "The Complete Reference JAVA 2", McGraw-Hill, 5 th edition 2002, ISBN: 0072224207							

Course Name	Operating Systems			نظم التشغيل			
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	CS221	0901221	3		3	1.5	4.5
Track	<input type="checkbox"/> University Requirement <input checked="" type="checkbox"/> College Requirement <input type="checkbox"/> Core <input type="checkbox"/> Elective <input checked="" type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	4 th Semester		Prerequisite	0903213			
Course Description:							
<p>In this course the student will study the basic concepts of operating systems (OS), the following concepts will be studied in this course: OS Overview (objectives, functions, evolution of OS, characteristics of modern OS), process description and control (process definition, process states, process description and process control), threads (definition, why use thread, relationship between processes and threads), microkernel (benefits of microkernel organization, microkernel design), uni-processor scheduling (types of scheduling, short term scheduling criteria, scheduling algorithms), memory management (memory management requirements, loading programs into main memory -fixed partitioning, dynamic partitioning, simple paging, simple segmentation-), virtual memory (paging, segmentation, combined paging and segmentation), operating system software (fetch policy, placement policy, replacement policy, resident set management, cleaning policy, load control), I/O management and disk scheduling (I/O devices, organization of I/O function, I/O buffering, disk I/O), and file management (file management system, file organization and access, file directories, secondary storage management).</p>							
Course Objectives:							
<ol style="list-style-type: none"> 1. Understand the basic concepts underlying operating systems and how a typical operating system works. 2. Describe the functions and design of operating systems. 3. Understand the main concept behind traditional (non-distributed) operating systems. 4. Analyze and explain the Algorithms used in Virtual Memory Management. 5. Discuss the algorithms used in I/O and File Management. 							
Grading	<input checked="" type="checkbox"/> Mid-term	20%	<input type="checkbox"/> Project		<input checked="" type="checkbox"/> Quizzes	10%	
	<input checked="" type="checkbox"/> Final	40%	<input checked="" type="checkbox"/> Lab	25%	<input checked="" type="checkbox"/> Participation	5%	
Textbook:							
W. Stallings, "Operating Systems: Internals and Design Principles", Prentice Hall International, 5 th edition 2005, ISBN: 0-13-147954-7							
Reference Books:							
Jean Bacon, Tim Harris "Operating Systems", Addison-Wesley 2003, ISBN: 0321117891.							

Course Name	Database Concepts and Design			مفاهيم وتصميم قواعد البيانات			
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	IS222	0902222	3		3	1.5	4.5
Track	<input type="checkbox"/> University Requirement <input checked="" type="checkbox"/> College Requirement <input type="checkbox"/> Core <input type="checkbox"/> Elective <input checked="" type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Engineering <input type="checkbox"/> Comp Network						
Level	4 th Semester		Prerequisite	0902111			
Course Description:							
<p>This course aims to discuss the basic concepts and designs of database. It covers topics such as: data model, levels of abstraction, data independence, and concurrency control. It focuses on how to design databases for given problems, and how to use database effectively, including ER modeling, key and participation constraints, weak entities, class hierarchies, aggregation and conceptual DB design using the ER model. Relational model: creating and modifying relation using query language, enforcing integrity constraints, ER to relational and view. Schema refinement and normal forms: Functional dependencies, reasoning about functional dependencies, normal forms, decompositions and normalization. Relational Queries: Relation algebra and calculus and commercial query languages. Object database systems: User defined abstract data type, structured types, objects; object identity; and reference type, inheritance, and database design for an ORDBMS. Students will be trained on some software tools such as: Oracle, Sybase, DB2, and Informix.</p>							
Course Objectives:							
<ol style="list-style-type: none"> 1. To describe and discuss the concepts of database design. 2. Students will learn how to design a conceptual data model and logical database model, convert the logical database designs to physical designs and develop the physical database. 3. Students will learn how to evaluate a set of query using relational algebra and calculus. 4. Students will learn how to evaluate a set of query using query language. 5. To discuss and explain database design for an ORDBMS. 							
Grading	<input checked="" type="checkbox"/> Mid-term	20%	<input checked="" type="checkbox"/> Project	15%	<input checked="" type="checkbox"/> Quizzes	10%	
	<input checked="" type="checkbox"/> Final	40%	<input checked="" type="checkbox"/> Lab	10%	<input checked="" type="checkbox"/> Participation	5%	
Textbook:							
Elmasri, Ramez. Navathe, Shamkant B, "Fundamentals of Database Systems" Addison-Wesley, Fifth Edition 2006, ISBN: 0321369572							
Reference Books:							
<ol style="list-style-type: none"> 1. Elmasri, R., Navath,S., and Navath, B., "Fundamentals of Database Systems" , Addison-Wesley, 4th Ed., 2003, ISBN 0321122267. 2. Date, C. J., "Introduction Database Systems", Addison-Wesley, 8th ed., 2003, ISBN 0321197844. 							

Course Name	Network Protocols and E-Commerce Technology		بروتوكولات الشبكات والتجارة الإلكترونية				
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	CN223	0904223	3		3	1.5	4.5
Track	<input type="checkbox"/> University Requirement <input checked="" type="checkbox"/> College Requirement <input type="checkbox"/> Core <input type="checkbox"/> Elective <input checked="" type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	4 th Semester		Prerequisite	0904214			
Course Description:							
<p>This course covers two parts. The first part of the course covers the principles underlying the interconnection of large numbers of computers and includes transmission technologies: Ethernet, optical fiber, gigabit networks, cellular transmission and infrared. This course covers also the network technologies: Servers clients, access control, intranets, reliable message passing, and interoperability. The second part of the course covers the electronic commerce technology. Topics include: communication and networking, mobile E-Commerce, and architecture of Web systems, data interchange, electronic payments , and all relevant application tied to EC (virtual stores, electronic government, etc...) with appropriate EC suites relying on appropriate tools like php, asp, asp-net, etc. Student will be trained on the existing components and product related to Cisco such as wireless networking, Switches, routers, etc. in addition with the products ,components and software of Heathkit educational systems for wireless networking</p>							
Course Objectives:							
<p>After completing this course, the student will be able to :</p> <ol style="list-style-type: none"> 1. Understand the software required to support a network, 2. Acquire knowledge underlying the interconnection of large number of computers and protocols that handle their interconnection, 3. Understand the hardware and interface components of a computerized communication network, 4. Understand most recent network technologies and underlying concepts such as servers clients, access control, intranets, reliable message passing, and interoperability, 5. Design efficient EC software (virtual stores, electronic government, etc) with appropriate EC suites relying on appropriate tools like php, asp, asp-net, etc. 							
Grading	<input checked="" type="checkbox"/> Mid-term	20%	<input type="checkbox"/> Project		<input checked="" type="checkbox"/> Quizzes	10%	
	<input checked="" type="checkbox"/> Final	40%	<input checked="" type="checkbox"/> Lab	25%	<input checked="" type="checkbox"/> Participation	5%	
Textbooks:							
<ol style="list-style-type: none"> 1. B.A. Fourouzan, "Data communication and Networking", 4th edition, 2004. 2. Jim A. Carter, "<u>Developing e-Commerce Systems</u>", Prentice Hall, 2002, ISBN: 0-130911127 							
Reference Books:							
<ol style="list-style-type: none"> 1. Hunt, Craig , "TCP/IP Network administration", Computers-O'Reilly programming series, Ed. Loukides, Mike, 1997, ISBN: 1565923227. 2. Harvey M. Deitel, Paul J. Deitel, Tem Nieto, Deitel, "<u>e-Business and e-Commerce How to Program</u>", Prentice Hall, 2001, ISBN: 0-13-028419-X . 							

Course Name	Business I (Management: Fundamentals and Skills)		إدارة أعمال (١)				
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	MGT290	0622290	3		3	0	3
Track	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Core <input type="checkbox"/> Elective <input checked="" type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	4 th Semester		Prerequisite	0902111			
Course Description:							
<p>This course introduces the essentials of management as they apply within the contemporary work environment. It combines a focused overview of recent scholarship with a practical approach to key functional areas (planning, organizing, leading, and controlling). Topics include the dynamic new workplace, management- past to present, ethical behavior and social responsibility, environment, global dimension of management, entrepreneurship and small business, foundation of planning, mission, goal setting, strategy formulation and implementation, planning tools and techniques, managerial decision making, organizational design and processes, managing change and innovation, individual and group behavior, communication and information technology, interpersonal skills, managing personal stress, time management, and creativity, corporate culture, work teams, motivation and leadership, empowering and delegation, managing conflict, foundation of control and value chain management.</p>							
Course Objectives:							
<p>Students at the end of the course should be able to understand the followings:</p> <ol style="list-style-type: none"> 1. Foundations of planning and decision making, 2. Basic organization designs, 3. Leadership and fundamentals of individual & group behavior, and 4. Principles of control and value chain management. 							
Grading	<input type="checkbox"/> Mid-term		<input type="checkbox"/> Project		<input type="checkbox"/> Quizzes		
	<input type="checkbox"/> Final		<input type="checkbox"/> Lab		<input type="checkbox"/> Participation		
Textbook:							
<p>Robbins, S. and Coulter, M. Management with One Key, 8e, Prentice Hall, 2005. ISBN: 0-13-143994-4</p>							
Reference Book:							
<p>Schermerhorn, J. Management, 8, Wiley, John&Sons, Inc. 2004. ISBN: 0471454761</p>							

Course Name	Database Management Systems			إدارة وتقييم قواعد البيانات			
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	IS310	0902310	3		3	1.5	4.5
Track	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Core <input type="checkbox"/> Elective <input type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	5 th Semester		Prerequisite	0902222			
Course Description:							
<p>This course covers the topics including : Storing data :disks and files which include the memory hierarchy, RAID, disk space management, buffer management, file and indexes, page formats and record formats; file organization and indexes which introduce cost modeling, comparison of three file organizations, overview of indexes and properties of indexes. Three-structured indexing, hash based indexing and database design security; transaction management which introduce to transactions and schedules, concurrent execution of transaction, lock-based concurrency control and crash recovery. Crash recovery includes introduction to ARIES, recovery from a system crash and media recovery. It also covers advanced topics such as : Parallel and distributed database including architectures for parallel databases, parallel query evaluation and optimization, distributed DBMS architectures, storing data in distributed DBMS, distributed catalog management and query processing, updating distributed data, distributed transactions and concurrency and recovery. More advanced topic is internet database. Students will be trained on some software tools such as: Oracle, Sybase, DB2, and Informix.</p>							
Course Objectives:							
<ol style="list-style-type: none"> 1. Explaining the concepts of records, record types, and files, as well as the different techniques for placing file records on disk. 2. Giving examples of the application of primary, secondary, and clustering indexes. 3. Identifying major DBMS functions and describing their role in a database system. 4. Explaining how the two-phase commit protocol is used to deal with committing a transaction that accesses databases stored on multiple nodes. 5. Explaining how DBMS deals with crash recovery. 6. Explaining the techniques used for data fragmentation, replication, and allocation during the distributed database design process. 7. Evaluating simple strategies for executing a distributed query to select the strategy that minimizes the amount of data transfer. 							
Grading	<input checked="" type="checkbox"/> Mid-term	20%	<input checked="" type="checkbox"/> Project	15%	<input checked="" type="checkbox"/> Quizzes	15%	
	<input checked="" type="checkbox"/> Final	35%	<input checked="" type="checkbox"/> Lab	10%	<input checked="" type="checkbox"/> Participation	5%	
Textbook:							
Elmasri, Ramez. Navathe, Shamkant B, "Fundamentals of Database Systems", Addison- Wesley, Fourth Edition 2004.							
Reference Books:							
<ol style="list-style-type: none"> 1. Elmasri, R., Navath,S., and Navath, B.,"Fundamentals of Database Systems" , Addison-Wesley, 4th Ed., 2003, ISBN: 0321122267. 2. Date, C. J., "Introduction Database Systems", Addison-Wesley, 8th ed.,2003, ISBN: 0321197844. 							

Course Name	System Analysis and Design (1)			تحليل وتصميم نظم المعلومات (١)			
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	IS311	0902311	3		3	1.5	4.5
Track	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Core <input type="checkbox"/> Elective <input type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Engineering <input type="checkbox"/> Comp Network						
Level	5 th Semester		Prerequisite	0901220			
Course Description:							
<p>This course emphasizes on the analysis of the structured system and designing techniques for software project development. It includes: setting IS project goals, developing work plans and methods to achieve those goals, and measuring progress against a project plan. The course material includes describing the major alternative methodologies used in developing information systems and the considerations involved in choosing which methodology to use. Production of the requisite systems documentation at each point in the analysis and designing an information system, and doing so with clarity and completeness. Analyzing business need for information and developing an appropriate strategy to solve the problem and providing the required information service. Preparing and using various information gathering techniques for eliciting user information requirements and system expectations. Construction and interpretation a variety of system description documents. Student will be trained on some software tools such as: Visible Analyst, Visio, ARCHITECT, Visio Modeler, and Cool Plex.</p>							
Course Objectives:							
<ol style="list-style-type: none"> To present necessary concepts to provide the skills required to do the analysis, modeling, and definition of information systems problems. Students with these basic skills of information technology will learn to gather information in order to identify problems to be solved. They will determine system requirements for an information system. Students will investigate alternative solutions and will determine feasibility of Solutions. Students will be exposed to methods of supporting each stage of development process. Students will analyze a substantial multi phased project as part of a team. 							
Grading	<input checked="" type="checkbox"/> Mid-term	20%	<input checked="" type="checkbox"/> Project	15%	<input checked="" type="checkbox"/> Quizzes	10%	
	<input checked="" type="checkbox"/> Final	40%	<input checked="" type="checkbox"/> Lab	10%	<input checked="" type="checkbox"/> Participation	5%	
Textbook:							
Jeffrey L. Whitten, Lonnie D. Bentley and Kevin C. Dittman, "Systems Analysis and Design Methods", McGraw-Hill Companies Inc., 6 th edition, 2004, ISBN: 0072474173.							
Reference Books:							
<ol style="list-style-type: none"> Jeffrey A. Hoffer, Joey, F. George and Joseph, S. Valacich, "Modern Systems Analysis and Design", Prentice Hall. 4th Edition, 2004, ISBN: 0-131-45461-7. Kenneth E. Kendall, Julie, E. Kendall, "System Analysis and Design", Prentice-Hall; 6th ed, 2004, ISBN: 0-131-45455-2. 							

Course Name	Professional Responsibility			المسؤولية المهنية			
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	IS312	0902312	2		2	0	2
Track	<input type="checkbox"/> University Requirement <input checked="" type="checkbox"/> College Requirement <input type="checkbox"/> Core <input type="checkbox"/> Elective <input checked="" type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	5 th Semester		Prerequisite	0902212			
Course Description:							
<p>This course introduces the students to the legal, social, and ethical issues of information technology and use; information rights, property rights, liability, accountability, privacy, security, crime, ethical principles, codes of ethics, "the digital divide", role of PTTs, role of government, role of law enforcement, role of business and industry; professional conduct, social responsibility, and rigorous standards for software testing and reliability, students read, write, discuss, and present reports on these topics, fraud and abuse, electronic communication privacy, mail fraud, credit card abuse, privacy protection, copyright and patent statute, communication decency, law and computer, software engineering code of ethic, name dispute resolution policy.</p>							
Course Objectives:							
<p>The course is designed to enable students to:</p> <ol style="list-style-type: none"> 1. Understand selected codes of ethics/professional conduct and apply them to fact situations. 2. Identify certain situations of potential civil or criminal liability arising from the use of technology, including invasions of the rights of persons and violations of laws. 3. Demonstrate the ability to communicate, both in written and oral form, an analysis of fact situations indicating potential problems (e.g., civil or criminal liability, unethical conduct). 4. Demonstrate the ability to advocate, both in class and electronically, for a particular solution, position or analysis relating to issues presented in class 							
Grading	<input checked="" type="checkbox"/> Mid-term	30%	<input type="checkbox"/> Project		<input checked="" type="checkbox"/> Quizzes	15%	
	<input checked="" type="checkbox"/> Final	50	<input type="checkbox"/> Lab		<input checked="" type="checkbox"/> Participation	5%	
Textbook:							
<p>Sara Baase, "A Gift of Fire: Social, Legal, and Ethical Issues for Computing and the Internet", Third edition, Prentice Hall, ISBN: 0-136-00848-8</p>							
Reference Book:							
<p>Ernest Kallman and John Grillo, "Ethical Decision making & Information Technology: an introduction with cases", 2nd edition, 2001.</p>							

Course Name	IT Project Management			إدارة مشروع تقنية المعلومات			
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	MGT__	0622__	3		3	0	3
Track	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Core <input type="checkbox"/> Elective <input type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Engineering <input type="checkbox"/> Comp Network						
Level	5 th Semester		Prerequisite	0622290			
Course Description:							
<p>This course will start commence by reviewing management and project management principles. It continues by studying the system life cycle: analysis (requirements determination), designing, implementation; system and database integration issues; network management; project tracking techniques, metrics, and system performance evaluation; managing expectations of managers, clients, team members, and others; determining skill requirements and staffing; cost-effectiveness analysis; reporting and presentation techniques; management of behavioral and technical aspects of the project; change management. This course teaches about software tools for project tracking and monitoring. Team collaboration techniques and tools. In addition, this course will introduce students to project-time scheduling methods. Students will be trained on some software tools such as: MS project, CLARITY, Visual Studio 2005, JIRA, and VA Software.</p>							
Course Objectives:							
<ol style="list-style-type: none"> 1. To teach students skills needed to design a project development and implementation plan. 2. To develop skills in use of project management tools and methods within the context of an information system project. 3. To initiate, design, implement, and discuss project close down. 4. To determine requirements and specifications for multi-user information system based on a database. 6. To present and explain the evolving leadership role of information management in organization 7. To examine the process for development of information system policies, procedures, and standards in the organization. 8. To discuss outsourcing and alternate implementations of IS Function. 							
Grading	<input checked="" type="checkbox"/> Mid-term	25%	<input checked="" type="checkbox"/> Project	15%	<input checked="" type="checkbox"/> Quizzes	10%	
	<input checked="" type="checkbox"/> Final	45%	<input type="checkbox"/> Lab		<input checked="" type="checkbox"/> Participation	5%	
Textbook:							
<p>David L. Olson, <u>David Olson</u>, "Introduction to Information Systems Project Management", 2003, ISBN: 0072872705.</p>							
Reference Book:							
<p>John McManus, <u>Trevor Wood-Harper</u> "Information Systems Project Management: Methods, Tools and Techniques", 2003, ISBN: 0273646990.</p>							

Course Name	Business II (Business Essentials and Strategies)		إدارة الأعمال (٢)				
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	MGT391	0622391	3		3	0	3
Track	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Core <input type="checkbox"/> Elective <input type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	5 th Semester		Prerequisite	0622290			
Course Description:							
<p>Contents cover managing human resources and labor relations, staffing, developing workforce, compensation and benefits, legal issues in managing people, dealing with labors, law governing labor-management relations, principles of marketing, target marketing and segmentation, consumer behavior, organization marketing, international marketing mix, developing new products and managing product life cycle, identifying products, pricing, distribution and promotion, principle of operation and production, goods and services operation, creating value through production, operation planning and scheduling, operation control, quality improvement, information system and electronic commerce, databases and application programs, information and communication technology, principle of accounting, tools of accounting trade, financial statements, financial issues, money and banking, international banking and finance, securities and investment, security markets, stocks and bonds, buying and selling security, financial and risk management, and, legal context of business.</p>							
Course Objectives:							
<p>At the end of semester, students will be in a position to:</p> <ol style="list-style-type: none"> 1. Manage human resources, 2. Understand principles of marketing, 3. Manage information, 4. Understand principles of accounting, 5. Understand money, banking and financial issues, and 6. Be aware of the legal context of business. 							
Grading	<input type="checkbox"/> Mid-term		<input type="checkbox"/> Project		<input type="checkbox"/> Quizzes		
	<input type="checkbox"/> Final		<input type="checkbox"/> Lab		<input type="checkbox"/> Participation		
Textbook:							
<p>Griffin, R. and Ebert, R. Business Essentials, 5e, Prentice Hall, 2004. ISBN: 0131441582</p>							
Reference Book:							
<p>Griffin, R. and Ebert, R. Business, 7e, prentice Hall, 2004. ISBN: 0-13-100680</p>							

Course Name	Computer Data Security & Privacy			سرية وحماية بيانات الحاسب			
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	CS320	0901320	3		3	0	3
Track	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Core <input type="checkbox"/> Elective <input checked="" type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	6 th Semester		Prerequisite	0904223 & 0901221			
Course Description:							
<p>This course presents relevant aspects of computer security and privacy. It includes the following topics: Security fundamentals: concepts and principles, vulnerability, threat models, attacks to computer systems. Data base and networks, cryptography: notion of public key, private key. Cryptology, authentication, digital signatures, key management and cryptography protocols, building secure systems, security in operating systems: protection mechanisms, OS services, access control, UNIX and windows NT security, network security: architecture and standards, authentication, access control, confidentiality, integrity, network management, internet security, firewalls , DNS and routers, computer security policy and procedures, and ISO security standards. Students will also be trained to use some specific security software like: PGP software.</p>							
Course Objectives:							
<p>The main objectives of this course are:</p> <ol style="list-style-type: none"> 1. To introduce students to concepts and principles of security, cryptographic systems, and protection mechanisms of operating systems, 2. To make the student able to design and build secure system and secure networks relying on well-known security software, 3. To make the student able also to manage networks, 4. To introduce the student to standard computer security policies and procedures. 							
Grading	<input checked="" type="checkbox"/> Mid-term	30%	<input checked="" type="checkbox"/> Project	10%	<input checked="" type="checkbox"/> Quizzes	15%	
	<input checked="" type="checkbox"/> Final	40%	<input type="checkbox"/> Lab		<input checked="" type="checkbox"/> Participation	5%	
Textbook:							
<p>Rick Lehtinen, Deborah Russel, G.T. Gangemi, Sr “Computer Security Basics”, Second Edition, June 2006, Oreilly publication, ISBN: 0-596-00669-1</p>							
Reference Books:							
<p>W. Stallings & L. Brown, “Computer Security, Principles and Practice” , Pearson Education, ISBN: 0-136-00424-5</p>							

Course Name	System Analysis and Design II			تحليل وتصميم نظم المعلومات (٢)			
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	IS321	0902321	3		3	1.5	4.5
Track	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Core <input type="checkbox"/> Elective <input type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Engineering <input type="checkbox"/> Comp Network						
Level	6 th Semester		Prerequisite	0902311			
Course Description:							
Physical data Models and modeling tools, structured and object design approaches; models for data bases: relational and object oriented physical data flow diagram and functional decomposition. I/O Design and prototyping (screen and report design), Input validation, GUI Controls for input design Command interfaces and graphical user interfaces (GUI), the user interfaces design process, user-interfaces design principles, user interaction models and techniques (including dialogues, graphics, sound, etc.), information presentation (screen and layout design, menu systems, control panels, labels, fonts, colors, etc.), event management and user support (error messages, human failure, help system design, user documentation), interface evaluation, GUI builders and UI programming environments, cross-platform design, applications and case studies. The course material includes recent designing methods such as object-oriented design and modeling. Student will be trained on some software tools such as: Visible Analyst, Visio, ARCHITECT, Visio Modeler, and Cool Plex.							
Course Objectives:							
<ol style="list-style-type: none"> To identify and differentiate between several system design strategies. To describe the design phase task in terms of a computer based solution for in house development project. To differentiate between physical and logical Dataflow Diagrams. Students will learn how to convert the logical database designs to physical database designs. To design and prototype computer outputs, inputs and user interface for the system. To design a substantial multi-phased project as part of a team. To differentiate between entity, interface, and control objects. 							
Grading	<input checked="" type="checkbox"/> Mid-term	20%	<input checked="" type="checkbox"/> Project	15%	<input checked="" type="checkbox"/> Quizzes	10%	
	<input checked="" type="checkbox"/> Final	40%	<input checked="" type="checkbox"/> Lab	10%	<input checked="" type="checkbox"/> Participation	5%	
Textbook:							
Jeffry L. Whitten, Lonnie D. Bentleg abd Kevin C. Dittman, "Systems Analysis and Design Methods", McGraw-Hill Companies Inc., 6th edition, 2004, ISBN: 0072474173.							
Reference Books:							
<ol style="list-style-type: none"> Jeffery A. Hoffer, Joey, F. George and Joseph, S. Valacich, "Modern Systems Analysis and Design", Prentice Hall. 4th Edition, 2004, ISBN: 0-131-45461-7. Kenneth E. Kendall, Julie, E. Kendall, "System Analysis and Design", Prentice-Hall; 6th ed, 2004, ISBN: 0-131-45455-2. 							

Course Name	Human Computer Interaction			اتصال الإنسان بالحاسب			
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	IS322	0902322	3		3	1.5	4.5
Track	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Core <input type="checkbox"/> Elective <input checked="" type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	6 th Semester		Prerequisite	0901220			
Course Description:							
<p>This course provides an overview and introduction to the field of HCI. It introduces students to tools, techniques, and sources of information about HCI and provides systematic approach to design. The course increases awareness of good and bad design through observation of existing technologies, and teaches the basic skills of task analysis, and analytic and empirical evaluation methods. The student will be acquainted with the whole design process: HCI in the design process, design rules, implementation support, evaluation techniques, universal support, etc...He also studies some relevant models and theories: cognitive models, communication models, task analysis, dialog notations and design, modeling rich interaction, etc. Final chapters will cover some alternative realities, multimedia, global information systems, and the Web. Students will also participate in a laboratory where they will practice HCI techniques in an independent, self defined project. Students will be trained on some HCI software like: AlphaUIMS, SuperCard, ISA dialog Manager, InterMaphics.</p>							
Course Objectives:							
<p>After completing this course the student will:</p> <ol style="list-style-type: none"> 1. Acquire some useful HCI techniques in practice, 2. Cover the latest topics in multimedia, global information systems, and the web-based models for rich interaction, 3. Increase coverage of social and contextual models and theories related to HCI design processes, 4. Be acquainted to new topics like: interaction design, universal access, and rich interaction. 							
Grading	<input checked="" type="checkbox"/> Mid-term	25%	<input checked="" type="checkbox"/> Project	15%	<input checked="" type="checkbox"/> Quizzes	10%	
	<input checked="" type="checkbox"/> Final	30%	<input checked="" type="checkbox"/> Lab	15%	<input checked="" type="checkbox"/> Participation	5%	
Textbook:							
<p>Alan Dix, Janet E., Gregory D., and Russell Beale, "Human-Computer Interaction", Prentice Hall, 3rd Ed. , 2003, ISBN: 0-13-046109-1.</p>							
Reference Book:							
<p>M.Kaffman, "HCI Models, theories and frameworks", 2003, ISBN: 1-55860-808-7.</p>							

Course Name	Web-Based Systems			النظم المبنية على الويب			
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	IS323	0902323	3		3	1.5	4.5
Track	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Core <input type="checkbox"/> Elective <input checked="" type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	6 th Semester		Prerequisite	0904223 & 0902222			
Course Description:							
<p>Overview of web based application, setup and configuration of web server, setup and configuration of eclipse and MySQL, Introduction to HTML: Basic Tags, Tables, Lists, Form, Frames, Images, Hyper links, Introduction to JDBC: Drivers, Types of Drivers, Connection pooling, Java Server; Pages: Scriptlet, Expression, Declaration, JDBC & JSP, Implicit JSP Objects, Introduction to XML; Introduction to JavaScript: JavaScript Popup Boxes, Functions, Events, Objects, Web Security and credit card Transactions; Web Performance: Packaging and Deployment, Internationalization and localization. Java Servlet, Parameter externalization.</p>							
Course Objectives:							
<p>The objectives of the course are:</p> <ol style="list-style-type: none"> 1. To develop and apply powerful tools to retrieve information from the Internet, 2. To understand modern text indexing methods, 3. How to design e-commerce sites 4. How to help Educators to use the web to support their own teaching, 5. How to build a Web based Education system, 6. To assign projects involving Web-based search engines, 7. To focus on development tools such as Java, JSP, ERVLET, XML, HTML, JavaScript, etc. 							
Grading	<input checked="" type="checkbox"/> Mid-term	25%	<input checked="" type="checkbox"/> Project	15%	<input checked="" type="checkbox"/> Quizzes	10%	
	<input checked="" type="checkbox"/> Final	30%	<input checked="" type="checkbox"/> Lab	15%	<input checked="" type="checkbox"/> Participation	5%	
Textbook:							
Marty Hall, Larry Brown “ Core Web Programming ”, 2nd Edition, A Sun Microsystems Prentice Hall PTR Book, ISBN: 0-13-089793-0							
Reference Books:							
<ol style="list-style-type: none"> 1. Nicholas C. Zakas “Professional JavaScript for Web Developers”, (2009), ISBN: 047022780X 2. Allaramaju, Subrahmanyam “Professional Java Server Programming J2ee: 1.3” WROX Press Ltd, ISBN: 1861005377 3. Thomas A. Powell, “HTML: The Complete Reference”, McGRAW-Hill, ISBN: 0-07- 212951-4 							

Course Name	Information Systems Management			إدارة نظم المعلومات			
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	MGT__	0622__	3		3	0	3
Track	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Core <input type="checkbox"/> Elective <input type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	6 th Semester		Prerequisite	0902310			
Course Description:							
<p>This course will provide knowledge of the strategic application of information systems (technology) in organizations, and the ways in which data is used to provide information structures. Current thinking in strategic information systems will be explored and related to current business practice. Students will be required to conduct significant amounts of research in both areas such as organizational theory and structure, business process management, information systems management and develop critical appraisals of their findings.</p> <p>The use of computer technology in business is now well established and widespread. Large monetary investment by companies in this technology necessitates the need for its efficient and effective management and use. Students need to be familiar with the practices of managing information systems project, its development and use. Students will be able to learn and develop knowledge and skills necessary to conduct information systems' planning and management of information systems in business.</p>							
Course Objectives:							
<p>The course should help students to achieve the following:</p> <ol style="list-style-type: none"> 1. Apply students' knowledge of Management Information Systems or Web design to develop an understanding of Information Systems Strategies. 2. To provide an understanding of managing information resource and information technology in business. 3. To provide knowledge and skills necessary to conduct information systems' planning and management. 4. To develop skills to manage business processes and information systems. 5. To provide knowledge of organizational theory, its structure and enterprise system. 							
Grading	<input checked="" type="checkbox"/> Mid-term	25%	<input type="checkbox"/> Assignments	20%	<input checked="" type="checkbox"/> Quizzes	10%	
	<input checked="" type="checkbox"/> Final	40%	<input type="checkbox"/> Lab		<input checked="" type="checkbox"/> Participation	5%	
Textbook:							
Ward and Griffiths, "Strategic Planning for Information Systems",							
Reference Books:							
Jelassi, T. Strategies for E-Business: Creating Value through Electronic and Mobile Commerce , Prentice Hall, 2004, ISBN: 0273688405							

Course Name	Practical (Co-op) Training			التدريب (التعاوني) العملي		
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Training	Tot.
	IS330	0902330	3		12	12 weeks
Track	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Core <input type="checkbox"/> Elective <input type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network					
Level	Between 3 rd and 4 th year		Prerequisite	90 Credit Units		
Course Description:						
<p>This course should be taken by those students completed 90 credit hours. The course period is 12 weeks long and must be during summer of the third academic year in. Students must be oriented in one of the companies, and well supervised so to accomplish correctly this training. The course must constitute a link between the theoretical and scientific academic background and the work environment. It provides a better understanding and a clear view of the real-world work environment. It provides also students complementary knowledge and training such as facing and dealing with real-world problems, being trained to work in team-works. After completing the summer training, students must submit a report. An oral exam is held by a committee consisting of both faculty members and outsider supervisors.</p>						
Course Objectives:						
<ol style="list-style-type: none"> 1. Develop student skills using practical applications. 2. Acquaintance the work environment. 3. Prepare the students to transfer from learning environment to work environment. 4. Acquaintance the applied work systems. 5. Understand mechanism of different applications. 6. Understand the attitude and the manner of the work. 7. Compare the studying courses with real world. 						
Grading	Report	40%	Final Project	60%		
Textbook:						
Reference Books:						

Course Name	Project Proposal			مشروع مقترح			
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	IS410	0902410	2		2	0	2
Track	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Core <input type="checkbox"/> Elective <input type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	7 th Semester		Prerequisite	Department Approval			
Course Description:							
<p>In this course, students choose a project subject and define the objectives of the project under the supervision of a faculty member, and prepare the project proposal including: defining the statement of the problem, defining system requirements, defining different candidate solutions for the problem of study, making feasibility study for different candidate solutions, defining the best candidate solution, defining time table schedule. Students should present the project interim report at the end of the semester, grading will be obtained by oral examination to be held by a committee from faculty members. Students will be allowed to work individually or in groups.</p>							
Course Objectives:							
<p>After completing this course, the student will have skills to:</p> <ol style="list-style-type: none"> 1. Deal with a real life project. 2. Define the statement of the problem; 3. Define the system requirements; 4. Perform a feasibility study; 5. Define different alternative solutions; 6. Learn how to make a time table; and follow up strictly its content 7. Develop skills in oral presentation 8. Write project proposal. 							
Grading	<input checked="" type="checkbox"/> Bi Weekly Reports	40%	<input checked="" type="checkbox"/> Final oral presentation and report.	60%			
Textbook:							
<p><u>Lynn E. Miner</u> & <u>Jeremy T. Miner</u> , “Proposal Planning and Writing”, Greenwood Publishing Group; 3rd edition (February 28, 2003), ISBN 1573564982.</p>							
Reference Book:							
<p><u>David L. Olson</u>, <u>David Olson</u> “Introduction to Information Systems Project Management”, 2003. ISBN: 0072872705.</p>							

Course Name	Software Quality Assurance		توكيد جودة البرمجيات				
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	IS411	0902411	3		3	1.5	4.5
Track	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Core <input type="checkbox"/> Elective <input type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	7 th Semester		Prerequisite	0902321			
Course Description:							
<p>The topics to be covered in the course include: Definition of Quality, Differentiating between Quality Assurance, Quality Control and Testing, Management commitment to quality, Quality coordination, Software Quality Assurance and CMMI, Software Quality Management and ISO 9001, Quality Tools, Software Quality Assurance Plan (SQAP), Implementation of SQAP, Modifications to SQAP, Quality Metrics and Data Auditing. Students will be trained on some software tools such as: OTF, CTB, and UNIT++.</p>							
Course Objectives:							
<ol style="list-style-type: none"> 1. Providing the students with the knowledge and skills of Quality Assurance, executing a Software Quality Assurance plan and preparing test management reports. 2. Teaching the different types of software testing that is performed in the development of a new application. 3. Teaching test methodologies including unit testing, functional testing, quality assurance testing, and acceptance testing. 4. Helping students to prepare different types of testing tools such as scenarios, questionnaires, checklists, cases, usability scripts, and test logs. 5. Teaching how to develop user requirements and verify that the application does satisfy these requirements. 							
Grading	<input checked="" type="checkbox"/> Mid-term	30%	<input type="checkbox"/> Project		<input checked="" type="checkbox"/> Quizzes	15%	
	<input checked="" type="checkbox"/> Final	40%	<input checked="" type="checkbox"/> Lab	10%	<input checked="" type="checkbox"/> Participation	5%	
Textbook:							
Daniel Galin, "Software Quality Assurance: from theory to implementation", Pearson-Addison-Wesely, 1 st ed 2004, ISBN: 0-201-70945-7							
Reference Books							
Mauro Pezze, Michal Young, "Software Testing and Analysis: Process, Principles and Techniques", John Wiley and Sons, 1 st ed 2007, ISBN: 0471455938							

Course Name	Electronic Business Strategy		إستراتيجية الأعمال الإلكترونية				
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	IS412	0902412	3		3	0	3
Track	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Core <input type="checkbox"/> Elective <input type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	7 th Semester		Prerequisite	0902324			
Course Description:							
<p>The course examines linkages of organizational strategy and electronic methods of delivering products and exchanges in inter-organizational, national, and global environments. To explain these linkages, it uses case studies from several online industries. Topics include strategy, e-business and e-commerce, sustainable profitability in e-commerce, business sense of e-opportunity, formulating a dot-com strategy, e-business models, web, steps to e-business leadership, competitive advantages, implementation, running virtual organizations, online monetary transactions, internet hardware and software, wireless internet, internet security, internet marketing, affiliate programs, e-customer relationship management, legal and ethical issues, internet taxation, privacy on the internet, regulating the internet on an international level, creating an e-business with global capabilities, online communities, online charities and non profit organizations on the web, web accessibility. The course also introduces the concept of Business Process Reengineering (BPR) and tasks about how it can be implemented.</p>							
Course Objectives:							
<p>The course should help students to achieve the following:</p> <ol style="list-style-type: none"> 1. Finding sustainable profitability in E-Business, 2. Making business sense of the e-opportunity, 3. Formulating and implementing a dot-com strategy, 4. Achieving e-business leadership, 5. Building stronger brands through on-line communities, and 6. Understanding the topics and concepts related to BPR. 							
Grading	<input checked="" type="checkbox"/> Mid-term		<input type="checkbox"/> Project		<input checked="" type="checkbox"/> Quizzes		
	<input checked="" type="checkbox"/> Final		<input type="checkbox"/> Lab		<input checked="" type="checkbox"/> Participation		
Textbook:							
Chaffey D. E-Business and E-Commerce Management: Strategy, Implementation, and practice , Prentice Hall, 2004, ISBN: 0273683780							
Reference Books:							
Jelassi, T. Strategies for E-Business: Creating Value through Electronic and Mobile Commerce , Prentice Hall, 2004, ISBN: 0273688405							

Course Name	Project Implementation			تنفيذ مشروع			
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	IS420	0902420	3		3	0	3
Track	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Core <input type="checkbox"/> Elective <input type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	8 th Semester		Prerequisite	0902410			
Course Description: Project implementation course offers students an opportunity to assemble their knowledge acquired throughout their BS curriculum to realize a final project. This would require them to gather information about the proposed subject and realize a final report as well as to develop a system practically. At this stage, students must carry on all phases system development of the subject already defined in the precedent course (Project proposal), and under the supervision of the same supervisor (as possible). At the end of the semester, students are asked to make an oral presentation with the presence of faculty members as referees.							
Course Objectives: After completing this course, the student will have the: <ol style="list-style-type: none"> 1. Ability to conduct a real life project. 2. Ability to find alternative solutions. 3. Ability to implement the selected project. 4. Ability to establish time table, and follow up strictly its content. 5. Ability to learn how to test the implementation. 6. Ability to develop skills in oral presentation, and present project work. 7. Ability to communicate through seminars 8. Ability to highlight strengths of the project 							
Grading	<input checked="" type="checkbox"/> Bi Weekly Report		40%	<input checked="" type="checkbox"/> Final Report		60%	
Textbook: There is no text book for this course							
Reference Book: John McManus, Trevor Wood-Harper "Information Systems Project Management: Methods, Tools and Techniques", 2003. ISBN: 0273646990.							

Course Name	Selected Topics in Information Systems			موضوعات مختارة في نظم المعلومات			
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab	Tot.
	IS421	0902421	3		3	0	3
Track	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Core <input type="checkbox"/> Elective <input type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	8 th Semester		Prerequisite	0902410			
Course Description:							
<p>Topics are selected from different areas in Information System that are not covered in the description of the courses listed in the curriculum. This course will cover subjects of recent issues and trends in computer science and may be let to the willing of the instructor, and must cover but not limited to the following advanced subjects: new trends in the Web technology, new trends in distributed and mobile computing, new trends in Artificial intelligence, new trends in software engineering, etc. Students are assigned individual projects in these specific fields: Project Reports and seminars, so to demonstrate their ability in research and oral presentations. Projects are discussed in workgroups so to involve the whole class in these subjects.</p>							
Course Objectives:							
<p>After completing this course, the student will:</p> <ol style="list-style-type: none"> 1. Develop abilities and skills in various advanced topics in information Systems, 2. Develop skills in collecting information and documentation, 3. Develop skills in reporting, 4. Develop skills in oral presentation, and presenting seminars, 5. Develop abilities in research. 							
Grading	<input checked="" type="checkbox"/> Mid-term	25%	<input checked="" type="checkbox"/> Project	25%	<input checked="" type="checkbox"/> Quizzes	10%	
	<input checked="" type="checkbox"/> Final	35%	<input type="checkbox"/> Lab		<input checked="" type="checkbox"/> Participation	5%	
Textbook: (*)							
<p>(*) It is let to the willing of the student with the collaboration of the instructor in choosing the appropriate manuals and references in the specific subjects.</p>							
Reference Books: (*)							

Course Name	Object-Oriented Analysis & Design			التحليل والتصميم كائني التوجه			
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	IS413	0902413	3		3	0	3
Track	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Core <input checked="" type="checkbox"/> Elective <input type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	7 th -8 th Semester		Prerequisite	0902321			
Course Description:							
Offers treatment in system analysis and design with special emphasis on object-oriented analysis and design techniques based on the Unified Modeling Language (UML). Discusses major modeling techniques of UML including use-case modeling, class modeling, object-interaction modeling, dynamic modeling and state diagrams and activity diagrams, subsystems developments, logical design, and special design. The topics include the object-oriented paradigm, UML, and the unified process; the object oriented and design workflow; the workflows and phases of the unified process; Pragmatic (CASE; Teams; Testing; Management Issues; Planning and Estimation; Reuse; Maintenance; User-Interface Design). Students will be trained on some software tools such as: BOCS, IPSYS, ICONEX, Object Maker, and Rational Rose.							
Course Objectives:							
<ol style="list-style-type: none"> 1. Introduce object-oriented methods without either requiring students to know Java or C++ or relying on classical methods to introduce key concepts. 2. The course focuses strictly on an object oriented approach to view all phases of the systems development life cycle. 3. Define, read and interpret, describe, recognize and understand object modeling. Discover objects and classes and their relationships. 4. Introduce to object-oriented paradigm, UML, and the unified process. 5. Construct an ideal object model and sequence diagrams. Construct design object class diagram. 6. Construct design object class diagram. Identify activity and implementation diagrams. 							
Grading	<input type="checkbox"/> Mid-term	25%	<input checked="" type="checkbox"/> Project	15%	<input type="checkbox"/> Quizzes	10%	
	<input type="checkbox"/> Final	45%	<input type="checkbox"/> Lab		<input type="checkbox"/> Participation	5%	
Textbook:							
Stephen, R. Schach, Stephen, Schach, " Introduction to Object-Oriented Analysis and Design with UML CD ", McGraw-Hill/Irwin; 1 st ed., 2003, ISBN 0072939842.							
Reference Books:							
<ol style="list-style-type: none"> 1. John, W. Satzinger, Robert, B. Jackson and Stephen, D. Burd, "Object-Oriented Analysis and Design with the Unified Process", Course Technology, 1st ed., 2004, ISBN 0619216433. 2. Alen, Dennis, Barbara, H. Wixom, and David, Tegarden, "System Analysis and Design with UML Version 2.0 : An Object-Oriented Approach.", John Wiley & Sons, 2nd ed., 2004, ISBN 0471348066. 							

Course Name	Data Mining and Data Warehousing			التنقيب عن وتخزين البيانات			
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	IS414	0902414	3		3	1.5	4.5
Track	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Core <input checked="" type="checkbox"/> Elective <input checked="" type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	7 th -8 th Semester		Prerequisite	0901120 & 0902222			
Course Description:							
<p>Data mining concepts: why data mining?, cycles of data mining, the various cycles in practice, data mining methodology, measurement of the effectiveness of data mining. It will introduce various data mining techniques: the market based analysis, clustering, link analysis, decision trees, artificial neural networks, genetic algorithms,; data mining and the corporate data warehouses, OLAPs, and choosing the right tool for the job, putting data mining to work. The course introduces also data warehouse concepts: Gradual changes in computing, dynamic reports, data Marts, operational Data stores, and data warehouse cost-benefit analysis. Some other concepts are described such as: Warehousing strategy, warehouse management and support processes, data warehouse planning, data warehouse implementation, data warehouse maintenance and evolution, warehouse applications and warehouse software, and recent warehouse trends. Student will be trained on some well-known data mining software like: Matryx98, Cart, Megaputer PolyAnalyst, KnowledgeAccess, Cognos Power Play.</p>							
Course Objectives:							
<ol style="list-style-type: none"> 1. Understand Data Warehouse and OLAP technology for data mining: Data preparation, data mining primitives, languages, and system architectures, 2. Make mining association with rules in large databases, do classification and prediction (with various techniques: Cluster analysis, neural nets, genetic algorithms.), 3. Develop and understand data mining applications and trends of data mining, 4. Deal with Warehousing strategy, warehouse management and support processes, 5. Have skills in data warehouse planning, data warehouse implementation, data warehouse maintenance and evolution, 6. Use some warehouse software related to some warehouse applications, and be acquainted with recent warehouse trends. 							
Grading	<input checked="" type="checkbox"/> Mid-term	25%	<input checked="" type="checkbox"/> Project	15%	<input checked="" type="checkbox"/> Quizzes	25%	
	<input checked="" type="checkbox"/> Final	45%	<input type="checkbox"/> Lab		<input checked="" type="checkbox"/> Participation	45%	
Textbook:							
J. Han, M. Kanber, " Data Mining: Concepts and Techniques ", 2000, Morgan Kauffman Publishers, ISBN: 1-55860-489-8.							
Reference Books:							
<ol style="list-style-type: none"> 1. Margaret H. Dunham "Data Mining: Introductory and Advanced Topics", Prentice Hall; 1st edition, 2002, ISBN: 0130888923. 2. M.Humphries, M.W.Hawkins, M. C.Dy. Harrys, "Data Warehousing: Architecture and Implementation", Prentice Hall, 1999, ISBN: 0130809020. 0262232138. 							

Course Name	Decision Support Systems			دعم اتخاذ القرارات والنظم الخبيرة			
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	IS415	0902415	3		3	0	3
Track	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Core <input checked="" type="checkbox"/> Elective <input type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	7 th -8 th Semester			Prerequisite	0902321		
Course Description:							
<p>The purpose of this course is to provide students with an understanding of the key technical and managerial issues in the effective development and use of decision support systems in organizations. The course focuses on integrating developments in the literature on decision processes, modeling technologies, and information technologies and discuss their application in the organizational context. The decision processes component will cover process models, bounded rationality and its replication for satisfying, optimizing behavior, and discuss heuristics commonly used by humans. The modeling technologies component will discuss decision analysis techniques such as decision trees, influence diagrams, multi-criteria decision making and mathematical programming. The information technologies component will give students the opportunity to work with specialized desktop decision support tools such DPL and Expert Choice (an analytic hierarchy process-based DSS engine), and TemTec Executive Viewer (an OLAP), Enterprise Resources Planning.</p>							
Course Objectives:							
<p>The objectives of the course are:</p> <ol style="list-style-type: none"> 1. To synthesize material on organizational context, decision making, and decision processes with material on modeling and information technologies relevant to the development and deployment of decision support systems 2. Understand human decision processes, in particular the heuristics that people employ to make decisions and their associated biases Problem structuring methods such as influence diagrams and objective hierarchies; 3. Apply and implement software of modeling technologies such as decision trees and multi-criteria decision making techniques within decision support systems; 4. Understand the role of technology architectures in implementation decision support systems and organizational use of individual and group decision support systems; 5. Be able to practice some emerging techniques in enterprise DSS like ERP and Business Intelligence. 							
Grading	<input checked="" type="checkbox"/> Mid-term	25%	<input checked="" type="checkbox"/> Project	15%	<input checked="" type="checkbox"/> Quizzes	10%	
	<input checked="" type="checkbox"/> Final	45%	<input type="checkbox"/> Lab		<input checked="" type="checkbox"/> Participation	5%	
Textbook:							
<p>Sherif Kamel, "DSS for Strategic Decision Making", Idea Group Publishing, 2002, ISBN: B00006ISM3.</p>							
Reference Book:							
<ol style="list-style-type: none"> 1. Ronald D Schwartz, "http://www.directtextbook.com/prices/0789501201Information systems using DSS software", Boyd and Fraser Pub, 1996, ISBN: 0789501201. 2. Daniel P., " Decision Support Systems: Concepts and resources for managers", Greenwood publishing, 2002, ISBN : 156720497x. 							

Course Name	Modeling & Simulation			النمذجة والمحاكاة بالحاسب الآلي			
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	CS414	0901414	3		3	1.5	4.5
Track	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Core <input checked="" type="checkbox"/> Elective <input checked="" type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	7 th -8 th Semester		Prerequisite	0817301			
Course Description:							
<p>There are four classifications of models: discrete or continuous, probabilistic or deterministic, static or dynamic, and open loop or closed loop. The course objective is to produce students who are capable of modeling and simulating discrete, probabilistic, dynamic, and open loop system as well analyzing, verifying and validating the simulations results. The purpose of this course is to provide students with a theoretical base in discrete-event modeling and simulation for applying concepts related to computer networks and information system modeling (random numbers, Monte Carlo methods, Probabilistic modeling, Queuing theory models, Markov models and chains, arrival laws, service laws, birth-dead process, stochastic process, stationary process, stochastic analysis, networks analysis and routing algorithms, verification and validation of simulation models). Discrete production systems are studied (time flow mechanism, Petri nets). Students should complete a major project using simulation models and a standard simulation language. Students will be trained on some software tools such as: ARENA, QNAP, and PETRI NETS</p>							
Course Objectives:							
<ol style="list-style-type: none"> 1. Discuss the fundamental concepts of computer modeling and simulation 2. Be proficient in the use of computer simulation tools. 3. Describe several established techniques for prediction and estimation. 4. Compare and contrast methods for random number generation. 5. Design, code, test, and debug simulation programs. 6. Design and build a simulation model for computer area (communication and computer networks, management information system). 							
Grading	<input checked="" type="checkbox"/> Mid-term	25%	<input checked="" type="checkbox"/> Project	15%	<input checked="" type="checkbox"/> Quizzes	10%	
	<input checked="" type="checkbox"/> Final	45%	<input type="checkbox"/> Lab		<input checked="" type="checkbox"/> Participation	5%	
Textbook:							
<p>Jerry Banks, John S. Carson, “Discrete-event system simulation”, Prentice Hall 2001, ISBN: 0130887021</p>							
Reference Books:							
<ol style="list-style-type: none"> 1) Chris Chung, Christopher A. Chung, “Simulation modeling Handbook: A practical approach ”, CRC Press 2003, ISBN: 0849312418 2) Claude Girault, Rudiger Valk, “Petri Nets for Systems Engineering”, Springer verlag 2002, ISBN: 3540412174 							

Course Name	Object oriented Databases			قواعد البيانات كأننة التوجه			
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab	Tot.
	IS422	0902422	3		3	1.5	4.5
Track	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Core <input checked="" type="checkbox"/> Elective <input type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	7 th -8 th Semester		Prerequisite	0902310			
Course Description:							
<p>Theory includes, the relational data model enter the object-oriented data model, object roles in databases and sample uses for object-oriented databases. Introducing the object-oriented paradigm, writing instructions, objects classes, and types of classes, types of methods, method overloading, naming classes, attributes, and methods. An introduction to inheritance, inheriting attributes, multiple inheritance interfaces, inheriting methods: polymorphism and benefits of object orientation. The object-oriented data model, object-oriented data relationships, object identifiers relationships, relationship integrity, ER diagramming models for object-oriented relationships, Coad/Yourdon notation, Shlaer/Mellor notation, Rumbaugh notation, Booch notation and Unified Modeling Language (UML), and integrating objects into a relational database. The proposed object database, standard basic OODBMS terminology, understanding types external specifications, implementations primitive, types inheritance interfaces and inheritance classes and extensions objects collection, objects structured, object creating and destroying objects. The proposed standards for object database definition, basic interface and class structure declaring attributes. Students will be trained on some software tools such as: Neologic and ILOG JRules 4.6.</p>							
Course Objectives:							
<ol style="list-style-type: none"> 1. Introduce to object-oriented common concepts to both OODBMSs and ORDBMSs. 2. Comparing RDBMS with OODBMS and ORDBMS. 3. Understanding of the logical design of object-oriented databases, focusing On the principles of the object paradigm. 4. Show how to design logical database model, convert the logical database designs to physical design and develop the physical database. 5. Introduce to object query language which is a query language for OODBMSs that provide constructs to query collection types. 							
Grading	<input checked="" type="checkbox"/> Mid-term	20%	<input checked="" type="checkbox"/> Project	15%	<input checked="" type="checkbox"/> Quizzes	10%	
	<input checked="" type="checkbox"/> Final	40%	<input type="checkbox"/> Lab	10%	<input checked="" type="checkbox"/> Participation	5%	
Textbook:							
Jan Harrington, "Object-Oriented Database Design Clearly Explained ", Morgan Kauffman, 2000, ISBN 0123264286.							
Reference Books:							
<ol style="list-style-type: none"> 1. Wolfgang, K. and Michael, I., "Object-Oriented Application Development Using The Cache Post-Relational Database", Spring-Verlag New York, LLC, 2003, ISBN 3540009604. 2. Paul, G. B., " Object- Relational Database Development : A Plumber : Guide ", Prentice Hall PTR; BK&CD Rom edition, 2000. 							

Course Name	Distributed and Mobile Databases			قواعد البيانات الموزعة والمنتقلة			
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	IS423	0902423	3		3	1.5	4.5
Track	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Core <input checked="" type="checkbox"/> Elective <input type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	7 th -8 th Semester		Prerequisite	0902310			
Course Description:							
<p>This course covers the fundamental topics for distributed and mobile database system. It includes: Distributed data processing, promises of distributed data base systems, complicating factors, The course material includes architectural models for distributed database management system and distributed database management system architecture (Client/Server Systems and Peer-to-Peer distributed systems). Distributed data base design including alternative design strategies, distributed design issues, fragmentation, and allocation. Semantic data control including, view management, data security, and semantic integrity control. Distributed concurrency control, distributed database management system reliability, parallel database systems and distributed object database management systems are introduce. Mobile database including : directory management, caching, broadcast data, query processing and optimization and transaction management are discussed. Students will be trained on some software tools such as: Oracle, Sybase, DB2, and Informix.</p>							
Course Objectives:							
<ol style="list-style-type: none"> 1. Look at the issue of parallelism and data distribution in a DBMS. 2. Introduce To the concept of data partitioning and considering its influence on parallel query evaluation and show how data partitioning can be used to parallelize several relational operations. 3. Discuss alternative architecture for a distributed of DBMS. Discuss alternative distributed database design strategies and issues. 4. Discuss query optimization and evaluation for distributed databases. 5. Discuss distributed transaction management. 6. Discuss query processing and optimization and transaction management for mobile database. 							
Grading	<input checked="" type="checkbox"/> Mid-term	25%	<input checked="" type="checkbox"/> Project	15%	<input checked="" type="checkbox"/> Quizzes	10%	
	<input checked="" type="checkbox"/> Final	45%	<input type="checkbox"/> Lab		<input checked="" type="checkbox"/> Participation	5%	
Textbook:							
Barbara, D., Jain, R. and Krishnakumar, N., "Databases and Mobile Computing ", Kluwer Academic Publishers, 1996.							
Reference Books:							
<ol style="list-style-type: none"> 1. Evaggelia, P and George, S., "Data Management for Mobile Computing", Kluwer Academic Publishers, 2004, ISBN 0792380533. 2. Lin, W. and Veeravalli, B., "Object Management in Distributed Database Systems Stationary and Mobile Computing Environments : A Competitive Approach (Network Theory and Applications)", Kluwer Academic Publishers, 2004. 							

Course Name	Knowledge Management and Information Retrieval		إدارة المعرفة واسترجاع البيانات				
Course Information	Course Code	Course No	Credit Hours	Contact Hours	Lec.	Lab.	Tot.
	IS424	0902424	3		3	1.5	4.5
Track	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Core <input checked="" type="checkbox"/> Elective <input type="checkbox"/> Comp Science <input checked="" type="checkbox"/> Information System <input type="checkbox"/> Comp Network <input type="checkbox"/> Comp Network						
Level	7 th -8 th Semester		Prerequisite	0902222			
Course Description:							
<p>Chapters cover two parts: First, Knowledge management and knowledge modeling. Knowledge management from an information system perspective. Analyzing information and knowledge process in organizations. Explicit and implicit tacit knowledge in software systems and in human social systems. Languages and models for codifying knowledge. Objects and processes. Knowledge, actors and actions. Process modeling, data and modeling, object-oriented modeling, knowledge modeling, ontology and the semantic Web. Application of information technologies to knowledge management. KM in information systems development, the role of Its from knowledge management perspectives. Groupware, intranets and portals, document and content management, classification and search. Knowledge –based systems, knowledge acquisition and engineering. Data mining and knowledge discovery, information extraction.</p> <p>Second, introduction to information retrieval models, document processing and search techniques. Models, query languages and operations, document processing. Information retrieval deals with the automated storage and retrieval of documents. Providing the latest information retrieval techniques, this course discusses Information Retrieval data structures and algorithms. Students will also be trained on some popular software like: Communispace (a knowledge management suite).</p>							
Course Objectives:							
<ol style="list-style-type: none"> 1. To manage knowledge in organizations, beyond conventional information processing such as document management systems, groupware, intranets, expert systems, software agents and repositories, 2. To examine knowledge management from an IS perspectives. 3. To expose students to the issues of knowledge management in organization and across communities, and to provide opportunities to learn and apply modeling and analytical techniques using various types of information technologies in meeting organizational knowledge management needs. 4. To build systems with book processing components: storage and retrieval systems, file structures, query operations, document operations and hardware. 							
Grading	<input checked="" type="checkbox"/> Mid-term	20%	<input checked="" type="checkbox"/> Project	15%	<input checked="" type="checkbox"/> Quizzes	10%	
	<input checked="" type="checkbox"/> Final	40%	<input checked="" type="checkbox"/> Lab	10%	<input checked="" type="checkbox"/> Participation	5%	
Textbook:							
<ol style="list-style-type: none"> 1. Amrit Tiwana, "Knowledge Management Toolkit, The: Orchestrating IT, Strategy, and Knowledge Platforms", 2nd Ed., Prentice Hall, 2003 . 2. Ricardo B. Yates et al, "Modern Information retrieval", Prentice Hall , 2003 							
Reference Books:							
<ol style="list-style-type: none"> 1. R. Tissen, D. Andriessen, F. Deprez, "Knowledge Management", 1st Ed. Prentice Hall ,2000. 2. Elias Awad, Hassan Ghazi, "Knowledge Management" 1st Ed - Prentice Hall ,2004 . 							