

نموذج (هـ)



المملكة العربية السعودية

جامعة الملك سعود

وكالة الجامعة للشؤون التعليمية والأكاديمية
إدارة الخطط والبرامج الدراسية

خطة المقرر
Module Syllabus

Course: Computer Programming 1
Course Number and Code: COMP 2301
Prerequisite:
Course Teaching Language: English
Course Level: 3
Credit Hours: 2+1

Course Description

This course introduces Java programming concepts which emphasis on object-oriented programming approach. Topics include structure of Java programs, constants, variables, data types and declarations, operators, expressions, and control structures, functions and recursion, arrays.

Course Objectives

Provide Students with the knowledge about developing problems computerized solutions to particular problems.

Provide Students with the knowledge about problems analysis

Provide Students with the knowledge about problems solutions designs

Provide Students with the knowledge about executing problems solutions



Topics to be covered

Topic	No of Weeks	Contact hours
Introduction to Java Application	2	8
Introduction to Java Applets	2	8
Control Structures – if, if...else, while repetition structures	3	12
Control Structures – for, do...while, switch, break, continue, logical operators	3	12
Methods	2	8
Arrays	2	8

Book references

Book name	Authors	Publisher	Year
Java how to program	Deitel & Deitel	Prentice Hall	2011



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خطة المقرر
Module Syllabus

Course: Principles to Database Systems
Course Number and Code: COMP 2302
Prerequisite: CT1201
Course Teaching Language: English
Course Level: 3
Credit Hours: 3+0

Course Description

This course provides students with a comprehensive introduction to database concepts and database management systems. Principles and methodologies of database design, and techniques for database application development. Primary focus is on the relational model of database management and querying databases using Structured Query Language (SQL).

Course Objectives

Provide the student with the skills set and the basic instructions for database systems
Learn ways to design relational databases.
Using Structured Query Language (SQL).

Topics to be covered

Topic	No of Weeks	Contact hours
Fundamentals of Database Management Systems	1	4
Basic concepts and terminology	1	4

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characteristics of the database approach, the three level-schema architecture and data independence	1	4
The Entity Relationship Model (notations and concepts) (ER)	2	8
Enhanced Entity Relationship Model (EER)	1	4
The Relational Data Model and Relational Database Constraints	1	4
Relational Database Design by ER- and EER-to-Relational Mapping	1	4
Introduction to SQL standard	2	8
SQL, SQL*Plus	2	8
[SQL Lab]	3	12

Book references

Book name	Authors	Publisher	Year
Fundamentals of Database Systems	Elmasri & Navathe	Addison-Wesley Pearson	2010



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خطة المقرر
Module Syllabus

Course: Operating Systems
Course Number and Code: COMP 2303
Prerequisite: CT1201
Course Teaching Language: English
Course Level: 3
Credit Hours: 2+1

Course Description

The course provides the theoretical knowledge of operating system. It also includes the practical skills to work within Linux and Windows operating systems

Course Objectives

Theoretical objectives

- Identify the types of operating systems.
- Identify the services provided by the operating systems for users.
- Identify the interfaces through which user can interact with the operating system.
- Identify the different ways to build the operating system.
- Identify the process concept.
- Identify the algorithms used for processor scheduling.
- Identify the ways to manage memory and virtual memory.
- Identify the file system.

Experimental objectives

- Proficiency under the Linux operating system through the study of:
- GNOME Desktop



- Desktop Sessions
- Using the Panels
- Using the main Menubar.
- Working with Files.
- Tools and Utilities.
- Control center.

Proficiency under the Windows operating system through the study of:

- Windows Desktop.
- start menu and its characteristics.
- Windows Explorer.
- File Management.
- Viruses.
- Printer Management.
- Control Panel.

Topics to be covered

Topic	No of Weeks	Contact hours
Types of operating systems.	2	4
The operating system services, operating system interfaces, operating system architecture.	2	4
Process management , CPU scheduling	4	8
Memory management, Secondary storage management	4	8
File management	2	4
Experimental study (Linux Operating System)		
Genome desktop.	1	2
Desktop Sessions.	1	2
Using the Panels.	1	2
Using the main Menubar.	1	2
Working with files.	1	2
Tools and Utilities.	1	2
Configuring Desktop.	1	2

Book references

Book name	Authors	Publisher	Year
Operating system concepts, , 5 th Edition	Peter B. Galvin & Silberschatz	Addison Wesley	2006



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خطة المقرر
Module Syllabus

Course: Computer Skills (2)
Course Number and Code: CT 2306
Prerequisite: CT1201
Course Teaching Language: English
Course Level: 3
Credit Hours: 2+1

Course Description

The course introduce the basics for computer users through basic software applications as file management, Word processing, spread sheets, Presentations, database, communications.

Course Objectives

Introduce students to the basic concepts of computer and the role of information technology in community development
Provide credited Skills in the field of computers qualify students for integration in the information society.
Raise the level of efficiency in the use of computers and general applications to all students in all specializations.
Giving the student the basic skills they need in the use of computers in a global standard
Equip students with the basic skills necessary to pass the choices adopted for the International Computer Driving

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Topics to be covered

Topic	No of Weeks	Contact hours
Information Technology Concepts	2	4
File Management and Computer Usage	2	4
Word Processing	2	4
Worksheets	3	6
Databases (ACCESS)	2	4
PowerPoint Presentation	2	4
Information and Communications	1	2

Book references

Book name	Authors	Publisher	Year
Licensed ECDL/ICDL material	Licensed ECDL/ICDL material	Licensed ECDL/ICDL material	2010



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خطة المقرر
Module Syllabus

Course: Internet Programming
Course Number and Code: COMP2401
Prerequisite: COMP2301
Course Teaching Language: English
Course Level: 4
Credit Hours: 2+1

Course Description

This course provides students with the fundamentals of web page design and web site development using HTML and Microsoft Expression Web. The course covers the necessary knowledge for developing dynamic web pages and web applications with database connectivity using PHP and MYSQL.

Course Objectives

Develop necessary skills to design and create web page and websites.
Provide basics for creating CSS for web pages.
Provide an understanding of using and configuring web server.
Provide basics for publishing files on the www and managing web sites.
Provide necessary skills for building dynamic and interactive web pages.
Provide basics for building web application with database connectivity.



Topics to be covered

Topic	No of Weeks	Contact hours
Designing web pages using HTML: page formatting, Advanced page formatting, web graphics and hyperlinks.	3	12
Tables, Frames, Forms and CSS.	2	8
Using Microsoft Front page for creating web sites and designing web pages	3	12
Web server installation and configuration, publishing web sites	0.5	2
Programming with php: variables, numbers, constants, strings, conditionals and operators, arrays, loops	1	4
Creating dynamic web sites	1	4
Creating and administrating Database using MYSQL	1	4
Using php with MYSQL	0.5	2
Web application development and examples	2	8

Book references

Book name	Authors	Publisher	Year
HTML, XHTML & CSS Quick steps	GUY HEART & Davis	McGraw-Hill	2010
PHP 6 and MySQL 5 for Dynamic Web Sites	Larry Ullman	Peachpit Press	2009



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خطة المقرر
Module Syllabus

Course: Computer Programming (2)
Course Number and Code: COMP2402
Prerequisite: COMP2301
Course Teaching Language: English
Course Level: 4
Credit Hours: 2+1

Course Description

This course covers the object oriented programming concepts – classes, objects, scopes, controlling access to members, constructors. Discuss the inheritance – superclass, subclass, protected members, polymorphism, and encapsulation.

Course Objectives

- To understand the notions of data abstraction and abstract data types (ADTs).
- To understand inheritance which is a form of software reuse in which classes are created from existing classes.
- To understand the concept of polymorphism that makes system extensible and maintainable.
- To understand the string- and character-processing capabilities
- To understand the graphics context and graphics objects and to manipulate colors & fonts.
- To understand the packages containing GUI-related components, even-handling classes and interfaces.
- To understand the Java streams class hierarchy to create, read, write and update files.



Topics to be covered

Topic	No of Weeks	Contact hours
Revision – Java Applications, Java applets, Control Structures, Methods & Arrays	2	8
Object-Based Programming	1	4
Object-Oriented Programming: Inheritance	1	4
Object-Oriented Programming: Polymorphism	1	4
Strings and Characters	2	8
Graphics and Java2D	3	12
Graphical User Interface Components	3	12
Files and Streams	1	4

Book references

Book name	Authors	Publisher	Year
JAVA - HOW TO PROGRAM	-H. M. DEITEL -P. J. DEITEL	Prentice Hall Publication	2010





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خطة المقرر Module Syllabus

Course: Systems Analysis
Course Number and Code: COMP2403
Prerequisite: COMP2302
Course Teaching Language: English
Course Level: 4
Credit Hours: 2+1

Course Description

This course introduces the students the role of the systems analyst in the development of information system for organizations. The systems analyst is a problem solver. As such, this module emphasizes development of effective solutions and communicating those solutions to the development team. Use of accepted design techniques, project management approaches, written and verbal communication, collaboration and teamwork, and organizational tools prepares the learner for the many demands of an entry-level systems analyst.

Course Objectives

Describe the different types of Information Systems
Describe the information systems development life cycle (SDLC)
Discuss the analytical, technical, management, and interpersonal skill of a system analyst
Describe the role of CASE tools and how they are used to support activities of SDLC
Discuss the system requirements determination methods
Understanding the logical modeling of processes by studying Data Flow Diagrams (DFDs)
Understand the use of Structured English, Decision Trees and Decision Tables for



representing the steps in logical processes in Data Flow Diagrams
Drawing Entity-Relationship (E-R) diagram to represent common business solutions

Topics to be covered

Topic	No of Weeks	Contact hours
Chapter 1: Define Information System Analysis & Design; Components of Information System – Data, Data Flow, Processing Logic; Process-oriented and data-oriented approach, Types of Information Systems, Systems Development Life Cycle (SDLC)	1	3
Chapter 2: Skills of System Analyst – Analytical, Technical, Management, Interpersonal; Definition of system and its parts; Important system components-open & closed system, modularity, coupling, cohesion;	1	3
Chapter 3: Project Manager, Project, Project Management Process – Initiation, Planning, Execution, Closing; PERT and Gantt Charts	1	3
Chapter 4: Use of Computer-Aided Software Engineering (CASE), Components of CASE – Diagramming Tools, Form and Report Generator tools, Analysis Tools, Documentation and Code Generation Tools	1	3
Chapter 5: Project Identification and Selection Process Chapter 6: Project Initiation and Project Planning	2	6
Chapter 6 : Assessing Project Feasibility – Economic, Technical, Operational, Schedule, Legal and contractual, Political; Tangible & Intangible Benefits and Costs	1	3
Chapter 7: Determining System requirements – Interviewing & Listening, Questionnaires, Observing users, Analyzing procedures and documents; Joint Application Design (JAD),	1	3
Chapter 8: Process Modeling: Data Flow Diagrams (DFD) – Definitions and symbols, Rules, Decomposition, Balancing	2	6
Chapter 8: Data Flow Diagrams (DFD) – Decomposition, Balancing	1	3
Chapter 9: Logic Modeling: Structured English, Decision Tables, Decision Trees, Comparison	1	3
Chapter 10: Conceptual Data Modeling: E-R Modeling – entities, attributes, relationships, candidate keys, identifiers	2	6

Book references

Book name	Authors	Publisher	Year
Modern Systems Analysis & Design, 3rd edition,	Jefferey A. Hoffer, Joey F. George, Joseph S. Valacich	Prentice Hall Publication	2010



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خطة المقرر
Module Syllabus

Course: Database Systems Lab
Course Number and Code: COMP2404
Prerequisite: COMP2302
Course Teaching Language: English
Course Level: 4
Credit Hours: 1+2

Course Description

This course covers the concepts of both relational and object relational databases and the powerful SQL programming language. Students are taught to create and maintain database objects and to store, retrieve, and manipulate data. Students learn to retrieve data by using advanced techniques such as ROLLUP, CUBE, set operators, and hierarchical retrieval. They also learn to write SQL and SQL*Plus script files using the SQL*Plus tool to generate report-like output. Demonstrations and hands-on practice reinforce the fundamental concepts.

Course Objectives

Owning the practical capabilities of developing a real database system.
Particularly applying the knowledge obtained from CS203 in analysis.
Design of a real database project.
Implementation of a real database project.



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Topics to be covered

Topic	No of Weeks	Contact hours
Introduction to Oracle and database	1	5
Sorting and Retrieving Data: The Basics	1	5
Advanced Data Manipulation	2	10
Controlling SQL *Plus	1	5
SQL Functions	1	5
Using Indexes and Constraints	1	5
Other Useful Oracle Techniques	2	10
Introduction to PL/SQL	2	10
More PL/SQL Tools	2	10
More PL/SQL Tools, ODBC (connecting to other software. Such as dbase, access, excel, Visual Basic)	2	10

Book references

Book name	Authors	Publisher	Year
Oracle 10G SQL programming	SCOTT URMAN	SCOTT URMAN	2009
Fundamentals of Database Systems	Elmasri and Navathe	Pearson	2010



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خطة المقرر Module Syllabus

Course: Computer Networks
Course Number and Code: COMP2405
Prerequisite: COMP2303
Course Teaching Language: English
Course Level: 4
Credit Hours: 2+1

Course Description

In general computer networks course is a theory and computer application Course. It aims to raise awareness of computer networks (of different types and techniques) and how to construct, operate and administer. It also provides the basic information necessary for the specialist networks in order to be able to provide information services in an environment of networking and information networks.

Course Objectives

Provide students with the basic concepts of networking.
Provide students with the types of networks and different designs.
Provide students with techniques of networking devices and equipment and the protocols and standards
Introduce students to applications and network services.
Giving students practical skills in the construction and administration of network information in a simple form.
Provide students with the existing networks of TCP / IP and addressing methods.



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Topics to be covered

Topic	No of Weeks	Contact hours
Introduction to Networks, OSI Reference Model and TCP/IP Model	2	6
Network Hardware, LAN construction(lab)	1	3
Networks Topologies, LAN construction(lab)	1	3
Ethernet Technology and cabling, Getting started with windows 2008 server(lab)	2	6
LAN Technologies, Installing server core	1	3
Network troubleshooting, Server Manger(lab)	2	6
TCP/IP Protocols, Active directory domain services(lab)	2	6
Switching, Windows deployment services(lab)	3	9
Internet information services IIS 7.0(lab)		

Book references

Book name	Authors	Publisher	Year
Computer Networking for LANs to WANs: Hardware, Software and Security	Jr. Kenneth C. and James L. Antonakos	Delmar	2010
Microsoft Windows Server 2008 Administration	Microsoft	McGraw Hill	2008
Administrating Windows Server 2008 Server Core	John Paul Mueller	Wiley Publishing	2008



