

Course Syllabus for Students Majoring in

Computer Department

Updated On: [07-Dec-2011]



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COMPUTER DEPARTMENT Diploma of Computer Programming



Program Objective

On Successful completion of the program, The students should be able to:-

- Develop an e-commerce web application (2009 Semester 1 And After Only).
- Understand the role of computer applications in a business environment. Assist in the development of appropriate programming solution for typical business problems.
- Develop an appropriate programming plan for a specified solution. Create the necessary logic flowcharts required in the development of a program to solve a typical business problems.
- Design and test an appropriate computer application program, given specific details, to solve typical business problems.
- Develop and code an appropriate program to solve specific business problems.
- Determine if a program produce the appropriate output required to solve a given problems.
- Develop, code, and test database application produce specific requirements for business applications.
- Assist in the maintenance of existing application programs.
- Determine an appropriate solution for existing software problems.
- Document new and modified programs to the appropriate organizational standards.
- Assist in the implementation of new application programs in a business environment.
- Assist new and existing users to understand the functions of a new or modified application programs.
- Communicate effectively with both technical and non technical users on programming matters.

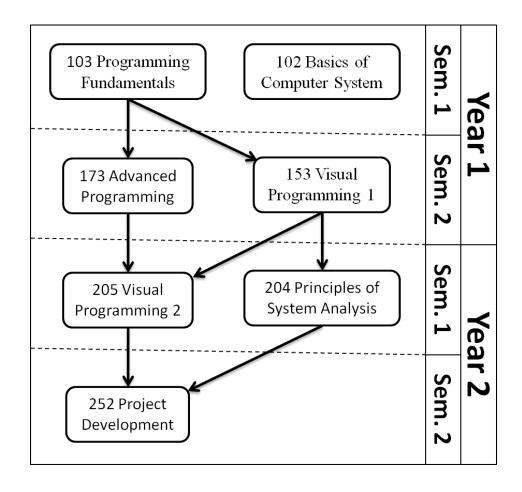




Dept. Code	Course No.	Course Title	Credits	Hours	Course Type	Prerequisites
		General Required courses	28			
01	101	Islamic Education	2	2	1	-
22	101	Principles of Accounting (1)	3	4	1	-
24	151	Principles of Accounting (2)	3	4	1	=
25	101	Principles of management	3	3	1	=
26	101	Introduction to the study of law	3	3	1	-
26	151	Principles of Economics	3	3	1	101
27	101	Basics of Statistics	3	4	1	-
28	102	Information Technology	2	4	1	-
30	099	English	0	5	1	-
30	101	English (1)	2	4	1	099
30	154	English (2)	2	3	1	101
30	204	English (3)	2	3	1	154
		General Elective courses	1			
07	111	Plastic Arts	01	2	2	=
08	110	Physical Education	01	2	2	=
11	101	Home Economics	01	2	2	=
65	101	Automotive Mechanics	01	2	2	=
69	101	Electronics Engineering	01	2	2	-
		Major Required Courses	34			
24	102	Basics of Computer System	3	3	1	-
24	103	Programming Fundamentals	4	5	1	-
24	153	Visual Programming 1	5	6	1	103
24	173	Advanced Programming	4	5	1	103
24	199	Field Training	4	30	1	
24	204	Principles Of Systems Analysis	3	4	1	153
24	205	Visual Programming 2	5	6	1	173 And 153
24	252	Project Development	6	7	1	205
		Major Elective Courses	3	_		100
24	203	FORTRAN & Applications	3	4	2	103
24	254	Operating Systems	3	4	2	205
24	258	Databases	3	3	2	102
22	107	Supplementary Required Courses	6	2		
22	105	Office Work	3	3	-	=
22	121	Introduction to Postal Services	3	3	1	=
22	153	Principles of Secretary ship	3	3	1	=
22	205	Transportation % Distribution	3	3		-
22	207	Stock Control	3	3		-
23	101	Principles of Insurance	3	3		-
23	102	Mathematics of Finance (1)	3	4		-
23	105	Financial Institutions in Kuwait	3	3		-
23	163	Commercial Banking Operations (1)	3	4		-
23	211	Kuwait Banks Foreign Operations	3	3		-
42	153	Principles of Public Health	3	3		-









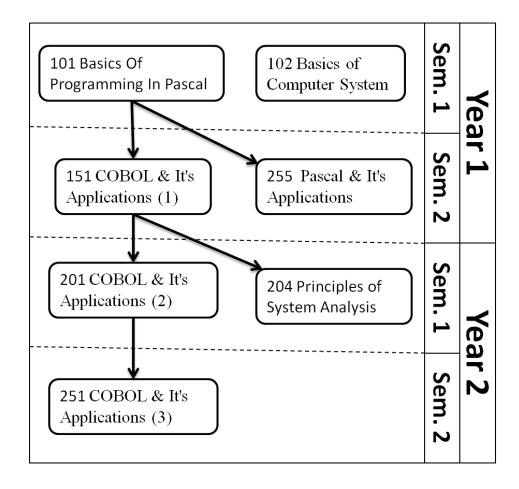


Major : Computing

Dept. Code	Course No.	Course Title	Credits	Hours	Course Type	Prerequisites
		General Required courses	28			
01	101	Islamic Education	2	2	1	-
22	101	Principles of Accounting (1)	3	4	1	-
24	151	Principles of Accounting (2)	3	4	1	-
25	101	Principles of management	3	3	1	-
26	101	Introduction to the study of law	3	3	1	-
26	151	Principles of Economics	3	3	1	101
27	101	Basics of Statistics	3	4	1	-
28	102	Information Technology	2	4	1	-
30	099	English	0	5	1	-
30	101	English (1)	2	4	1	099
30	154	English (2)	2	3	1	101
30	204	English (3)	2	3	1	154
		General Elective courses	1			
07	111	Plastic Arts	01	2	2	-
08	110	Physical Education	01	2	2	-
11	101	Home Economics	01	2	2	-
65	101	Automotive Mechanics	01	2	2	-
69	101	Electronics Engineering	01	2	2	-
		Major Required Courses	34			
24	101	Basics Of Programming In Pascal	4	5	1	-
24	102	Basics of Computer System	3	3	1	-
24	151	COBOL & It's Applications (1)	5	6	1	101
24	199	Field Training	4	30	1	
24	201	COBOL & It's Applications (2)	5	6	1	151
24	204	Principles Of Systems Analysis	3	4	1	151
24	251	COBOL & It's Applications (3)	6	7	1	201
24	255	Pascal & It's Applications	4	5	1	101
		Major Elective Courses	3			
24	203	FORTRAN & Applications	3	4	2	101
24	254	Operating Systems	3	4	2	201
24	258	Databases	3	3	2	102
		Supplementary Required Courses	6			
22	105	Office Work	3	3		-
22	121	Introduction to Postal Services	3	3	1	-
22	153	Principles of Secretary ship	3	3	1	-
22	205	Transportation % Distribution	3	3		-
22	207	Stock Control	3	3		-
23	101	Principles of Insurance	3	3		-
23	102	Mathematics of Finance (1)	3	4		-
23	105	Financial Institutions in Kuwait	3	3		-
23	163	Commercial Banking Operations (1)	3	4		-
23	211	Kuwait Banks Foreign Operations	3	3		=
42	153	Principles of Public Health	3	3		-









First: General Required Courses

101 Islamic Cultural Studies 2 Credits 3 Hours

Islamic Culture is and obligatory subject at Health Sciences. Technology and Commercial Studies Colleges.

The meaning of Islamic Culture, its Sources, its Characteristics, Islamic legislation and its importance, legal and illegal transactions, work and production in Islam, the rights and duties of workers, the Islamic family and its responsibilities, Islam and health care, the Islamic attitude towards the present medical cases, intellectual movements and the attitude of Islam towards them.

AC 101 Principles of Accounting (1) 3 Credits 4 Hours

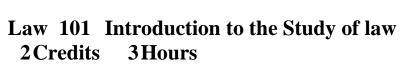
This course introduces students to the science of accounting and basic accounting concepts. It also explains the methods of analyzing, recording, classifying and summarizing financial operations within accounting in addition. The preparation of closing accounts and balance sheets in partnerships is explained. Students are given a great deal of practical training in case studies.

AC 151 Principles of Accounting (2) 3 Credits 4 Hours

The course develops an understanding of accounting principles concepts and procedures necessary to prepare closing accounting methods in addition to case studies.

ADM 101 Management Principles 3Credits 3 Hours

The course aims at acquiring the students with scientific management principles. It covers the functions of management and administrative processes. Special emphasis is placed on the role of management in Kuwait.





This course covers the basics and general principles of the law. It is considered to be a common ground to stand upon, as a prior step towards an advanced law study. It includes law, rights and contracts. It is taught to all departments in the college except medical secretaries.

Eco. 101 Principles of Economics 3Credits 3Hours

The basic concepts of economics, various economic systems, supply and demand, market equilibrium, elasticties, cost and market structures. Circular flow, national income, Money and banking, international trade, balance of payments, and exchange rate.

Sta. 101 Statistics 3Credits 4Hours

"Definition and scope of Statistics" This course covers the classic and empirical definitions of probability, collection and presentation of data measure of location, dispersion and skewness, sampling distribution of the mean, areas under the normal curve, regression and correlation and index numbers.

102 Information Technology 2 Credits 4 Hours

This course provides the student with the necessary information and skills of information storage and retrieval by using information technology (computers) as an alternative procedure. The course content is described as follows:

- Information system and its linkage with different office equipment and machines.
- The relation of microfilm technology to the computer input/output.
- The relationship between computer and office automation.
- A comparison between microfilms and computers in terms of information storage, manipulation and retrieval.
- Telecommunication and its applications (telex, telefax, modem).
- Image processing and its applications



EL 099 English (99) 0 Credits 5 Hours

This non-credit remedial course aims to elevate the learners' proficiency in English from beginner to upper-intermediate level.

It is a communicative course that encourages students to acquire the language they learn and to adapt material to their own situation. In order to attain this goal, systematic attention is paid to language form through special language study sections that follow each unit, and are devoted to the study and practice of grammar, pronunciation and vocabulary

EL 101 English (1) 2Credits 4Hours

This is a common core English Credit Course required for all students of Business College, Since it is a general course, it deals with a variety of topics in different areas. The general aim is to build on a functional and structural language syllabus.

EL 153 English (2) 2 Credits 3 Hours

This is the first ESP course for computer science students. Its material is subject – specific. Its methodology is claimed as communicative.

It develops students' abilities and skills by giving them training in:-

- Asking and answering questions.
- Listening to oral texts and answering questions so as to develop both listening and speaking skills.
- Reading for gist and for details.
- Learning and using certain terms in context.
- Utilizing various language functions as appropriate to the occasion.

Topics and skills have been included on the basis of relevance to a wide variety originating form discussions, reading, listening and writing. All exercises fall into two categories: Those that concentrate on form as vocabulary and word formation, and those that given texts. A wide variety of commercial and technical terms is used across the various topic area. Course book: English for computer science, by P. Charles Brown, and Norma D. Mullen – Oxford University press, 1990.



EL 203 English (3) 2 Credits 3 Hours

English 203 is an advanced ESP course offered to students of the computer science major. Its material is subject – specific.

The course aims at developing learners' abilities to learn about and use English receptively and productively in both the spoken and the written forms, hence developing their linguistic and communicative competence and performance.

Activities are structured, so that learners can discover and learn new vocabulary and skills using their experience and knowledge. Course book: English for computer science, by p. Charles Brown, and Norma D. Mullen – Oxford University Press, 1990



Second : General Elective Courses

111Plastic Ar	rts	
1 Credits	2 Hours	
110Physical I	Education	
1 Credits	2Hours	
101 Home Eco	onomics	
1 Credits	2Hours	
101 Automoti	ve Mechanics	
1 Credits	2Hours	
101 Electronic	es Engineering	
1 Credits	0 0	



Three: Major Required Courses

COM 101 Basics Of Programming In Pascal 4Credits 5Hours

This course has been designed to provide students with an introduction to the basic concepts required to create and run simple structured computer programs needed in an information system and business environment, students utilize experiential learning to acquire fundamental computer system programming concepts and techniques.

The specific purpose of this course is to provide the participant with a basic knowledge of programming techniques that will assist the student to adapt quickly to specific on job languages and procedures.

COM 102 Basics Of Computer System 3 Credits 3 Hours

This course has been designed to help students familiarize themselves with the various forms and uses of computers and other technological innovations in an information system environment.

Students utilize experiential learning to acquire computer literacy The purpose of this course is to provide the participant with a knowledge base that will assist the him/her to adapt quickly to specific on the job equipment and procedures.

COM 103 Programming Fundamentals 4Credits 5Hours

This course is an introductory course in basic programming, emphasis on pseudo code development and problem solving. It starts with manipulating abstract data types moving gradually toward object data types. Then, the course will take an in depth look at programming concepts and techniques of control and repetition structures. The course will adopt a practical hands-on approach when examining programming styles where the student will get familiarized with the use of command prompt editor to compile, debug, and run Object Oriented Programs.



COM 151 COBOL & It's Applications (1) 5Credits 6Hours

This course has been designed to provide students with the basic concepts required to create and run simple COBOL application programs.

Students utilize experiential learning to acquire TOP-DOWN structured design programming concepts, fundamental coding concepts, and the skills needed to process input, and enhance the readability of program output, for typical business applications. The specific purpose of this course it to provide the participant with the necessary basic programming skills to assist in the computerization of traditional business applications such as: payroll, accounts receivable, and inventory control.

COM 153 Visual Programming 1 5 Credits 6 Hours

This course introduces the knowledge and techniques to develop a reliable Graphical User Interfaces (GUIs) web applications. And based on today's technologies the course emphasizes on designing Web pages for the World Wide Web. Students use basic Hypertext Markup Language (HTML) to create graphical content, optimize the graphical content presentation through the use of Cascading Style Sheets (CSS) technology, and attach interactive events via scripting languages. All under a constraint that students will create web sites without the aid of a software authoring tools.

COM 173 Advanced Programming 4Credits 5Hours

This course is a continuation of 103 programming fundamentals, using the same programming language; the course will extend the object-oriented programming principles to a moderate technical level of details. Apart from creating and manipulating members, objects, and classes, using an up-to-date Integrated Development Environment (IDE), the course will start by recapping the previous programming course arrays manipulation section, adding the applications of arrays as well(Sorting and Searching), Emphasis is placed on abstraction, encapsulation, inheritance, and polymorphism as the major four concepts of Object Oriented Principles. The course will introduce basic File Input/output, and Exception handling.

Upon completion, students should be able to understand, code, test, and debug a class diagram of more than five classes.



199 Field Training 4Credits 30Hours

Being an applied institute, the College of Business Studies curriculum includes a special course for practical training. This course a compulsory course for all students, each student will be send to a training institute according to his/her major in private or government agencies, companies or organizations.

The student will spend 5 hours a day 5 days a week for 9 weeks. During that time, the student will observe site work in action, and perform any given tasks by the training guide. During the course, the trainee will submit weekly reports showing progress. At the end of the course the student will provide a comprehensive report about the site work and the report will be discussed in front of an evaluation committee.

COM 201 COBOL & It's Applications (2) 5 Credits 6 Hours

This course has been designed to provide students with an expansion of the concepts required to create and run COBOL application programs used to solve typical business problems. Students utilize experiential learning to acquire the programming skills needed to process numeric fields, processing sequential files, and define, maintain, and use tables for typical business applications. The specific purpose of this course is to provide the participant with the necessary programming skills to assist in the computerization of traditional business applications such as: payroll, accounts receivable, and inventory control with the minimum of on-the-job training.



COM 204 Principles Of Systems Analysis 3Credits 4Hours

This course has been designed to help students familiarize themselves with the various forms and uses of systems analysis in an information system environment. Students utilize experiential learning to acquire the basic concepts of computer systems analysis. The purpose of this course is to provide the participant with a knowledge base that will assist him/her to adapt quickly to specific on the job system analysis environments and associated procedures.

COM 205 Visual Programming 2 5Credits 6Hours

This course teaches the fundamentals of Web applications and implementation using the up-to-date web programming technologies. This course passes through four major phases. First, review and enhance the I/O concepts discussed earlier (103 / 173) ensuring that the persistency needs of any software application is fulfilled. Then, the basic knowledge required to develop Web Models will be introduced, followed by the essential methods required to incorporate XHTML within Web Views, and finally, introduce state-full techniques to handle user requests over the stateless HTTP environment. The course shall be taught using an up-to-date Web-enabled IDE. The student will develop a project that incorporates all topics that have been previously covered.

COM 251 COBOL & It's Applications (3) 6Credits 7Hours

This course has been designed to provide students with an expansion and consolidation of the concepts required to creat, run and test COBOL application programs used to solve business problems. Student utilize experiential learning, and extensive in-depth practical development to acquire the programming skills needed to process programs for typical business applications. The specific purpose of this course is to provide the participant with the necessary hands. on programming skills to assist in computerization of traditional business applications such as: payroll, accounts receivable, and inventory control with the minimum of on-the-job training.



COM 252 Project Development 6Credits 7Hours

This course brings together all of the elements of web site design, user interaction scenarios, graphics, data storage, and data security. To construct a fully functional commercial web site application. The course will start by introducing some basic data structures' constructs, highly involved in web-application development. The student will learn how to connect to a data source, and how to secure any internet connection. The student will make use of some industry standard software products - for example, to generate reports and send emails; however, the student will develop the complete web-application from scratch.

COM 255 Pascal & It's Applications 4 Credits 5 Hours

This course has been designed to provide students with advanced structured programming concepts built on the basic principles covered in programming principles. Students utilize experiential learning to acquire further structured computer application programming concepts and techniques required in a typical information systems environment. The specific purpose of this course is to provide the participant with a comprehensive knowledge base of structured programming that will assist him/her to adapt quickly to specific on the job languages and procedures.



Four: Major Elective Courses

COM 203 FORTRAN and its Applications 3 Credits 4 Hours

The course discusses algorithms, flowcharting, basics of FORTRAN, reading, writing, testing repetition, sub-programs functions, and practical applications.

COM 254 Operating Systems 3 Credits 4 Hours

The course introduces operating systems, their components, historical development of DOS and related programs, input and output instructions, main memory, processing, data.

COM 258 Introduction to DATABASE 3 Credits 3 Hours

This course is designed to provide an introduction to database concepts and terminologies. The course covers relational database modeling, Structured Query Language (SQL), data modeling, and normalization of database tables. It also covers information security and database systems maintenance.



Five: Supplementary Required Courses

105 Office Work 3 Credits 3 Hours

AS 121 Introduction to Postal Administration 3Credits 3Hours

This course provides the basic academic background to later courses, introduces postal services organizations and terms and develops students' abilities mentally and academically to understand these courses. The course also deals with the concept and importance of postal services in various fields in society: social, economic, political, cultural, and outlines the services offered worldwide, (such as stamps, stationery, post – office boxes, items, parcels, money orders) as well as modern services. the course also covers the development of the postal system all over the world in general and in Kuwait in particulars, and gives basic information on international and Arab postal unions.

AS 153 Secretarial Principles 3 Credits 3 Hours

The course qualifies students for secretarial work, particularly as far as the organization of day-to-day business, meetings, secretarial diplomacy and all other duties are concerned.

AS 205 Transportation and Distribution 3Credits 3Hours

The function and elements of transportation, including pricing and marketing, in addition to customs regulations and documents. Channels and different types of transportation are also introduced.



AS 207 Stock Control 3Credits 3Hours

This course is intended to define the concept and importance of stock control and point out the role of store men. It is also designed to enable students to apply economic methods of storage and propose and use stock control reports.

IB 101 Principles of Insurance 3 Credits 3 Hours

the course introduces the key principles of risk and insurance and their applications, particularly the different risks that individuals and economic institutions are exposed to. The course also deals with the types of insurance and reinsurance which cover these risks and the insurance companies which provide such cover, with special reference to Kuwait.

IB 102 Mathematics of Finance3 Credits 4 Hours

The course outlines the theoretical basis and the practical applications of the mathematics of finance and investment used in the financial and commercial fields as to simple interest, compound interest, and their applications with regard to commercial paper rate, debt settlement, long-term loan amortization, and mathematical operations related to foreign trade.

IB 105 Financial Institutions in Kuwait3 Credits 3 Hours

This course introduces the main types and functions of financial institutions in Kuwait, and the relationship between them, particularly in the banking, insurance and investment sectors. The course discusses the role of the money market and capital with particular reference to the Kuwait Stock Exchange and the Kuwaiti Fund for Arab Economic Development.



IB 163 Commercial Banking Operations 3 Credits 3 Hours

The course deals with the main functions of commercial banks, and the banking services offered to their customers. Theory is put practice with the help of documents and forms used in commercial banks. The course also introduces the internal organization of commercial banks and the relationship between different bank departments.

IB 211 Foreign Commercial Bank Operations3Credits 3Hours

The course introduces students to the practical applications of the operations of commercial banks with foreign countries, with regard to monetary credit, foreign exchange operations, and the relationship between local banks and their correspondents abroad with regard to investments.

153Principles of Public Health 3Credits 3Hours