



Computer and Info. Technology Department

Major Programming

1430H – 2010G

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Department	Computer and Info. Technology	Major	Programming
<p>Course Description:</p> <p>This program is designed to full fill the needs of the apprenticeship of the local employment jobs according to the national occupational skill standard of assistant programmers and the internet technology developers. Training for this program includes a practice on skills of English language, math, methods of human communication and behaving towards others. Also, it includes software and developing internet technology. Moreover, it includes software skills such as; analyzing and programming databases, programming language, to develop different applications and much more technology to develop the internet.</p> <p>This department has established a new course called The Project. This is due to the trainees needs to extensive hands-on experience on different skills. This course has been divided into two parts: project1 & project2. this runs through two training trimesters.</p> <p>The Programming Major trains learners in 1547 training hours and 420 hands-on practical hours.</p> <p>This major awards the graduates diploma certificate in programming. Graduates are expected to work in the relevant fields to Computer Programming, such as; A assistant programmer and internet technology developer.</p>			
<p>Course's general objective:</p> <p>This program aims to provide trainees with skills and necessary knowledge to carry out the work in programming at the fourth level of the National Vocational Qualifications System.</p>			
<p>Course's specific objectives:</p> <p>At the end of this course trainees should be able to do the following jobs:</p> <ol style="list-style-type: none">1- Help analyzing systems.2- Participate in application systems design.3- Help developing the system.4- Update systems.5- Maintain applications.6- Give suggestions and advices.7- Keep himself updated.8- Develop internet sites.			

The Study Plans Distributed on trimesters

	No.	Course Code	Course Name	Prerequisites	No. of Units				
					CRH	L	P	T	CTH
First trimester	1	ISL 101	Islamic Culture -1		2	2	0	0	2
	2	ARB 101	Arabic Language		2	2	0	0	2
	3	ENG 106	General English Language		4	4	0	2	6
	4	MAT 113	General Mathematics		4	4	0	0	4
	5	CMT 101	Introduction to Computer Applications		2	0	4	0	4
	6	PHY 115	General Physics		3	3	0	1	4
	7	VOC 107	Vocational Guidance & Excellence		2	2	0	0	2
Total Number of Units					19	17	4	3	24
CRH: Credit Hours L: Lecture P: Practical T: Tutorial CTH: Contact Hours									

	No.	Course Code	Course Name	Prerequisites	No. of Units				
					CRH	L	P	T	CTH
Second trimester	1	ENG 135	Specialized English -1	ENG 106	4	4	0	2	6
	2	MAT 115	Specialized mathematics	MAT 113	3	3	0	1	4
	3	CMT 102	Advanced Computer Applications	CMT 101	2	0	4	0	4
	4	PRG 150	Fundamentals of Computer Programming		4	2	4	0	6
	5	PRG 153	Web Pages Design		4	2	4	0	6
Total Number of Units					17	11	12	3	26

	No.	Course Code	Course Name	Prerequisites	No. of Units				
					CRH	L	P	T	CTH
Third trimester	1	ENG 234	Specialized English -2	ENG 135	4	4	0	2	6
	2	PRG 182	Introduction to Database		4	2	4	0	6
	3	PRG 154	Computer Programming	PRG 150	4	3	2	0	5
	4	PRG 274	Web Page Programming -1	PRG 150 PRG 153	3	1	4	0	5
Total Number of Units					15	10	10	2	22

	No.	Course Code	Course Name	Prerequisites	No. of Units				
					CRH	L	P	T	CTH
Fourth trimester	1	ISL 102	Islamic Culture -2	ISL 101	2	2	0	0	2
	2	ENG 137	Communication Skills -1	ENG 106	4	4	0	2	6
	3	PRG 276	Web Page Programming -2	PRG 274	4	2	4	0	6
	4	PRG 282	Analysis & Design of Database Systems	PRG 182	4	3	2	0	5
	5	PRG 292	Project -1		2	0	4	0	4
Total Number of Units					16	11	10	2	23

	No.	Course Code	Course Name	Prerequisites	No. of Units				
					CRH	L	P	T	CTH
Fifth trimester	1	ENG 237	Communication Skills -2	ENG 137	4	4	0	2	6
	2	ETH 101	Professional Ethics & Comm. Skills		2	2	0	0	2
	3	CMT 127	Computer components & Assembly		4	2	4	0	6
	4	PRG 279	Advanced Internet Technologies	PRG 274	4	2	4	0	6
	5	PRG 294	Project -2	PRG 182 PRG 292	3	2	2	0	4
Total Number of Units					17	12	10	2	24

	No.	Course Code	Course Name	Prerequisites	No. of Units				
					CRH	L	P	T	CTH
Sixth trimester	1	PRG 299	Co-operative Training		4	Site Conditions Over 420 hours			

Total Number of trimesters Credit Units					CRH	L	P	T	CTH
					88	61	46	12	119
Total of training Hours (13X119=1547) + Cooperative training Hours (420)					1967				



COMPUTER COMMON COURSES

1430H – 2010G

Department	English Language Center		Major		Computing Technology	
Course Name	Specialized English-1		Course Code		ENG 135	
Prerequisites	ENG 106					
Trimester	1	2	3	4	5	6
Credit Hours		4				Cooperative
Contact Hours (hours per week)	L	4				
	W	0				
	T	2				
<i>L = Lecture Hours, W = Workshop/Laboratory Hours, T = Tutorial Hours</i>						
Course description:						
<p>This basic course aims at introducing students of computer & information technology to the technical English language of their field of specializations.</p>						
General Objective:						
<p>The general goal of this course is to enable the students to comprehend and speak basic simple written and spoken technical English in the field of computer science & information technology as well as preparing them for enrollment in more advanced courses of similar nature.</p>						
Specific Objectives					Required Performance Specifications	NOSS Related tasks
A. Procedural Objectives: Trainee should be able to:						
B. Behavioral and Cognitive Objectives: Trainee should be able to:						
1. Grasp and use a reasonable amount of basic technical terms in their field of study.						Basic knowledge
2. Comprehend simple to intermediate technical texts of computing & IT.						Basic knowledge
3. Employ related grammatical structures used in the language of their major.						Basic knowledge
4. Understand acronyms as they relate to computing and IT.						Basic knowledge
5. Prepare and orally present technical material covered in class.						Basic knowledge
6. Write sequences, facts, descriptions, emails, comparisons, and give instructions.						Basic knowledge
7. Understand spoken language presented in class.						Basic knowledge
Textbook:	Santiago, R. E. (2007) Infotech: <i>English for computer users</i> . Cambridge: Cambridge University Press.					
Additional Readings and Teaching Aids.	Course Book Audio CD.					
References:	Oxford Word Power Dictionary.					
Theoretical and Practical Topics:					NOSS Related tasks	
					Task	Task Description
○ Unit 1 Computer Applications (Page 2).						Basic knowledge
○ Unit 2 Computer essentials (Page 7).						Basic knowledge
○ Unit 3 Inside the system (Page 11).						Basic knowledge
○ Unit 4 Buying a computer (Page 16).						Basic knowledge

o Unit 5 Type, click and talk! (Page 22).		Basic knowledge
o Unit 6 Capture your favorite image (Page 27).		Basic knowledge
o Unit 7 Display screens and ergonomics (Page 32).		Basic knowledge
o Unit 8 Choosing a printer (Page 37).		Basic knowledge
o Unit 9 Devices for the disabled (Page 42).		Basic knowledge
o Unit 10 Magnetic storage (Page 48).		Basic knowledge
o Unit 11 Optical storage (Page 52).		Basic knowledge
o Unit 12 Flash memory (Page 57).		Basic knowledge
o Unit 13 The operating system (OS) (Page 63).		Basic knowledge
o Unit 14 Word processing (WP) (Page 68).		Basic knowledge
o Unit 15 Spreadsheets and databases (Page 73).		Basic knowledge
o Unit 15 Spreadsheets and databases (Page 73).		Basic knowledge

Detailed Contents

Hours	Contents	Instructional Objectives Students will learn and practice the following Language forms and functions:
Module 1 Computers today 1		
4	Unit 1 Computer Applications (Page 2): <ul style="list-style-type: none"> o The digital age. o The magic of computers. o Collocations. o Computers at work. 	<ul style="list-style-type: none"> o Match captions with pictures. o In pairs, discuss how computers are used in various situations. o Read the text and identify parts of speech. o Guess the meaning from context. o Match words with their correct meanings. o Match the verbs with nouns to practice collocations. o Complete sentences using collocations. o Listen and complete a table. o Read a text and fill the gaps with sentences. o Write a short presentation.
4	Unit 2 Computer essentials (Page 7): <ul style="list-style-type: none"> o Different types of computer . o Advertising slogans. o What is a computer?. 	<ul style="list-style-type: none"> o Discuss the elements of computer systems. o Label computer elements in a graph. o Match the slogans with hardware. o Scan slogans for similar words. o Read the text and explain a figure. o Listen and label pictures & check comprehension. o Use classifying expressions to describe a diagram. o Write an email to explain the benefits of computers.
6	Unit 3 Inside the system (Page 11): <ul style="list-style-type: none"> o Technical specifications. o What is inside a PC system?. o How memory is measured?. 	<ul style="list-style-type: none"> o Translate technical specifications into Arabic. o Distinguish between RAM and ROM. o Learn about how memory is measured o Use relative clauses. o Listen for specific information to fill a diagram. o Review computer terms in groups.
4	Unit 4 Buying a computer (Page 16): <ul style="list-style-type: none"> o In a computer shop. 	<ul style="list-style-type: none"> o Discuss the elements of computer systems. o Label computer elements in a graph.

	<ul style="list-style-type: none"> ○ Choosing the right computer. ○ Computer adverts. ○ Technical specifications. ○ Greetings and offering help. 	<ul style="list-style-type: none"> ○ Match the slogans with hardware. ○ Scan slogans for similar words. ○ Read the text and explain a figure. ○ Listen and label pictures & check comprehension. ○ Use classifying expressions to describe a diagram. ○ Write an email to explain the benefits of computers.
Module 2 Input/output devices 21		
4	Unit 5 Type, click and talk! (Page 22): <ul style="list-style-type: none"> ○ Describing input devices. ○ Functions and features of devices. ○ The keyboard. ○ Mouse actions. ○ Interacting with your computer. ○ Speech recognition systems. 	<ul style="list-style-type: none"> ○ Label input devices. ○ Listen for information. ○ Use the infinitive and gerunds to describe input devices functions and features. ○ Label pictures with functions. ○ Fill in a reading text with missing verbs. ○ Listen for comprehension.
4	Unit 6 Capture your favorite image (Page 27): <ul style="list-style-type: none"> ○ They eyes of your computer . ○ Scanners . ○ A digital camera. ○ Superlatives . ○ Suffixes. 	<ul style="list-style-type: none"> ○ Discuss the ways of capturing an image on a computer. ○ Read a text and answer questions. ○ Listen to a conversation and complete notes. ○ Distinguish between facts & opinion. ○ Complete sentences with the right superlative form. ○ Use suitable suffixes to form adjectives or nouns. ○ Describe a camera, webcam, or a video camera.
4	Unit 7 Display screens and ergonomics (Page 32): <ul style="list-style-type: none"> ○ How screen displays work. ○ Choosing the right display device. ○ Ergonomics. ○ Should & Shouldn't. 	<ul style="list-style-type: none"> ○ Talk about your computer screen. ○ Match definitions with technical words. ○ Read and answer questions about the computer screen display. ○ Listen and recommend display devices. ○ Discuss the health problems associated with computer use. ○ Practice giving instructions and advice (by using should or shouldn't). ○ Write an email using guidelines.
4	Unit 8 Choosing a printer (Page 37): <ul style="list-style-type: none"> ○ Printers. ○ Multifunction printers. ○ Comparatives. 	<ul style="list-style-type: none"> ○ Label the types of printer. ○ Read the text and discuss printer types. ○ Scan a text for words with similar meanings ○ Join ideas using suitable connectors. ○ Label connectors according to their function. ○ Complete sentences using the comparative forms of the adjectives. ○ Read adverts and answer questions. ○ Write an email to your friend comparing two printers.
4	Unit 9 Devices for the disabled (Page 42): <ul style="list-style-type: none"> ○ Assistive technologies. ○ Computers for disabled. ○ Noun Phrases. 	<ul style="list-style-type: none"> ○ Describe photos. ○ Search for information in a text. ○ Complete a crossword from a text. ○ Form noun phrases.

	<ul style="list-style-type: none"> ○ Assistive technologies for blind. 	<ul style="list-style-type: none"> ○ Select the type of a modifier before a head noun. ○ Listen to an interview and make notes. ○ Write an email summarizing the different technologies available in the market for disabled.
Module 3 Storage devices 47		
4	Unit 10 Magnetic storage (Page 48): <ul style="list-style-type: none"> ○ Types of magnetic drives. ○ Buying a portable hard drive. ○ Precautions. ○ Word building. 	<ul style="list-style-type: none"> ○ Scan a text for information. ○ Complete sentences with words. ○ Listen and answer questions. ○ Identify a sector and track in a figure. ○ Match words with definitions. ○ Match instructions with techno pictures. ○ Use the imperatives to give precaution and warnings. ○ Identify parts of a speech. ○ Write a replay to an email.
4	Unit 11 Optical storage (Page 52): <ul style="list-style-type: none"> ○ DVD & CDs. ○ Optical discs and drives. ○ Choosing the right storage device. ○ Connectors 	<ul style="list-style-type: none"> ○ Discuss the major DVD & CDs functions and features. ○ Listen to a conversation for information. ○ Scan a text for information Make notes from reading. ○ Match connectors with their functions. ○ Translate computer instructions into Arabic. ○ In pairs, choose and give reasons on selection of storage devices. ○ Give an opinion about a topic from a forum.
4	Unit 12 Flash memory (Page 57): <ul style="list-style-type: none"> ○ Flash-based gadgets. ○ Memory in a flash. ○ What are flash drives?. 	<ul style="list-style-type: none"> ○ Match flash memories descriptions with the pictures. ○ Read the text about flash memories and answer the questions. ○ Scan a text for words or phrases with similar meanings. ○ Practice word buildings. ○ Convert nouns into verbs and verb into nouns. ○ Put two words or more together to form new meaning. ○ Listen for comprehension. ○ Describe a flash based device. ○ Write a short reply to a text from a friend. ○ Complete a vocabulary puzzle.
Module 4 Basic software 62		
4	Unit 13 The operating system (OS) (Page 63): <ul style="list-style-type: none"> ○ The functions of operating systems. ○ GUI operating systems. ○ Mac & PC operating systems. ○ Windows Vista. 	<ul style="list-style-type: none"> ○ Discuss the functions of the operating systems. ○ Complete a text with technical words. ○ Read the text and decide which adjectives to use to describe the GUI. ○ Translate operating system terms and expressions into Arabic. ○ Label the interface features. ○ Compare MAC and PC operating systems. ○ Decide if these nouns are countable, uncountable or either.

4	<p>Unit 14 Word processing (WP) (Page 68):</p> <ul style="list-style-type: none"> ○ Word Processing features. ○ Word Sudoku. ○ The Cut & Paste techniques . 	<ul style="list-style-type: none"> ○ Write a summary following steps. ○ Discuss the major functions and features of MS-Word Processor. ○ Translate features and functions of WP to own language. ○ Read instructions and complete the puzzle. ○ Listen and identify steps in a task. ○ Give instructions on how to cut and paste text. ○ Correct mistakes in a dialogue. ○ Practice giving instruction using the imperative. ○ Write how to copy and paste an image into Word. ○ Write instructions on how to use find and replace a text. ○ Scan descriptions to match with dialogue boxes.
4	<p>Unit 15 Spreadsheets and databases (Page 73):</p> <ul style="list-style-type: none"> ○ Spreadsheet programs. ○ Business letters. ○ Databases. ○ Software at home and at work. 	<ul style="list-style-type: none"> ○ Discuss what spreadsheets are and what they are used for? ○ Label words with diagram. ○ Listen for comprehension. ○ Discuss the advantages and disadvantages of showing data as a graph. ○ Complete an invoice and a letter. ○ Write fax to complain about having errors installing a printer. ○ Make a list of applications. ○ Read a text about databases. ○ Form the plural of regular and irregular nouns. ○ Practice the plural endings.

Department	English Language Center			Major	Computing Technology	
Course Name	Specialized English -2			Course Code	ENG 234	
Prerequisites	ENG 135					
Trimester	1	2	3	4	5	6
Credit Hours			4			Cooperative
Contact Hours (hours per week)	L		4			
	W		0			
	T		2			
<i>L = Lecture Hours, W = Workshop/Laboratory Hours, T = Tutorial Hours</i>						
Course description:						
<p>Building on the content of Technical English I, this course is intended to provide students of Computer Science and IT with more advanced and specialized technical English needed for studying their major and functioning in their future careers.</p>						
General Objective:						
<p>The general goal of this course is to develop students' proficiency in technical English and in the four language skills in general and in reading and writing in particular. In addition, students will learn specialist terminology related to computer science and IT.</p>						
Specific Objectives				Required Performance Specifications	NOSS Related tasks	
A. Procedural Objectives: Trainee should be able to:						
B. Behavioral and Cognitive Objectives: Trainee should be able to:						
1. Understand and use advanced computing terminology.					Basic knowledge	
2. Comprehend technical texts that cover a wide range of topics in their field.					Basic knowledge	
3. Understand and use grammatical structures related to technical language.					Basic knowledge	
4. Understand abbreviations (acronyms) as they relate to computing and information technology.					Basic knowledge	
5. Prepare and orally present technical materials covered in the classroom.					Basic knowledge	
6. Write short essays using sequence, fact, description, comparison.					Basic knowledge	
7. Understand spoken language presented in the classroom and workplace.					Basic knowledge	
Textbook:	Oxford English for Information Technology – E. Glendinning & J. McEwan.					
Additional Readings and Teaching Aids.	Reading to be selected and distributed by the instructor.					
References:	Oxford Word Power Dictionary.					

Theoretical and Practical Topics:	NOSS Related tasks	
	Task	Task Description
○ Unit 1: Computer Users.		Basic knowledge
○ Unit 2: Computer Architecture.		Basic knowledge
○ Unit 3: Computer Applications.		Basic knowledge
○ Unit 5: Former Student.		Basic knowledge
○ Unit 6: Operating Systems.		Basic knowledge
○ Unit 7: Graphical User Interfaces.		Basic knowledge
○ Unit 10: Computer Support.		Basic knowledge
○ Unit 11: Networks.		Basic knowledge
○ Unit 18: Data Security.		Basic knowledge
○ Unit 22: People in Computing.		Basic knowledge

Detailed Contents		
Hours	Contents	Instructional Objectives In each unit students will learn and practice the following language functions and skills:
4	Unit 1: Computer Users A: ○ Starter ○ Speaking ○ Writing ○ Language Skills B: ○ Specialist reading	<ul style="list-style-type: none"> ○ Listen for specific Information. ○ Practice speaking and writing about their own use of computer. ○ Understand the difference between the Past simple and the Present perfect. ○ Practice reading for specific information.
4	Unit 2: Computer Architecture A: ○ Starter ○ Reading ○ Speaking ○ Writing ○ Language Skills B: ○ Specialist reading	<ul style="list-style-type: none"> ○ Exchange personal information. ○ Participate in discussions related to the uses of computer. ○ Practice reading for specific information. ○ Practice reading advertisement. ○ Understand and use common computing terminology. ○ Use sequence words. ○ Understand prepositions of place ○ Write a brief description.
6	Unit 3: Computer Applications A: ○ Starter ○ Reading ○ Language Skills ○ Speaking ○ Writing B: ○ Specialist reading	<ul style="list-style-type: none"> ○ Discuss major computer applications. ○ Practice reading diagrams and charts. ○ Practice skimming and scanning. ○ Describe a process verbally. ○ Use the Present passive for description of processes. ○ Describe a process in writing.
4	Unit 5: Former Student A: ○ Starter ○ Speaking ○ Language Skills ○ Writing	<ul style="list-style-type: none"> ○ Discuss IT courses. ○ Practice Listening for specific information. ○ Understand questions in the past simple. ○ Practice using phrasal verbs with up ○ Describe an IT course in writing.

6	Unit 6: Operating Systems A: <ul style="list-style-type: none"> ○ Starter ○ Reading ○ Speaking ○ Language Skills ○ Writing B: <ul style="list-style-type: none"> ○ Specialist reading 	<ul style="list-style-type: none"> ○ Participate in discussions related to operating systems. ○ Practice skimming and scanning. ○ Describe main operating systems verbally. ○ Understand the use of the –ing form in subject position and after preposition. ○ Practice describing technical concepts in writing.
4	Unit 7: Graphical User Interfaces A: <ul style="list-style-type: none"> ○ Starter ○ Reading ○ Speaking ○ Writing B: <ul style="list-style-type: none"> ○ Specialist reading 	<ul style="list-style-type: none"> ○ Discuss diagrams related to computer interfaces. ○ Practice timed reading for specific details. ○ Learn and practice common verbs used in computer applications. ○ Understand how to use verbs like: allow, enable, help, let and permit. ○ Practice writing instructions.
4	Unit 10: Computer Support A: <ul style="list-style-type: none"> ○ Starter ○ Language Skills ○ Speaking 	<ul style="list-style-type: none"> ○ Understand a spoken explanation. ○ Understand If-sentences. ○ Understand and follow sequential procedures verbally.
6	Unit 11: Networks A: <ul style="list-style-type: none"> ○ Starter ○ Reading ○ Language Skills ○ Speaking ○ Writing B: <ul style="list-style-type: none"> ○ Specialist reading 	<ul style="list-style-type: none"> ○ Understand and use an adequate amount of advanced computing terminology. ○ Read a diagram and text together. ○ Understand and use relative clauses with participle. ○ Explain sequential procedures verbally. ○ Practice writing advantages and disadvantages.
6	Unit 18: Data Security A: <ul style="list-style-type: none"> ○ Starter ○ Reading ○ Language Skills ○ Speaking ○ Writing B: <ul style="list-style-type: none"> ○ Specialist reading 	<ul style="list-style-type: none"> ○ Participate in discussions related to data security. ○ Read and comprehending technical texts (scanning). ○ Learn and practice cause and effect structure. ○ Write a detailed description of a technical problem and its solution.
4	Unit 22: People in Computing A: <ul style="list-style-type: none"> ○ Starter ○ Reading ○ Language Skills ○ Speaking ○ Writing B: <ul style="list-style-type: none"> ○ Specialist reading 	<ul style="list-style-type: none"> ○ Discuss professional life of people working in IT. ○ Practice note-taking. ○ Understand and practicing how to use structures used for requirement: need to, have, must, be + essential and critical ○ Transfer information from a text to a table. ○ Practice how to write a c.v. for a job application.
2	Revision	
2	Quizzes and exams	

Department	English Language Center		Major		Computing Technology	
Course Name	Communication Skills-1		Course Code		ENG 137	
Prerequisites	ENG 106					
Trimester	1	2	3	4	5	6
Credit Hours				4		Cooperative
Contact Hours (hours per week)	L			4		
	W			0		
	T			2		
<i>L = Lecture Hours, W = Workshop/Laboratory Hours, T = Tutorial Hours</i>						
Course description:						
<p>Building on the content of previous English courses (Eng 106, ESP I & II), this course is intended to provide computing and IT students with opportunities to develop their communication skills both in daily life and at the workplace. The course focuses on workplace skills, communicative ability, and life skills.</p>						
General Objective:						
<p>The general goal of this course is to develop students' language and communication skills both at the workplace and in their daily interaction with speakers of English. Another important goal of the course is to determine students' future communicative needs (both oral and written) and tailor instruction towards such needs through authentic activities that simulate real life communication.</p>						
Specific Objectives				Required Performance Specifications	NOSS Related tasks	
A. Procedural Objectives: Trainee should be able to:						
B. Behavioral and Cognitive Objectives: Trainee should be able to:						
1. Understand spoken and written general and employment-related language.					Basic knowledge	
2. Communicate in their own words with instructors and co-workers.					Basic knowledge	
3. Understand the cultural and civic expectations of their new environment and workplace.					Basic knowledge	
4. Cope with authentic documents they will encounter at work (most if not all skills in the syllabus address workplace).					Basic knowledge	
Textbook:	Workplace Plus: Living and Working in English. (Student Book) By Joan Saslow. Longman. http://www.longman.com/workplaceplus Workplace Plus: Living and Working in English. (Work Book) By Joan Saslow					
Additional Readings and Teaching Aids.	Additional relevant communicative activities to be selected by the instructor.					
References:	English/English/Arabic Dictionary					
Recommendations for Instructors:						
<ul style="list-style-type: none"> Teachers are advised to use additional supplementary materials (as needed) based on the communication needs of their students. It is also recommended to make use of the students' knowledge of the subject matter in their major in order to boost their self confidence and use their technical knowledge to develop communication in class. The use of PowerPoint and other teaching aides is highly recommended. 						
Authentic Communicative activities in this book are very important tools to develop the students' communicative competence. Based on the student's field of training, using more relevant authentic communicative activities will prove useful.						

Theoretical and Practical Topics:	NOSS Related tasks	
	Task	Task Description
○ Unit 1: Your Life and Work.		Basic knowledge
○ Unit 2: Your Environment.		Basic knowledge
○ Unit 3: Your Equipment and Machines.		Basic knowledge
○ Unit 4: Your Customers.		Basic knowledge
○ Unit 5: Your Time.		Basic knowledge
○ Unit 6: Your Supplies and Resources.		Basic knowledge
○ Unit 7: Your Relationships.		Basic knowledge
○ Unit 8: Your Health and Safety.		Basic knowledge
○ Unit 9: Your Money.		Basic knowledge
○ Unit 10: Your Career.		Basic knowledge

Detailed Contents		
Hours	Contents	Instructional Objectives In each unit students will learn and practice the following language functions and skills:
4	Unit 1: Your Life and Work: Skills: <ul style="list-style-type: none"> ○ Preparing for job interview. ○ Requesting a letter of recommendation. ○ Filling out an application. ○ Describing skills and abilities. Grammar: <ul style="list-style-type: none"> ○ Present perfect continuous. ○ Gerunds for describing likes, dislikes and skills. 	<ul style="list-style-type: none"> ○ Engage in short conversations. ○ Get to know someone. ○ Ask for references.
4	Unit 2: Your Environment: Skills: <ul style="list-style-type: none"> ○ Requesting and giving directions in a building. ○ Offering and giving assistance. ○ Giving directions to a place. Grammar: <ul style="list-style-type: none"> ○ Imperatives for directions, warnings, requests and suggestions. ○ Indirect commands. 	<ul style="list-style-type: none"> ○ Give directions for transportation. ○ Use maps and building directions.
6	Unit 3: Your Equipment and Machines: Skills: <ul style="list-style-type: none"> ○ Reporting equipment breakdown. ○ Troubleshooting a problem. ○ Discussing product warranty. ○ Using Product service telephone lines. Grammar: <ul style="list-style-type: none"> ○ The passive voice. ○ Review: Irregular past participles. 	<ul style="list-style-type: none"> ○ Discuss a product warranty. ○ Complete a proof-of-purchase card. ○ Use telephone to call product service lines.
4	Unit 4: Your Customers: Skills: <ul style="list-style-type: none"> ○ Offering and asking for services. ○ Explaining conditions. ○ Writing consumer complaint letters. 	<ul style="list-style-type: none"> ○ Request a certain brand. ○ Ask for service in a gas station. ○ Explain conditions. ○ Write consumer complaint letters.

	<p>Grammar:</p> <ul style="list-style-type: none"> ○ Used to. ○ Comparisons with as and not as. ○ Review: Comparative forms. 	
6	<p>Unit 5: Your Time:</p> <p>Skills:</p> <ul style="list-style-type: none"> ○ Understanding consequences. ○ Discussing payment. ○ Understanding importance of punctuality. ○ Rescheduling events. <p>Grammar:</p> <ul style="list-style-type: none"> ○ Verbs followed by infinitives. ○ Verbs followed by objects and infinitives. 	<ul style="list-style-type: none"> ○ Discuss payment. ○ Calculate pay. ○ Understand importance of punctuality. ○ Reschedule events.
4	<p>Unit 6: Your Supplies and Resources:</p> <p>Skills:</p> <ul style="list-style-type: none"> ○ Comparing and contrasting values. ○ Drawing conclusions. ○ Classifying products. <p>Grammar:</p> <ul style="list-style-type: none"> ○ Conclusions with must. ○ Exclamations with what. 	<ul style="list-style-type: none"> ○ Compare prices. ○ Use unit pricing. ○ Use food coupons. ○ Determine the best buy.
4	<p>Unit 7: Your Relationships:</p> <p>Skills:</p> <ul style="list-style-type: none"> ○ Asking about and understanding rules and laws. ○ Congratulating someone on good news. ○ Offering help. ○ Comparing and contrasting customs and laws. <p>Grammar:</p> <ul style="list-style-type: none"> ○ Impersonal it with adjectives and infinitives. 	<ul style="list-style-type: none"> ○ Offer help. ○ Understand rules, laws and violations.
6	<p>Unit 8: Your Health and Safety:</p> <p>Skills:</p> <ul style="list-style-type: none"> ○ Reading directions and warnings. ○ Following employer policies. ○ Applying warnings on medications. <p>Grammar:</p> <ul style="list-style-type: none"> ○ Review: Possessive adjectives. ○ Possessive pronouns. 	<p>Return an item to the supermarket.</p> <ul style="list-style-type: none"> ○ Get a prescription. ○ Choose and use over-the-counter medications.
4	<p>Unit 9: Your Money:</p> <p>Skills:</p> <ul style="list-style-type: none"> ○ Reading bills. ○ Writing checks. ○ Evaluating financial services of banks. ○ Offering information to customers. <p>Grammar:</p> <ul style="list-style-type: none"> ○ Conditional sentences. ○ Keep + gerund. 	<ul style="list-style-type: none"> ○ Find appropriate person for information. ○ Use the yellow pages. ○ Read the fine print. ○ Understand credit and debit cards.
4	<p>Unit 10: Your Career:</p> <p>Skills:</p> <ul style="list-style-type: none"> ○ Calling for an interview. ○ Offering job history and references. ○ Discussing career goals. ○ Accepting feedback in performance reviews. 	<ul style="list-style-type: none"> ○ Phone for an interview. ○ Praise others. ○ Accept complaints.



	Grammar: <ul style="list-style-type: none">○ Review: The simple present tense and the present continuous.○ Review: The present perfect and the present perfect continuous.	
4	Recommendations for Instructors: <ul style="list-style-type: none">○ Teachers are advised to use additional supplementary materials (as needed) based on the communication needs of their students.○ It is also recommended to make use of the students' knowledge of the subject matter in their major in order to boost their self confidence and use their technical.○ Knowledge to develop communication in class.○ The use of PowerPoint and other teaching. Aides is highly recommended.	
Authentic Communicative activities in this book are very important tools to develop the students' communicative competence. Based on the student's field of training, using more relevant authentic communicative activities will prove useful.		

Department	English Language Center			Major	Computing Technology	
Course Name	Communication Skills -2			Course Code	ENG 237	
Prerequisites	ENG 137					
Trimester	1	2	3	4	5	6
Credit Hours					4	Cooperative
Contact Hours (hours per week)	L				4	
	W				0	
	T				2	
<i>L = Lecture Hours, W = Workshop/Laboratory Hours, T = Tutorial Hours</i>						
Course description:						
<p>Building on the language skills developed in previous English courses (Eng 101, ESP I & II), this course is intended to provide Computing and IT students with opportunities to develop their communication skills both in daily life and at the workplace. The course focuses on workplace skills, communicative ability, and life skills.</p>						
General Objective:						
<p>The general goal of this course is to develop students' language and communication skills both at the workplace and in their daily interaction with speakers of English. Another important goal of the course is to determine students' future communicative needs (both oral and written) and tailor instruction towards such needs through authentic activities that simulate real life communication.</p>						
Specific Objectives				Required Performance Specifications	NOSS Related tasks	
A. Procedural Objectives: Trainee should be able to:						
B. Behavioral and Cognitive Objectives: Trainee should be able to:						
1. Understand spoken and written general and employment-related language.					Basic knowledge	
2. Communicate in their own words with instructors and co-workers.					Basic knowledge	
3. Understand the cultural and civic expectations of their new environment and workplace.					Basic knowledge	
4. Cope with authentic documents they will encounter at work.					Basic knowledge	
Textbook:	Workplace Plus: Living and Working in English 3. (Student Book) By Joan Saslow. Longman. http://www.longman.com/workplaceplus Workplace Plus: Living and Working in English 3. (Work Book) By Joan Saslow.					
Additional Readings and Teaching Aids.	Additional relevant communicative activities to be selected by the instructor.					
References:	English/English/Arabic Dictionary					
Recommendations for Instructors:						
<ul style="list-style-type: none"> Teachers are advised to use additional supplementary materials (as needed) based on the communication needs of their students. It is also recommended to make use of the students' knowledge of the subject matter in their major in order to boost their self confidence and use their technical knowledge to develop communication in class. The use of PowerPoint and other teaching aides is highly recommended. 						
Authentic Communicative activities in this book are very important tools to develop the students' communicative competence. Based on the student's field of training, using more relevant authentic communicative activities will prove useful.						

Theoretical and Practical Topics:	NOSS Related tasks	
	Task	Task Description
○ Unit 1: Your Life and Work.		Basic knowledge
○ Unit 2: Your Environment.		Basic knowledge
○ Unit 3: Your Equipment and Machines.		Basic knowledge
○ Unit 4: Your Customers.		Basic knowledge
○ Unit 5: Your Time.		Basic knowledge
○ Unit 6: Your Supplies and Resources.		Basic knowledge
○ Unit 7: Your Relationships.		Basic knowledge
○ Unit 8: Your Health and Safety.		Basic knowledge
○ Unit 9: Your Money.		Basic knowledge
○ Unit 10: Your Career.		Basic knowledge

Detailed Contents		
Hours	Contents	Instructional Objectives In each unit students will learn and practice the following language functions and skills:
4	<p>Unit 1: Your Life and Work:</p> <p>Skills:</p> <ul style="list-style-type: none"> ○ Prepare for job interview. ○ Request a letter of recommendation. ○ Fill out an application. ○ Describe skills and abilities. <p>Vocabulary:</p> <ul style="list-style-type: none"> ○ Weather adjectives. ○ Expressions of surprise. ○ Occupations and allied skills. 	<ul style="list-style-type: none"> ○ Engage in short conversations. ○ Get to know someone. ○ Ask for references.
4	<p>Unit 2: Your Environment:</p> <p>Skills:</p> <ul style="list-style-type: none"> ○ Requesting and giving directions in a building. ○ Offering and giving assistance. ○ Giving directions to a place. <p>Vocabulary:</p> <ul style="list-style-type: none"> ○ Directions in building interiors. ○ Responses to social invitation. 	<ul style="list-style-type: none"> ○ Give directions for transportation. ○ Use maps and building directions.
6	<p>Unit 3: Your Equipment and Machines:</p> <p>Skills:</p> <ul style="list-style-type: none"> ○ Report equipment breakdown. ○ Troubleshoot a problem. ○ Discuss product warranty. ○ Use Telephone Product service lines. <p>Vocabulary:</p> <ul style="list-style-type: none"> ○ Equipment, machine, and appliances. ○ Machine maintenance. ○ Computer malfunction. 	<ul style="list-style-type: none"> ○ Discuss a product warranty. ○ Complete a proof-of-purchase card. ○ Use telephone to call product service lines.
4	<p>Unit 4: Your Customers:</p> <p>Skills:</p> <ul style="list-style-type: none"> ○ Explain a discounted item. ○ Discuss a safety recall. 	<ul style="list-style-type: none"> ○ Request a certain brand. ○ Ask for service in a gas station. ○ Explain conditions. ○ Write consumer complaint letters.

	<ul style="list-style-type: none"> ○ Improve quality-control problem. ○ Offer services. ○ Explain conditions. ○ Write consumer complaint letters. <p>Vocabulary:</p> <ul style="list-style-type: none"> ○ Phrases to describe good and bad quality. ○ Locations in a store. ○ Product for babies and children. 	
6	<p>Unit 5: Your Time:</p> <p>Skills:</p> <ul style="list-style-type: none"> ○ Understand consequences of lateness. ○ Clarify job expectations. ○ Discuss payment, hours, and overtime pay. ○ Understand importance of punctuality. ○ Reschedule events. <p>Vocabulary:</p> <ul style="list-style-type: none"> ○ Payment options . ○ Wages and hours. ○ Time expressions. 	<ul style="list-style-type: none"> ○ Discuss payment. ○ Calculate pay. ○ Understand importance of punctuality. ○ Reschedule events.
4	<p>Unit 6: Your Supplies and Resources:</p> <p>Skills:</p> <ul style="list-style-type: none"> ○ Order supplies by email or online. ○ Make economical purchasing decisions. ○ Determine the "best buy". ○ Draw conclusions. ○ Classify products. <p>Vocabulary:</p> <ul style="list-style-type: none"> ○ Containers. ○ Units of measure. ○ Abbreviations of quantity. 	<ul style="list-style-type: none"> ○ Compare prices. ○ Use unit pricing. ○ Use food coupons. ○ Determine the best buy.
4	<p>Unit 7: Your Relationships:</p> <p>Skills:</p> <ul style="list-style-type: none"> ○ Ask about and understand rules and laws. ○ Congratulate someone on good news. ○ Offer help. ○ Compare and contrast customs and laws. <p>Vocabulary:</p> <ul style="list-style-type: none"> ○ Expressions of uncertainty. ○ Conversation starters. ○ Adjectives of emotion. 	<ul style="list-style-type: none"> ○ Offer help. ○ Understand rules, laws and violations.
6	<p>Unit 8: Your Health and Safety:</p> <p>Skills:</p> <ul style="list-style-type: none"> ○ Read directions and warnings. ○ Follow employer policies. ○ Apply warnings on medications. ○ Return an item to the supermarket. <p>Vocabulary:</p> <ul style="list-style-type: none"> ○ Complaints about food. ○ Medicine label terms. 	<ul style="list-style-type: none"> ○ Return an item to the supermarket. ○ Get a prescription. ○ Choose and use over-the-counter medications.
4	<p>Unit 9: Your Money:</p>	<ul style="list-style-type: none"> ○ Find appropriate person for

	<p>Skills:</p> <ul style="list-style-type: none"> ○ Read bills. ○ Write checks. ○ Evaluate financial services of banks. ○ Offer information to customers. <p>Vocabulary:</p> <ul style="list-style-type: none"> ○ Bank services and accounts. ○ Good and bad financial news. ○ Expressions of satisfaction and dissatisfaction. 	<p>information.</p> <ul style="list-style-type: none"> ○ Use the yellow pages. ○ Read the fine print. ○ Understand credit and debit cards.
4	<p>Unit 10: Your Career:</p> <p>Skills:</p> <ul style="list-style-type: none"> ○ Call for an interview. ○ Offer job history and references. ○ Discuss career goals. ○ Accept feedback in performance reviews. ○ Praise others. ○ Accept compliments. <p>Vocabulary:</p> <ul style="list-style-type: none"> ○ Responses to compliments. ○ On the job educational opportunities. 	<ul style="list-style-type: none"> ○ Phone for an interview. ○ Praise others. ○ Accept complaints.
4	<p>Recommendations for Instructors:</p> <ul style="list-style-type: none"> ○ Teachers are advised to use additional supplementary materials (as needed) based on the communication needs of their students. ○ It is also recommended to make use of the students' knowledge of the subject matter in their major in order to boost their self confidence and use their technical. ○ Knowledge to develop communication in class. ○ The use of PowerPoint and other teaching. Aides is highly recommended. 	
<p>Authentic Communicative activities in this book are very important tools to develop the students' communicative competence. Based on the student's field of training, using more relevant authentic communicative activities will prove useful.</p>		

Department	Computer and Info. Technology			Major	Computing technology		
Course Name	Specialized Mathematics			Course Code	MAT 115		
Prerequisites							
Trimester	1	2	3	4	5	6	Cooperative
Credit Hours		3					
Contact Hours (hours per week)	L	3					
	W	0					
	T	1					
<i>L = Lecture Hours, W = Workshop/Laboratory Hours, T = Tutorial Hours</i>							
Course description:							
<p>This course introduces the required topics needed by the trainee in this major. Trainees are going to practice Algebraic expressions, multi-borders, Linear equations, Matrixes & limit, Logarithmic & basic circuits, Concept of function & its curves , Algebra of compound Number. Also, this course is required for all majors in the Computer Department.</p>							
General Objective:							
<p>This course aims to acquire the trainee the basic skills in Mathematical calculations related to computer technology.</p>							
Specific Objectives		Required Performance Specifications			NOSS Related tasks		
A. Procedural Objectives: Trainee should be able to:							
1. To solve Algebraic expressions and Quadratic Equation.		To solve the question as defined correctly.			Computer's user technician supporter, Knowledge 6, Internet technology assistant programmer and developer, Knowledge8, Computer systems administrator, Knowledge5, Multi media expert, Knowledge8.		
2. To solve Linear equations.		To solve the question as defined correctly.					
3. To solve exponential functions.		To solve the question as defined correctly.					
4. To solve Logarithms.		To solve the question as defined correctly.					
5. To solve Trigonometric functions.		To solve the question as defined correctly.					
6. To draw curves of Trigonometric functions .		To solve the question as defined correctly.					
7. Rounding off compound No.		To solve the question as defined correctly.					
B. Behavioral and Cognitive Objectives: Trainee should be able to:							
1. Define Algebraic expressions.		Mention the types of Algebraic expressions			Computer's user technician supporter, Knowledge 8, Knowledge8, Computer systems administrator, Knowledge5, Multi media expert, Knowledge8.		
2. Define the type the linear equation.		Mentioning the types of the linear equations					
3. Mention the methods of using Matrixes & limit to solve linear equations.		To define the correct method of the answer.					
4. Mention the types of exponential functions.		To mention two types of functions.					
5. To mention the methods of rounding off compound No.		To define the correct Algebraic method to answer a question.					
Safety instructions:							

Theoretical and Practical Topics:	NOSS Related tasks		
	Professional Standard	Task	Task Description
○ Algebraic expressions and Quadratic Equation.	Networks Technician	Knowledge8	Mathematical & Calculation Knowledge
	Computer's user technician supporter	Knowledge6	Ability to make technical analysis.
	Internet technology developer and programmer assistant.	Knowledge8	Mathematical & Calculation Knowledge
	systems administrator	Knowledge5	To get know logical analysis.
	Multimedia expert	Knowledge8	To get know measurement units.
○ Linear equations (3 Xs).	Networks Technician	Knowledge8	Mathematical & Calculation Knowledge
	Computer's user technician supporter	Knowledge6	Ability to make technical analysis.
	Internet technology developer and programmer assistant.	Knowledge8	Mathematical & Calculation Knowledge
	systems administrator	Knowledge5	To get know logical analysis.
	Multimedia expert	Knowledge8	To get know measurement units.
○ Matrix and limits.	Networks Technician	Knowledge8	Mathematical & Calculation Knowledge
	Computer's user technician supporter	Knowledge6	Ability to make technical analysis.
	Internet technology developer and programmer assistant.	Knowledge8	Mathematical & Calculation Knowledge
	systems administrator	Knowledge5	To get know logical analysis.
	Multimedia expert	Knowledge8	To get know measurement units.
○ Logarithms and functions.	Networks Technician	Knowledge8	Mathematical & Calculation Knowledge
	Computer's user technician supporter	Knowledge6	Ability to make technical analysis.
	Internet technology developer and programmer assistant.	Knowledge8	Mathematical & Calculation Knowledge
	systems administrator	Knowledge5	To get know logical analysis.
	Multimedia expert	Knowledge8	To get know measurement units.
○ Principles of functions and curves (Trigonometric functions).	Networks Technician	Knowledge8	Mathematical & Calculation Knowledge
	Computer's user technician supporter	Knowledge6	Ability to make technical analysis.
	Internet technology developer and programmer assistant.	Knowledge8	Mathematical & Calculation Knowledge
	systems administrator	Knowledge5	To get know logical analysis.
	Multimedia expert	Knowledge8	To get know measurement units.
○ Rounding off compound numbers.	Networks Technician	Knowledge8	Mathematical & Calculation Knowledge
	Computer's user technician supporter	Knowledge6	Ability to make technical analysis.
	Internet technology developer and programmer assistant.	Knowledge8	Mathematical & Calculation Knowledge
	systems administrator	Knowledge5	To get know logical analysis.
	Multimedia expert	Knowledge8	To get know measurement units.

Detailed Contents		
Hours	Contents	Evaluation Tools
6	Algebraic expressions & multi borders <ul style="list-style-type: none"> ○ Calculation Operations (multiplications- division – subtraction –add) . ○ Arrange calculation Operations on algebraic expressions. ○ Algebraic fractions. ○ Numerical values of algebraic expressions. ○ Analysis of Quadratic Equation. 	Oral questions Written questions Self- test
6	Linear equations <ul style="list-style-type: none"> ○ Types & concept of linear equations . ○ Methods to solve linear equations. ○ Solving linear equations with one passive. 	Oral questions Written questions Self- test
7	Matrixes & limit <ul style="list-style-type: none"> ○ Matrix concepts &types. ○ Calculation process on matrix. ○ Calculation of extremists (2x2) &3x3) . ○ Solve linear equations using matrixes . 	Oral questions Written questions Self- test
7	Logarithmic & exponential circuits <ul style="list-style-type: none"> ○ Negative exponential & fractions . ○ Calculation Operations on exponential . ○ Define logarithms . ○ Rules of logarithms . ○ Number e & natural logarithm . ○ Exponential logarithm equations . 	Oral questions Written questions Self- test
7	Concept of function & its curve <ul style="list-style-type: none"> ○ Define function . ○ Field . ○ Range . ○ Function curve . ○ Some common functions (tri-functions) 	Oral questions Written questions Self- test
6	Algebra of compound NO. <ul style="list-style-type: none"> ○ Define compound numbers as couple . ○ Figure (a+ib) on compound axis . ○ Algebraic Operations on compound numbers ○ Polar figure . ○ Complex roots (DeMorgan's Laws) . 	Oral questions Written questions Self- test

References	1-mathematics for technicians , a .greer & g . taylor , stanely thornes 1989 . 2- basic mathematics, h. kruglack & moore, schaum outlines , mc grow-hill . 3- college of algebra & trigonometry , p. Schmidt, schaum outline series , mc grow- hill inc. 1987 . 4- college of algebra, ray barent , mc grow- hill inc ., 1987 .
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Department	Computer and Info. Technology			Major	Computing Technology		
Course Name	Computer components & Assembly			Course Code	CMT 127		
Prerequisites							
Trimester	1	2	3	4	5	6	Cooperative
Credit Hours		4					
Contact Hours (hours per week)	L		2				
	W		4				
	T		0				
<i>L = Lecture Hours, W = Workshop/Laboratory Hours, T = Tutorial Hours</i>							
Course description:							
<p>This course introduces the basic principle for assembling and building the computers components thru thrills on how to deal with the different parts of the computer and how to assemble them together for building a computer up. After that, there are thrills on how to install a suitable operating system. Moreover, there is training on how to do the basic maintenance for the set and how to fix damages.</p> <p>This course represents Hardware part of (A+) and IT Essential 1 Certificate.</p>							
General Objective:							
This course aims to acquire the trainee the basic skills in building up and assembling computer parts.							
Specific Objectives	Required Performance Specifications	NOSS Related tasks					
		From The Criterion				Task No.	
A. Procedural Objectives: Trainee should be able to:							
1. Install the Motherboard.	Installing the motherboard and choosing the suitable case	Computer's user technician assistant				G2 , G3	
		Networks technician				G2 , G4	
		Systems administrator				F1 , F5	
		Programmer assistant & Internet applications developer				G2 , G4	
2. Install Hard disks.	Connecting the hard disk with the motherboard and choosing the right cable.	Computer's user technician assistant				G2 , G3	
		Networks technician				G2 , G4	
		Systems administrator				F1 , F5	
		Programmer assistant & Internet applications developer				G2 , G4	
3. Install Compact Disks	Making a compact disk.	Computer's user technician assistant				G2 , G3	
		Networks technician				G2 , G4	
		Systems administrator				F1 , F5	
		Programmer assistant & Internet applications developer				G2 , G4	
4. Install the Processor.	Installing the processor on the main board.	Computer's user technician assistant				G2 , G3	
		Networks technician				G2 , G4	
		Systems administrator				F1 , F5	
		Programmer assistant & Internet applications developer				G2 , G4	
5. Install the sound card.	Installing the sound card on the main board.	Computer's user technician assistant				G2 , G3	
		Networks technician				G2 , G4	
		Systems administrator				F1 , F5	

		Programmer assistant & Internet applications developer	G2 , G4
6. Install the Memory.	Installing the memory in the right place.	Computer's user technician assistant	G2 , G3
		Networks technician	G2 , G4
		Systems administrator	F1 , F5
		Programmer assistant & Internet applications developer	G2 , G4
7. Install or change and format the network card.	Installing the network card.	Computer's user technician assistant	C4, D4, D5, F2
		Networks technician	B4, C2, G5
		Systems administrator	A1, A2, A3, E2
		Programmer assistant & Internet applications developer	F4
8. Try out the set and maintain it.	Starting the computer after being built and assembled	Computer's user technician assistant	F3, Knowledge1, F3, C7
		Networks technician	Knowledge1, F2
		Systems administrator	Knowledge2
		Programmer assistant & Internet applications developer	Knowledge3

B. Behavioral and Cognitive Objectives: Trainee should be able to:

1. Recognize the different parts of the computer.	Mentioning the main parts of computer.	Computer's user technician assistant	G2, G3, D4
		Networks technician	G2, G4, A6
		Systems administrator	A1, F1, F5
		Programmer assistant & Internet applications developer	G2, G4, F4
2. Recognize the different features of the mother board.	Mentioning the main difference between mother boards and the features of each.	Computer's user technician assistant	G2, G3, D4
		Networks technician	G2, G4, A6
		Systems administrator	A1, F1, F5
		Programmer assistant & Internet applications developer	G2, G4, F4

Safety conditions:

- Keep devices safe.
- Follow the safety instructions when using tools.
- Follow the safety instructions of location.

Theoretical and Practical Topics:	NOSS Related tasks		
	Because this course is shared between all courses of Computer Technology so the following tasks from the professional standard for a career were adapted.		
• Safety Procedures and Tools:	Computer's users Technician supporter	C4	Makes backup for the data on the set
		D4	Ensures the conformity with the standard
		F2	Prints the maintenance instruction from the manufacturer
	Network computer's technician	G6	Makes training projects using the training net
		F5	Ensures the application of a security place
	Systems administrator	Behaviors 7	Keeps the sets and tools safe
		E3	Marks policies of backing up
	Programmer assistant and internet applications developer	Behaviors 13	Keeps the sets and tools safe
		D6	Prepares backup for programs
	• Introduction to	Computer's users Technician	D4

personnel computer:	supporter	standard		
	Network computer's technician	G2	Takes part in the training course	
		G3	Follow up reading in specialized books, journals and newsletters	
		A6	Participates in defining computer characteristics	
		G2	Takes part in the training course	
	Systems administrator	G4	Follows up specialized books and magazines.	
		A1	Defines device specifications	
		F1	Takes part in the training course	
	Programmer assistant and internet applications developer	F5	Follow up reading in specialized books, journals and newsletters	
		F4	Participates in defining computer devices characteristics	
		G2	Takes part in the training course	
		G4	Follows up specialized books and magazines	
	<ul style="list-style-type: none"> Assembling computer step by step: 	Computer's users Technician supporter	B3	Makes check on a device
D3			Asks for device parts	
D4			Ensures the conformity with the standard	
F2			Prints the maintenance instruction from the manufacturer	
F3			Update protection programs	
Network computer's technician		A6	Participates in defining computer devices characteristics.	
		B4	Studies the available characteristics in the market	
		C1	Asks for a network devices and tools	
		E3	Changes the VGA	
		E4	Repairs network devices	
Systems administrator		A1	Defines device specifications	
		E2	Identifies features of backup tapes and sets.	
Programmer assistant and internet applications developer		E2	Identifies types of problems at the beneficiary site	
		F4	Participates in defining computer devices characteristics	
<ul style="list-style-type: none"> Principles of prevention maintenance and faults repairing: 		Computer's users Technician supporter	C4	Update protection programs
			D4	Ensures the conformity with the standard
	D5		Changes the faulty parts	
	F2		Prints the maintenance instruction from the manufacturer	
	Network computer's technician	B4	Studies the available characteristics in the market	
		C2	Installs network devices	
		G5	Benefits from manufacturer help	
	Systems administrator	A1	Identifying features of sets	
		A2	Installs operating system	
		A3	Fixes computer configuration	
		E2	Identifies types of problems at the beneficiary site	
	Programmer assistant and internet applications developer	E4	Reinstalls soft wares	
	<ul style="list-style-type: none"> Principles of operating system: 	Computer's users Technician supporter	F3	Updates soft ware protection
			C7	Upgrades OS and soft wares
Knowledge 1			Understands technical terms in English	
D3			Asks for device parts	
Network computer's technician		Knowledge 2	Knows the technical terms in English	

	Systems administrator	Knowledge 3	Knows computer conception.	
	Programmer assistant and internet applications developer	Knowledge 1	Understands technical terms in English language	
		F2	Gives advices on how to use the available soft ware and programs	
<ul style="list-style-type: none"> Laptops and small mobile devices: 	Computer's users Technician supporter	C4	Makes backup copy of computer data	
		D4	Ensures the conformity with the standard	
		D5	Changes the faulty parts	
		F2	Prints the maintenance instruction from the manufacturer	
	Network computer's technician	B4	Studies the available characteristics in the market	
		C2	Installs network devices	
		G5	Benefits from manufacturer help	
	Systems administrator	A1	Defines the device's characteristics	
		E2	Repairs system faults and soft ware support	
		A2	Installs OS	
		A3	Fixes device configuration	
	Programmer assistant and internet applications developer	E4	Reinstalls soft wares	
<ul style="list-style-type: none"> Introduction to printers and scanners: 	Computer's users Technician supporter	D4	Ensures the conformity with the standard	
		D5	Changes the faulty parts	
		F2	Prints the maintenance instruction from the manufacturer	
	Network computer's technician	B4	Studies the available characteristics in the market	
		C2	Installs network devices	
		G5	Benefits from manufacturer help	
	Systems administrator	A1	Defines the device's characteristics	
		A3	Fixes device configuration	
		E2	Repairs system faults and soft ware support	
	<ul style="list-style-type: none"> Network Principles: 	Computer's users Technician supporter	E	Configure the device to join the network
		Network computer's technician	A1	Participates in defining network type
			A2	Identifies the network location type
A3			Participates in defining the connection type	
A6			Participates in defining computer devices characteristics	
A7			Participates in developing the network design	
C1			Asks for a network devices and tools	
C2			Installs network devices	
C5			Supervises the cables run	
C6			Run network cables	
C7			Checks cables run	
C8			Connects between devices	
C9			Checks devices function	
E1			Receives problem description	
E2			Repairs cables faults	
E3			Changes network card	
F1			Monitor network performance continuously	
F2			Tests solution before Applying them	
F3			Participates in finding solution for a continuous network function	
E4	Repairs network devices			



	Systems administrator	E5	Configure network card in the device
		F6	Provides backup for programs and network device configuration
		A	Prepares systems and soft wares
		B	Manages users accounts
		D5	Manage system function (OS, server, services support)
<ul style="list-style-type: none"> • Introduction to computer security: 	Computer's users Technician supporter	C2	Uses soft ware testing
		C4	Makes backup copy of computer data
		F3	Update protection programs
	Network computer's technician	C	Configure the network
		C4	Prepares network devices
		D1	Uses network software monitoring
		F1	Monitor network performance continuously
		F3	Participates in finding solution for a continuous network function
	Systems administrator	B	Manages users accounts
		C	Manages system files
		D	Provides technical support for the systems
	Programmer assistant and internet applications developer	D	Updates systems
		E	Maintains applications
<ul style="list-style-type: none"> • Communication skills: 	Computer's users Technician support	F	Provides routine maintenance
		G	Keeps developing himself
	Network computer's technician	E	Provides technical support to the network
		G	Keeps developing himself
	Systems administrator	D	Provides technical support for the systems
		F	Keeps developing his skills
	Programmer assistant and internet applications developer	E	Maintains applications
		F	
		G	Keeps developing himself

The Theoretical Detailed Content		
Hours	Contents	Evaluation means
3	Safety Procedures and Tools: <ul style="list-style-type: none"> • Conditions and Safety procedures. • Tools and programs used in personnel computer. • The best practice in using tools. 	Oral questions Written questions Homework Self- test
3	Introduction to Personnel Computer: <ul style="list-style-type: none"> • International professional certificate. • Computer system. • Computer parts. • Internal components. • Ports and connections. • Input devices. • Output devices. • System resources. 	Oral questions Written questions Homework Self- test
3	Computer building-step by step: <ul style="list-style-type: none"> • Opening the computer case. • Installing power supply. • Installing internal fans. • Installing fans in external slots. • Installing network and video cards. • Installing internal cables. • Closing the computer case completely and connecting external cables. • Running the computer for the first time. 	Oral questions Written questions Homework Self- test
2	Principles of prevention maintenance and faults repairing: <ul style="list-style-type: none"> • Maintenance prevention. • Steps of repairing faults. 	Oral questions Written questions Homework, Self- test
3	Principles of operating system: <ul style="list-style-type: none"> • Operating system(OS) functions. • Comparison between operating systems. • Defining OS based on customer need. • Installing OS. • Windows exploration. • Techniques of repairing prevention of OS. • Repairing OS faults. 	Oral questions Written questions Homework Self- test
3	Laptops and small mobile devices: <ul style="list-style-type: none"> • Portable laptop. • Laptop's components. • Comparison between PC and laptop. • Laptop's configuration. • Comparison between mobile phones. • Techniques of maintenance of laptops and small mobile devices. • Maintenance of laptops and small mobile devices. 	Oral questions Written questions Homework Self- test

2	<p>Introduction to scanners and printers:</p> <ul style="list-style-type: none"> • Different kind of printers. • Configuring printer. • Different kind of scanners. • Configuring scanner. • Maintenance prevention of printers and scanners. • Repairing scanners and printers faults. 	<p>Oral questions Written questions Homework Self- test</p>
3	<p>Network Principles:</p> <ul style="list-style-type: none"> • Network concepts. • Network types. • Network techniques. • Physical network components. • Infrastructure and building network. • Network standards. • Ethernet standards. • TCP/IP and OSI model. • Configuring network card and modem. • Communication techniques. • Prevention maintenance of the network. • Repairing network faults. 	<p>Oral questions Written questions Homework Self- test</p>
2	<p>Introduction to computer security:</p> <ul style="list-style-type: none"> • The importance of information security. • Security threats. • Security procedures. • Techniques of maintenance procedure of computer security. • Repairing faults related to security. 	<p>Oral questions Written questions Homework Self- test</p>
2	<p>Communications skills:</p> <ul style="list-style-type: none"> • Relation between communication and repairing .faults. • Communication skills and professional behavior. • Profession ethics. • Connection center environment and technical responsibilities. 	<p>Oral questions Written questions Homework Self- test</p>

The Practical Detailed Content		
Hours	Contents	Evaluation means
4	Introduction to Personnel Computer: <ul style="list-style-type: none"> International professional certificate. Computer system. Computer parts. Internal components. Ports and connections. Input devices. Output devices. System resources. 	Notice (Practical performance) Written questions Self- test
4	Safety Procedures and Tools: <ul style="list-style-type: none"> Conditions and Safety procedures. Tools and programs used in personnel computer. The best practice in using tools. 	Notice (Practical performance) Written questions Self- test
12	Computer building-step by step: <ul style="list-style-type: none"> Opening the computer case Installing power supply. Installing internal fans. Installing fans in external slots. Installing network and video cards. Installing internal cables. Closing the computer case completely and connecting external cables. Running the computer for the first time. 	Notice (Practical performance) Written questions Self- test
4	Principles of prevention maintenance and faults repairing: <ul style="list-style-type: none"> Maintenance prevention. Steps of repairing faults. 	Notice (Practical performance), Written questions, Self- test
6	Principles of operating system: <ul style="list-style-type: none"> Operating system(OS) functions. Comparison between operating systems. Defining OS based on customer need. Installing OS. Windows exploration. Techniques of repairing prevention of OS. Repairing OS faults. 	Notice (Practical performance) Written questions Self- test
4	Laptops and small mobile devices: <ul style="list-style-type: none"> Portable laptop. Laptop's components. Comparison between PC and laptop. Laptop's configuration. Comparison between mobile phones. Techniques of maintenance of laptops and small mobile devices. Maintenance of laptops and small mobile devices. 	Notice (Practical performance) Written questions Self- test

4	<p>Introduction to scanners and printers:</p> <ul style="list-style-type: none"> • Different kind of printers. • Configuring printer. • Different kind of scanners. • Configuring scanner. • Maintenance prevention of printers and scanners. • Repairing scanners and printers faults. 	<p>Notice (Practical performance) Written questions Self- test</p>
6	<p>Network Principles:</p> <ul style="list-style-type: none"> • Network concepts. • Network types. • Network techniques. • Physical network components. • Infrastructure and building network. • Network standards. • Ethernet standards. • TCP/IP and OSI model. • Configuring network card and modem. • Communication techniques. • Prevention maintenance of the network. • Repairing network faults. 	<p>Notice (Practical performance) Written questions Self- test</p>
4	<p>Introduction to computer security:</p> <ul style="list-style-type: none"> • The importance of information security. • Security threats. • Security procedures. • Techniques of maintenance procedure of computer security. • Repairing faults related to security. 	<p>Notice (Practical performance) Written questions Self- test</p>
4	<p>Communications skills:</p> <ul style="list-style-type: none"> • Relation between communication and repairing faults. • Communication skills and professional behavior. • Profession ethics. • Connection center environment and technical responsibilities. 	<p>Notice (Practical performance) Written questions Self- test</p>
References	<p>IT Essentials I v4.0 , PC Hardware and Software(Chapters 1-10) Cisco Networking Academy Program, Student Companion Guide, Cisco Press</p>	

Department	General Studies			Major	All Majors		
Course Name	Advanced Computer Applications			Course Code	CMT 102		
Prerequisites	101 CMT						
Trimester	1	2	3	4	5	6	Cooperative
Credit Hours		2					
Contact Hours (hours per week)	L	0					
	W	4					
	T	0					
<i>L = Lecture Hours, W = Workshop/Laboratory Hours, T = Tutorial Hours</i>							
Course Description:							
<p>This course consists of several topics manage the trainee to knows advanced possibilities to the most common office applications (Excel & Access) which help the computer's user to achieves their works in profession way .</p> <p>This course covers advanced three levels of ICDL.</p>							
General Objective:							
This course aims training on the most important office applications in professional way.							
Specific Objectives	Required Performance Specifications	NOSS Related tasks					
		From The Criterion	Task No.				
A. Procedural Objectives: Trainee should be able to:							
1. Using electronic tables programs professionally.	Execute limited operations in electronic tables program.	Support technician of commuter users	General Knowledge in F1, F4				
		Programmer assistant & internet technology developer	F1				
2. Using data base.	Execute limited operations in data base.	Programmer assistant & internet technology developer	F1, C3, C15				
B. Behavioral and Cognitive Objectives: Trainee should be able to:							
1. Suitable seat before computer.	Seat in correct way.	Programmer assistant & internet technology developer	C2.C3.C15				
		Networks technician	Knowledge in A4, E6				
2. To know English specialized terms.	Mentions the term with order.	Support technician	Knowledge 1				
		Programmer assistant & internet technology developer	C2.C3.C15				
		Networks technician	Knowledge A4, E6				
Safety conditions:							
<ul style="list-style-type: none"> ○ To follow safety instructions in the specifications books enclosed with computer. ○ To follow the instructions of correct sit. 							

Theoretical and Practical Topics:	NOSS Related tasks		
	Because this course is shared between all courses of Computer Technology so the following tasks from the professional standard for a career were adapted.		
	Professional Standard	Task	Task Description
o Electronic tables (Excel):	Computer's user technician supporter	Knowledge 3	Good typeset.
		Knowledge 4	The ability of writing reports.
		F1	Follow the frequently schedule maintenance.
	Programmer assistant & network developer	Knowledge F1	To know writing & preparing reports.
		Knowledge D5	Knowing documentation methods.
	Computer networks technician	Knowledge E6	Knowing methods of preparing reports.
o Data base programs (Access):	Computer's user technician supporter	Knowledge 3	Good typeset.
		Knowledge 4	The ability of writing reports.
	Programmer assistant & network developer	C3	Joins the screens with the database (append, edit, delete, and retrieve).
		C15	Participates in data transfer.
		F1	Helps in evaluation of the programs offered by the others.
		Knowledge F2	Knowing data base.

Practical detailed Content		
Hours	Contents	Evaluation Tools
18	First part : Electronic tables (Excel) & includes :	
8	<p>Calculation operations advanced skills using functions:</p> <ul style="list-style-type: none"> • Time & date functions. • Knowledge functions. • Logical functions. • Search & references functions. • Mathematics & triangles functions. • Calculate all open hand compositions. • Scouting formulation errors & values errors. • Errors meaning /null #, num , ref# , n/a# , name # , div/0 # , value , # # # #. • Replace whole formulation or part with calculated value. • Reference model r1 c1. • Use tri-dimensional references . • The effects of copy , include , or delete work papers on tri-dimensional references. • Limiting formulation reference site or cells followed another cell values. • Creating data calculation formulation on other work page or another compilation. • Open compilation directed by formulation. • Refresh references to renamed compilations or converted. • Create images , cells or organism. 	<p>Direct notice (practical performance) Self – test Home woks</p>
5	<p>Electronic tables planning:</p> <ul style="list-style-type: none"> • Purpose behind using planning. • Included planning. • Planning paper. • Create planning. • Create Default planning by one step. • Delete data heads or titles or planning show media, editing planning titles. • Delete data chains. • Add text square to planning. • Add title to planning or axis. • Change planning size and the setting for printing. • Maximize , minimize & change planning paper's size. • Fixing different planning type. • fixing different planning choices. • fixing different site for planning. 	<p>Direct notice (practical performance) Self – test Home woks</p>

5	<p>Conditional setting , ordering , filtering lists in electronic tables:</p> <ul style="list-style-type: none"> • Differentiate data that do called conditions. • Applying conditional ordinations. • Change conditional ordinations , add or delete. • Ordering: <ul style="list-style-type: none"> ○ Default Ordering arranges. ○ Lists Ordering. ○ Rows Ordering depend on contents of one column. ○ Rows Ordering depend on contents of two columns. ○ Columns Ordering depend on rows contents. • Filtering: <ul style="list-style-type: none"> ○ Delete Filtering factors from the list. ○ Automatic Filtering choices. ○ Three or more conditions in single column. ○ Criteria in two columns or more. ○ Criteria scope. 	<p>Direct notice (practical performance) Self – test Home woks</p>
34	The second part : Data base (Access)	
2	<p>Introduction to data base:</p> <ul style="list-style-type: none"> • Database tasks , concept of database setup. • Different between electronic tables program & data base program. • Data base files contents. • Purpose behind using data base design. • Basic steps of data base design. 	<p>Direct notice (practical performance) Self – test Home woks</p>
4	<p>Data base operating program:</p> <ul style="list-style-type: none"> • Operate program. • Finish program. • Create a data base , data bases programs using: <ul style="list-style-type: none"> ○ Wizard. ○ Without Wizard. • Open table. • Copy field & its characters. • Add field to a table. • Delete a field form the table. • Methods of change field data type. 	<p>Direct notice (practical performance) Self – test Home woks</p>
4	<p>Tables in Database :</p> <ul style="list-style-type: none"> • Different in work sheet between Electronic tables and database. • Data types. • Methods of create tables in database by using: <ul style="list-style-type: none"> ○ Table's wizard. ○ Insert data in data sheet. 	<p>Direct notice (practical performance) Self – test Home woks</p>

	<ul style="list-style-type: none"> • Open table. • Copy field & its characters. • Add field to a table. • Delete a field form the table. • Methods of change field data type. 	
4	<p>Records in data base:</p> <ul style="list-style-type: none"> • Add and edit data. • Save a record. • Delete a record. • Undo of changes. • Repeat a value from previous record. • Move between records & fields. • Purpose behind using Primary keys. • Primary keys types in data base program. 	<p>Direct notice (practical performance) Self – test Home woks</p>
4	<p>Inquires in data base:</p> <ul style="list-style-type: none"> • Types of inquires. • Inquires design. • Show higher or low values in inquires. • Inquires calculations operations. • Create limit inquiry. • Create table inquiry. • Create table form another table using inquiry. • Create central inquiry. • Create deletion inquiry. • Show tables names or hide it in net inquiry design. • Add table or inquiry in net inquiry design or delete it. • Expression creator. • Create an expression. 	<p>Direct notice (practical performance) Self – test Home woks</p>
2	<p>Database Forms:</p> <ul style="list-style-type: none"> • Purpose behind using of forms. • Create forms. • Show the title and other information in form or report. • Show current date and time. • Show of pages numbers. • Show or hide network. • Open and close tool boxes. • Rename form. • Create sub-form. 	<p>Direct notice (practical performance) Self – test Home woks</p>
3	<p>Data base Relations:</p> <ul style="list-style-type: none"> • Relations task in a data base of data bases programs. • Define relations. • Integrated referential. 	<p>Direct notice (practical performance) Self – test</p>

	<ul style="list-style-type: none"> • Succession of update & delete. • Define relations among tables. • Edit a found previous relation. • Delete a relation. • Remove a table form frame. • Show found relations. 	Home woks
3	<p>Binding data & check authenticity:</p> <ul style="list-style-type: none"> • Purpose behind binding data. • Using data types & fields to bind data in tables. • Rules of authenticity. • Using macro or new procedure to check authenticity. • Using authenticity of data access or binding it in tables. • Create insert masks. 	Direct notice (practical performance) Self – test Home woks
4	<p>Data base reports:</p> <ul style="list-style-type: none"> • Reports purpose. • Reports display methods. • Report creation methods. • Confine volume , pattern place or report. • Customize form frame or report. • Show the title & other information text in pattern or report. • Show date & current time. • Add pages separation. • Show pages numbers. • Change pages numbers. • Confine Options of page set up to print form or report. • Confine default template for form or report. • Change source of form or report. • Report sections. • Show or hide Report sections. • Change size of report and form sections. • Keep one syllable contents. • Repeat group head in another page. • Ignore printing page head or appending it in the first & last pages of reports. • Assume pages separation if one of the conditions achieved. • Cancel print order if the report not include any registers. 	Direct notice (practical performance) Self – test Home woks
2	<p>Search & Ordering data base:</p> <ul style="list-style-type: none"> • Search methods about data & replace it. • Search on a value in a field & replace it. 	Direct notice (practical performance) Self – test

	<ul style="list-style-type: none"> • Replace limited value in the field. • Search on a register in data papers. • Registers simple or complex milling operations. • Record ordering in data paper display method or display pattern. • Record ordering using network design. • Record ordering in reports. 	Home woks
2	<p>Data base Filtering:</p> <ul style="list-style-type: none"> • Chose filtering method in a table , inquiry or pattern. • Similarity between limiting inquires & filtering factors. • Save filtering factors to reuse. • filtering factor effects , table ordering arrange or inquiry about pattern or new report. • Create filtering factor: <ul style="list-style-type: none"> ○ Filtering depend on selected. ○ Filtering depend on form. ○ Input Filtering. ○ Advanced Filtering / ordering. • Possibility to mill registers or break it in a pattern. 	Direct notice (practical performance) Self – test Home woks

References	1- sams teach yourself Microsoft windows xp in 24 hours by gerg m.perry. 2- Microsoft office xp gohabrakin jarir bookstore 2002. 3- Simplified office xp . jarir bookstore 2002.
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PROGRAMMING COURSES

1430H – 2010G

Department	Computer and Info. Technology			Major	Programming		
Course Name	Fundamentals of Computer Programming			Course Code	PRG 150		
Prerequisites							
Trimester	1	2	3	4	5	6	Cooperative
Credit Hours		4					
Contact Hours (hours per week)	L		2				
	W		4				
	T		0				
<i>L = Lecture Hours, W = Workshop/Laboratory Hours, T = Tutorial Hours</i>							
Course description:							
<p>This course includes set of topics that represent a theoretical base of programming science . the course includes topics about different counting systems , its importance with regard to data representation , logical operations , logical expressions & discrete mathematics that help to covert word description to algorithm transferable program.</p> <p>Then include means of thinking to solve problems by computer & followed programming bases which shape the formed units of any program . this program used object oriented language environment.</p>							
General Objective:							
This course aims to acquire the trainee basic skills in the theoretical & practical side of computer programming.							
Specific Objectives	Required Performance Specifications			NOSS Related tasks			
	Criterion of Programmer assistant & developer of internet technology			Task No.			
A. Procedural Objectives: Trainee should be able to:							
1. transfer from counting system to other system.	Transfer specific operation to another system.			✗			
2. practice different logical operations.	Execute Specific operation			✗			
3. write logical expressions.	✗			✗			
4. coinage word description Of the program doing in algorithm.	Simplify the program in pictures.			B4.B5.D1.D2.D3			
5. solve the programming problems to execute on computer.	Find applicable solutions.			A3			
6. write programming code of simple programs.	✗			C6			
7. execute the program in computer.	Write & execute correct program.			✗			
8. manipulate errors arise when the program is executed.	✗			C7.C8.C9			
9. analysis problems & set clear steps to solve it.	✗			✗			

B. Behavioral and Cognitive Objectives: Trainee should be able to:		
1. mentions the most important counting systems.	mentions the most important counting systems.	*
Safety conditions:		
<ul style="list-style-type: none"> ○ To follow the safety instructions meanwhile using tools. ○ To follow the safety instructions for the location. ○ To maintain the machines. 		
Theoretical and Practical Topics:	NOSS Related tasks Criterion of Programmer assistant & developer of internet technology	
	Task	Task Description
○ Counting system:	B4	Participate to put algorithm system map.
	B5	Participate to put flow chart map.
○ Logical operations:	B4	Participate to put algorithm system map.
	B5	Participate to put flow chart map.
○ Logical expressions:	B4	Participate to put algorithm system map.
	B5	Participate to put flow chart map.
○ Principles of Discrete mathematics:	B4	Participate to put algorithm system map.
	B5	Participate to put flow chart map.
○ Introduction to general programming:	B4	Participate to put algorithm system map.
	B5	Participate to put flow chart map.
○ Methods of Problem solving by computer:	A3	Learn utilize needs.
○ Algorithms & flow charts:	B4	Participate to put algorithm system map.
	B5	Participate to put flow chart map.
○ Bases of sequential programming:	C6	Write programming orders.
	C8	Participate in choosing program.
○ Methods of primary data representation:	C6	Write programming orders.
	C8	Participate in choosing program.
○ Types of arithmetic & logical operations:	C6	Write programming orders.
	C8	Participate in choosing program.
○ Write expressions:	C6	Write programming orders.
	C8	Participate in choosing program.
○ Conditional & decision statements:	C6	Write programming orders.

The Theoretical Detailed Content		
Hours	Contents	Evaluation Tools
3	Counting systems: <ul style="list-style-type: none"> ○ Decimal system. ○ Hexadecimal system. ○ Binary system. ○ Conversion system. 	Oral questions Written questions & Homeworks Self- test Projects
1	Logical operations: <ul style="list-style-type: none"> ○ And operation. ○ Or operation. ○ Not operation. ○ Nor operation. ○ Logical gates. 	Oral questions Written questions & Homeworks Self- test Projects
2	Logical: <ul style="list-style-type: none"> ○ Truth table. ○ Logical expression formulation. ○ Demorgan,s laws. ○ Simplifying logical expressions. 	Oral questions Written questions & Homeworks Self- test Projects
1	Principles of discrete mathematics: <ul style="list-style-type: none"> ○ Sets. ○ Functions. ○ Algorithms. 	Oral questions Written questions & Homeworks, Self- test, Projects
2	General introduction to programming: <ul style="list-style-type: none"> ○ Computer program concept. ○ Programming language concept. ○ Types of programming languages. ○ Programming profession concept. ○ Programming manufacture. 	Oral questions Written questions & Homeworks Self- test Projects
3	Problem solving: <ul style="list-style-type: none"> ○ Problem formulation. ○ Algorithm solution. ○ Path maps. 	Oral questions Written questions & Homeworks, Self- test, Projects
3	Primary data representation: <ul style="list-style-type: none"> ○ Data types. ○ Primary data. ○ Variables. ○ Constants. ○ Declaration statements clauses. ○ Comments sentences. ○ Reserved words. 	Oral questions Written questions & Homeworks Self- test Projects
4	Operations types: <ul style="list-style-type: none"> ○ Operands. ○ Assignments operations. ○ Arithmetic operations. 	Oral questions Written questions & Homeworks Self- test Projects

	<ul style="list-style-type: none"> ○ Logical operations. ○ Relational operations. ○ Textural operations. ○ Data casting operations. 	
3	Expressions: <ul style="list-style-type: none"> ○ Expressions types. ○ Operation execution priorities. ○ Using arches. 	Oral questions Written questions & Homeworks, Self- test, Projects
4	Conditional & decision sentence (Branching): <ul style="list-style-type: none"> ○ If sentence. ○ If-else sentence. ○ Overlap if sentence. ○ Switch sentence. 	Oral questions Written questions & Homeworks Self- test Projects

The Practical Detailed Content		
Hours	Contents	Evaluation Tools
8	To know the environment that use editing program , compilation it to machine language , run & debugging:	Notice (Practical performance) Oral questions Written questions Self- test
10	Training on problem solving & Path maps:	Notice (Practical performance) Oral questions Written questions Self- test
10	Training on primary data representation:	Notice (Practical performance) Oral questions Written questions Self- test
12	Training on operations types:	Notice (Practical performance) Oral questions Written questions Self- test
12	Training on expressions:	Notice (Practical performance) Oral questions Written questions Self- test
References	1-discrete mathematics & its applications – by Kenneth h. rosen. 2- java to program –by deitel & deitel 3- effective java programming language guide –by Joshua bloch 4- java programming language by ken Arnold , gems gosling , David holmiz.	

Department	Computer and Info. Technology			Major	Programming		
Course Name	Web pages design			Course Code	PRG 153		
Prerequisites							
Trimester	1	2	3	4	5	6	Cooperative
Credit Hours		4					
Contact Hours (hours per week)	L		2				
	W		4				
	T		0				
<i>L = Lecture Hours, W = Workshop/Laboratory Hours, T = Tutorial Hours</i>							
Course description:							
<p>This course includes set of topics manage the trainee to build sites on the internet . this includes training on principles of web site design and using basic tools to build web pages such as html , applied programs & graphics . the course includes all the semester small projects embedded all the previous tools, in addition to acquired experience form the training courses related to set sites.</p>							
General Objective:							
<p>The course aims to train the trainee how to use basic & necessary tools to build a site on the internet, & using graphics.</p>							
Specific Objectives	Required Performance Specifications			NOSS Related tasks			
	Criterion of Programmer assistant & developer of internet technology			Task No.			
A. Procedural Objectives: Trainee should be able to:							
1. Recording client needs.	Needs include client demand.			H1			
2. write web pages design codes.	Programming language suitable for needs.			H1			
3. Web pages design.	Design in accord with topic.			H1			
4. Develop internet pages.	Develop in design.			H1			
5. Modify web pages design codes.	New modification get aims.			H1			
6. Add steps in design to ready pages.	Bound new steps with last.			H1			
7. Using graphics programming.	Using program of graphics.			H1			
8. Using web pages design.	Using program of web pages design.			H1			
9. Show the designed page to the client.	The client agreement on the web pages design.			H1			
B. Behavioral and Cognitive Objectives: Trainee should be able to:							
1. Define the steps of web pages design.	Mention the basic steps of design.			H1			
2. Differentiate between colors.	Confine a name of fixed color.			H1			
3. To use English specialized terms.	Mention a number of special terms related to web pages design in English.			H1			
4. To know how to use site design tools.	Mentions of web design tools.			H1			
5. Understanding html tags.	Speak about html tags.			H1			



Safety conditions:		
<ul style="list-style-type: none"> ○ To follow the safety instructions meanwhile using tools. ○ To keep secret information. ○ Observing copy rights. ○ Observing machines safety. ○ To follow place safety procedures. 		
Theoretical and Practical Topics:	NOSS Related tasks	
	Criterion of Programmer assistant & developer of internet technology	
	Task	Task Description
○ Introduction to internet:	H1	Web pages design.
○ Principles of web site design:	H1	Web pages design.
○ build Pages using html language:	H1	Web pages design.
○ Sites build using applied programs such as Microsoft front page & Dreamwaver:	H1	Web pages design.
○ To deal with specific applications by graphics & manipulating it:	H1	Web pages design.
○ Site publishing:	H1	Web pages design.

The Theoretical Detailed Content		
Hours	Contents	Evaluation Tools
2	Introduction to internet: <ul style="list-style-type: none"> ○ Internet Germination. ○ Internet services. ○ Client /server model. 	Oral questions Written questions & duties Self- test Projects
2	Principles of web site design: <ul style="list-style-type: none"> ○ Types of w w w. ○ Determine site goals. ○ Determine site components. ○ Site construction plan. 	Oral questions Written questions & duties Self- test Projects
6	Pages setup by html: <ul style="list-style-type: none"> ○ Texts formatting. ○ Using images. ○ page layout. ○ Hyper links. ○ Lists. ○ Tables. ○ Frames. 	Oral questions Written questions & duties Self- test Projects
8	applications to build sites: <ul style="list-style-type: none"> ○ Microsoft front page. ○ Dreamwaver. ○ Multimedia program. ○ Corporate & general specifics of site pages. 	Oral questions Written questions & duties Self- test Projects
4	Graphics application: <ul style="list-style-type: none"> ○ Graphics program. ○ Insert sound effects. ○ Extension types of keeping images. 	Oral questions Written questions & duties Self- test Projects
4	Site publishing: <ul style="list-style-type: none"> ○ Site server research method. ○ Different between servers. ○ Files uploading methods. ○ Site announcement methods. ○ Site maintenance methods. 	Oral questions Written questions & duties Self- test Projects

The Practical Detailed Content		
Hours	Contents	Evaluation Tools
12	Build Pages by html: <ul style="list-style-type: none"> ○ Texts formatting. ○ Using images. ○ page layout. ○ Hyper links. ○ Lists. ○ Tables. ○ Frames. 	Oral questions Written questions & Self- test
20	applications of Site build: <ul style="list-style-type: none"> ○ Microsoft front page. ○ Dreamwaver. ○ Multimedia program. ○ Dealing with files. ○ Determine general specifics of site pages (themes). 	Oral questions Written questions & Self- test
8	Graphics application: <ul style="list-style-type: none"> ○ Graphics program. ○ Insert sound effects. ○ Extension types of keeping images. 	Oral questions Written questions & Self- test
8	Design integrated site: <ul style="list-style-type: none"> ○ Determine sites types. ○ Determine site components. ○ Site building plan. ○ Site building. ○ Site test. 	Direct note Oral questions Written questions & Self- test
4	Site publishing: <ul style="list-style-type: none"> ○ Site server research method. ○ Files uploading methods. ○ Site announcement methods. ○ Site maintenance. 	Direct note Oral questions Written questions & Self- test
References	1. Learning web design : A beginner's guide to html , graphics,& Beyond –by Jennifer Niederst , Richard koman. 2. Front page 2007.	

Department	Computer and Info. Technology			Major	Programming		
Course Name	Introduction to Database			Course Code	PRG 182		
Prerequisites							
Trimester	1	2	3	4	5	6	Cooperative
Credit Hours			4				
Contact Hours (hours per week)	L		2				
	W		4				
	T		0				
<i>L = Lecture Hours, W = Workshop/Laboratory Hours, T = Tutorial Hours</i>							
Course description:							
<p>This course introduce basic skills to learn the trainee about data base concept , how to use special statements related to inquiry structural language , so that the trainee be able to create data base at the end of course by DDL , DML , DCL tables , add & modify data in order to insure that the trainee understand this topics through a project at the end of training class.</p>							
General Objective:							
This course aims to understand basic concepts of data base & SQL.							
Specific Objectives	Required Performance Specifications			NOSS Related tasks			
	Criterion of Programmer assistant & developer of internet technology			Task No.			
A. Procedural Objectives: Trainee should be able to:							
B. Behavioral and Cognitive Objectives: Trainee should be able to:							
1. Understand the general meaning of data base.	✘			A3, B1, B2, C6, C7, C8			
2. Define sql statements , how to use it.	✘			A3, B1, B2, C6, C7, C8			
Safety conditions:							
<ul style="list-style-type: none"> ○ To keep secret information. ○ Observing copy rights. ○ Observing machines safety. ○ To follow safety procedures when tools is used. ○ To follow place safety procedures. 							
Theoretical and Practical Topics:	NOSS Related tasks						
	Criterion of Programmer assistant & developer of internet technology						
	Task	Task Description					
○ Define data concepts of tables , files & data base:	B1	Designs the database.					
	B2	tests the pre-designed database.					
○ Define elements of creating files , records:	B1	Designs the database.					
	B2	tests the pre-designed database.					
○ Define relationship:	B1	Designs the database.					
	B2	tests the pre-designed database.					

○ Basics of sql:	C6	Writes the programming codes.
	C7	Participates in the program debugging.
	C8	Participates in the program testing.
○ Sql techniques:	C6	Writes the programming codes.
	C7	Participates in the program debugging.
	C8	Participates in the program testing.
○ Data processing using sql:	C6	Writes the programming codes.
	C7	Participates in the program debugging.
	C8	Participates in the program testing.

The Theoretical Detailed Content		
Hours	Contents	Evaluation Tools
6	Define tables , files & data base (ddl):	Oral questions, Written questions Self – test, Short exams
4	File's components & different between tables & files:	Oral questions, Written questions Self – test, Short exams
5	Define records , relations & fields (dml):	Oral questions, Written questions Self – test, Short exams
5	dcl- Sql techniques:	Oral questions, Written questions Self – test, Short exams
6	Data processing using dcl –sql:	Oral questions, Written questions Self – test, Short exams

Detailed Practical course		
Hours	Contents	Evaluation tools
18	First : introduction to data base:	Direct notice (Practical Performance) Home woks
	6 ○ How to create a table, add primary key and foreign key.	
	4 ○ How to add new records.	
	4 ○ How to modify data found in data base.	
16	Second : data processing using sql:	Direct notice (Practical Performance) Home woks
	4 ○ Using select statement , define Alias.	
	4 ○ Condition statement where.	
	2 ○ Arrange results using order by clause.	
	2 ○ Null value concept , its effects.	
18	4 ○ Define connected in sql language.	Direct notice (Practical Performance) Home woks
	Third : sql techniques language:	
	6 ○ Relate between two table or more.	
	6 ○ Using multi-row functions.	
6	○ Using group by clause.	Direct notice (Practical Performance) Home woks
	○ Using having clause.	
	○ Using sub query.	

References	1- introduction to sql & pl/sql- volume 1 oracel corporation , 2000.
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Department	Computer and Info. Technology		Major	Programming			
Course Name	Computer programming		Course Code	PRG154			
Prerequisites	PRG 150						
Trimester	1	2	3	4	5	6	Cooperative
Credit Hours			4				
Contact Hours (hours per week)	L		3				
	W		2				
	T		0				
<i>L = Lecture Hours, W = Workshop/Laboratory Hours, T = Tutorial Hours</i>							
Course description:							
<p>This course covers looping , arrays , functions & object programming , through studying classes as encapsulated data , manipulate its programs in one code . also speak about classes topics to achieve organized mechanism to reuse the previous programming . also dealt with how to do GUI . the course touch on integrated project in which all pervious tools employed in addition to the acquired experiences in the related training course.</p>							
General Objective:							
<p>This course aims to set the necessary base for the programmer to write object oriented programming.</p>							
Specific Objectives	Required Performance Specifications			NOSS Related tasks			
	Criterion of Programmer assistant & developer of internet technology			Task No.			
A. Procedural Objectives: Trainee should be able to:							
1. dealing with data that have complex structure such as arrays.	Find applicable solutions by computer.			B4, B5, C5, C6			
2. divide the program into a group of specialized small methods.	Find applicable solutions by computer.			B4, B5, C5, C6			
3. solve formulation of programming problem that clear using objects oriented programming.	Find applicable solutions by computer.			B4, B5, C5, C6			
4. encapsulate data manipulate programs in one programming code through writing class code.	Find applicable solutions by computer.			B4, B5, C5, C6			
5. create graphical user interface (gui).	Dealing with graphics.			C2, C5			
B. Behavioral and Cognitive Objectives: Trainee should be able to:							
1. understanding programming problems & imagine suitable solutions.	Find applicable solutions by computer.			B4, B5, C5, C6			
Safety conditions:							
<ul style="list-style-type: none"> ○ To keep secret information. ○ Observing copy rights. ○ Observing machines safety. ○ To follow safety procedures when tools is used. ○ To follow place safety procedures. 							



Theoretical and Practical Topics:	NOSS Related tasks	
	Criterion of Programmer assistant & developer of internet technology	
	Task	Task Description
○ Looping statements:	B4	Participates in creating program algorithms flow.
	B5	Participates in creating program flow chart.
○ Arrays:	B4	Participates in creating program algorithms flow.
	B5	Participates in creating program flow chart.
○ Methods:	C5	Uses off-shelve programs and code libraries.
○ Classes & objects:	C5	Uses off-shelve programs and code libraries.
○ Graphical user interface:	C5	Uses off-shelve programs and code libraries.

The Theoretical Detailed Content		
Hours	Contents	Evaluation Tools
8	Looping statements: <ul style="list-style-type: none"> ○ For statement. ○ While statement. ○ Do-while statement. ○ Nested loops statements. 	Oral questions Written questions Self – test Short – exam Small projects
7	Arrays: <ul style="list-style-type: none"> ○ Arrays concept. ○ Array declaration statement. ○ One- dimensional array. 	Oral questions Written questions Self – test Short – exam Small projects
6	Methods: <ul style="list-style-type: none"> ○ Method operands. ○ Return statement. ○ Calling method. ○ Methods types. 	Oral questions Written questions Self – test Short – exam Small projects
12	Classes & objects: <ul style="list-style-type: none"> ○ Object oriented programming. ○ Class declaration statement. ○ Class properties & class methods. ○ Object creation. ○ Accessing method , properties & methods. 	Oral questions Written questions Self – test Short – exam Small projects
6	Graphical user interface using wizards:	Oral questions Written questions Self – test Short – exam Small projects

The Practical Detailed Content		
Hours	Contents	Evaluation Tools
4	Training on looping statements:	Direct notice (practical performance), Home work
4	Training on arrays:	Direct notice (practical performance), Home work
4	Training on methods:	Direct notice (practical performance), Home work
8	Training on classes & objects:	Direct notice (practical performance), Home work
6	Training on graphical user interface using wizards:	Direct notice (practical performance), Home work
References	1- java how to program – by Deitel & Deitel. 2- Effective java programming language guide – by Joshua Bloch.	

Department	Computer and Info. Technology			Major	Programming		
Course Name	Web pages programming (1)			Course Code	PRG 274		
Prerequisites	PRG 150 & PRG 153						
Trimester	1	2	3	4	5	6	Cooperative
Credit Hours			3				
Contact Hours (hours per week)	L		1				
	W		4				
	T		0				
<i>L = Lecture Hours, W = Workshop/Laboratory Hours, T = Tutorial Hours</i>							
Course description:							
<p>This course consists on several topics manage the trainee to create dynamic site on the internet . this course begins with forms that used in interactivity between web page & site visitor . also this course include studying one of the programming language related to interactivity sites (JavaScript) that manages the trainee to write dynamic page executing its programs on customer's side & knowing functions , events & using in check bonds in form validation techniques , & using CSS technologies . the course touch on integrated project in which all pervious tools employed in addition to the acquired experiences in the related training course . we can use (VBScript or JavaScript).</p>							
General Objective:							
This course aims to manage the trainee to create dynamic site on the internet.							
Specific Objectives	Required Performance Specifications			NOSS Related tasks			
	Criterion of Programmer assistant & developer of internet technology			Task No.			
A. Procedural Objectives: Trainee should be able to:							
1. analyze the problem into executable steps.	Write initial imagine about executable steps of logical operations.			H1, H2			
2. define the variables in JavaScript.	Write required commands in JavaScript for client .			H2			
3. write programming commands.	Write exactable programming commands in correct way.			D3, D4, H2			
4. test programming commands.	Obtain at correct result.			H2			
5. write comments of every programming line.	Describe programming command in right way.			H2			
6. tie programming commands to form integrated program.	Obtain at correct result of program.			H2			
7. prepare reserve copy of the program.	Obtain at correct copy of the grogram.			C14			
B. Behavioral and Cognitive Objectives: Trainee should be able to:							
1. To know English specialized terms.	Mentions the term with order.			H2			
2. Knowing programming language commands for client site such as php.	Mentions some server program tools.			H2			
3. Knowing programming server tools.	Speak about specification of server program.			H2			

Safety conditions:		
Theoretical and Practical Topics:	NOSS Related tasks	
	Criterion of Programmer assistant & developer of internet technology	
	Task	Task Description
○ Forms:	H1	Participation designing internet sites.
	H2	Writes websites programming codes.
	C14	Prepare a backup copy of the program.
	D3	Writes the new required steps.
	D4	Installs the program.
○ Principles of used programming language:	H1	Participation designing internet sites.
	H2	Writes websites programming codes.
	C14	Prepare a backup copy of the program.
	D3	Writes the new required steps.
	D4	Installs the program.
○ Understanding events & functions:	H1	Participation designing internet sites.
	H2	Writes websites programming codes.
	C14	Prepare a backup copy of the program.
	D3	Writes the new required steps.
	D4	Installs the program.
○ Check form validation techniques:	H1	Participation designing internet sites.
	H2	Writes websites programming codes.
	C14	Prepare a backup copy of the program.
	D3	Writes the new required steps.
	D4	Installs the program.
○ Cascading style sheets techniques:	H1	Participation designing internet sites.
	H2	Writes websites programming codes.
	C14	Prepare a backup copy of the program.
	D3	Writes the new required steps.
	D4	Installs the program.

The Theoretical Detailed Content		
Hours	Contents	Evaluation Tools
2	Forms: <ul style="list-style-type: none"> ○ Create & understand forms. ○ How to add basic components. ○ Form submitting methods. ○ For resetting. 	Self – text Home works Short – exam
3	Principles of used programming languages: <ul style="list-style-type: none"> ○ Client side programming. ○ Define variable data types. ○ Write expressions. ○ Decision statements. ○ Looping statements. ○ Objects documents. ○ Written steps of dynamic pages of client side. 	Self – text Home works Short – exam
4	Understand events & functions: <ul style="list-style-type: none"> ○ Event concept & its . ○ To know the most important events (on mouse over , on mouse out , on click , on submit , on load , on focus , on blur , on change). ○ Functions concept & its uses. ○ Define function & write special code. ○ Use & recall functions during events. 	Self – text Home works Short – exam
2	Form validation: <ul style="list-style-type: none"> ○ Bonds on text fields. ○ Check textual or digital value. ○ Use check method of date. ○ Passwords auditing. ○ Inserting e mail conditions. 	Self – text Home works Short – exam
2	Cascading style sheets (css): <ul style="list-style-type: none"> ○ Concept of css technology & its uses. ○ General appearance of web page. ○ Coordinating colors , ends , line frames & arrange elements inside web page. 	Self – text Home works Short – exam

The Practical Detailed Content		
Hours	Contents	Evaluation Tools
8	Forms: <ul style="list-style-type: none"> ○ Create & understand forms. ○ How to add basic components. ○ Form submitting methods. ○ For resetting. 	Direct notice Self – test Home works Short – exam Small project
16	Principles of used programming languages: <ul style="list-style-type: none"> ○ Training on client side programming. ○ Training on variables data types , write expressions , decision statements & looping statements. ○ Training on using objects document. ○ Training to write dynamic web pages of client side. 	Direct notice Self – test Home works Short – exam Small project
6	Varied exercises on using events , functions & recalling functions through events:	Self –test home works short exams
8	Form validation: <ul style="list-style-type: none"> ○ Check the input of long text. ○ Check digital & textural values. ○ Auditing date value. ○ Auditing passwords. ○ Auditing input text of email. 	Self – test Home works Short – exam
6	Varied exercise on using css in site page to improve appearance and adding dynamic:	Self – test Home works Short – exam
8	Build a complete site as project consist of many of dynamic components such as: <ul style="list-style-type: none"> ○ Advertising Panes. ○ Internet Presentation. ○ Visitor Counters. ○ Guests Book. 	Self – test Home works Short – exam
References	1- JavaScript : definitive guide – by David Flanagan. 2- JavaScript – beginners guide – June Bork – science Arabic publisher.	

Department	Computer and Info. Technology			Major	Programming		
Course Name	Web page programming (2)			Course Code	PRG 276		
Prerequisites	PRG 274						
Trimester	1	2	3	4	5	6	Cooperative
Credit Hours				4			
Contact Hours (hours per week)	L			2			
	W			4			
	T			0			
<i>L = Lecture Hours, W = Workshop/Laboratory Hours, T = Tutorial Hours</i>							
Course description:							
<p>This course consists on several topics manage the trainee to create interactive site with visitors on the internet . this includes studying one of the programming languages such as (PHP) that executed in server side & create HTML in online . also the course includes how to bond between interactive program site & data base & inquiry method of data inside base , processing data through add , modify & delete.</p> <p>It includes the studying how to mänge program status when it modified with more than one visitor by sessions concepts , the matter that achieves kind of privacy for every visitor , how to grant power for site's visitors . the course deals with cookies files that save on visitor's machine to facilitate his follow-up every once visit the site . an integrated project intermediates the course along the training class , in which all previous tools positioned add to acquired experiences in the training courses related to site setup. we can use (ASP – PHP – JSP).</p>							
General Objective:							
This course aims to manage the trainee to design advanced dynamic site on internet, bonding it with data base & data processor inside the base through the site.							
Specific Objectives	NOSS Related tasks			Required Performance Specifications		Task No.	
				Criterion of Programmer assistant & developer of internet technology			
A. Procedural Objectives: Trainee should be able to:							
1. participate in data base design.				Logical & active design of data base.		A6	
2. create data base.				Create harmonized tables with design.		B1	
3. check data base designed before.				Debugging errors in design & relation.		B2	
4. studying application analysis.				Analyze the program status according to measures.		B3	
5. set time plan for programming.				Divide tasks plan & programming steps.		C1	
6. write programming commands of web page programming.				Good design in accord with goal.		H1-H2	
7. relate pages with data base & issue reports.				Direct contact according to standards.		H3-H4	
8. following program's errors.				Errors resulted from programming work.		C7	

9. examine the program, prepare the executable copy.	The exam according to goal , purpose of program.	C8-C9
10. Setup a program.	✖	✖
B. Behavioral and Cognitive Objectives: Trainee should be able to:		
1. Working in team work.	Setup program in correct way.	Information C11
2. Exchange experiences with others.	Co-operate with team work.	G6
3. Command in specialized English.	Utilize from feedback to achieve aim.	
4. Knowing the basic of database.	Mentions some specialized terms.	H2
5. Knowing programming language commands for client site such as php.		
6. Knowing programming server tools.	Speak about specification of server program.	H2
7. Knowing tools of server program.	Mentions some server program tools.	H2
8. How to deal with data base.	Mentions some dealings with data base.	H2
Safety conditions:		
<ul style="list-style-type: none"> ○ To keep secret information. ○ Observing copy rights. ○ Observing machines safety. ○ To follow safety procedures when tools is used. ○ To follow place safety procedures. 		
Theoretical and Practical Topics:	NOSS Related tasks	
	Criterion of Programmer assistant & developer of internet technology	
	Task	Task Description
○ Principles of used programming language:	H2	Writes websites programming codes.
	C6	Writes the programming codes.
○ Relate server side with client:	H2	Writes websites programming codes.
	C6	Writes the programming codes.
○ Forms processing:	H2	Writes websites programming codes.
	C6	Writes the programming codes.
○ Arrays & strings and its operations:	A6	Participates in creating database.
	B1	Designs the database.
	B2	Tests the pre-designed database.
○ Relate pages site with data base:	A6	Participates in creating database.
	B1	Designs the database.
	B2	Tests the pre-designed database.
○ Manage site status by sessions:	A6	Participates in creating database.
	B1	Designs the database.
	B2	Tests the pre-designed database.
○ Using cookies files:	C6	Writes the programming codes.

The Theoretical Detailed Content		
Hours	Contents	Evaluation Tools
4	Principles of used programming language: <ul style="list-style-type: none"> ○ Server side applications. ○ Define variables data types. ○ Write expressions. ○ Decision statements. ○ Looping statements. ○ Bonding client side with server side. 	Self – test Home works Short exams
3	Forms manipulation <ul style="list-style-type: none"> ○ Recall internal values in retrieving form's data. ○ Store values in variables. 	Self – test Home works Short exams
3	Arrays & strings: <ul style="list-style-type: none"> ○ Define array & its use. ○ Define string and its operations. ○ Use string & arrays in storing and reading values. 	Self – test Home works Short exams
9	connect web pages with data base: <ul style="list-style-type: none"> ○ connection of data base. ○ directing inquiry command to data base. ○ retrieving query results from data base. ○ create html table. ○ fill html table with query results. ○ Execute add command on data base. ○ Execute delete command to data base. ○ Execute modify command to data base & retrieve result after modification. 	Self – test Home works Short exams
4	Manage site by sessions: <ul style="list-style-type: none"> ○ Create independent session for each user. ○ Store & recall objects through session. ○ Control in life time session. ○ Create site's visitors validities, page. ○ unauthorized access. 	Self – test Home works Short exams
3	Manage cookies during user's language: <ul style="list-style-type: none"> ○ Create cookies & determining contents. ○ Retrieve data from data retrieving cookies. 	Self – test Home works Short exams

The Practical Detailed Content		
Hours	Contents	Evaluation Tools
2	Define the environment that use program editing process , run & debugging:	Direct notice (practical performance), Self- test, Home works, Short exams, Small projects.
8	Training on principles of used language:	Direct notice (practical performance), Self- test, Home works, Short exams, Small projects.
6	Training on forms processing topic:	Direct notice (practical performance), Self- test, Home works, Short exams, Small projects.
4	Training on arrays & strings:	Direct notice (practical performance), Self- test, Home works, Short exams, Small projects.
14	Training on web page connections with data base:	Direct notice (practical performance), Self- test, Home works, Short exams, Small projects.
6	Training on managing site status by sessions:	Direct notice (practical performance), Self- test, Home works, Short exams, Small projects.
6	Training on cookies files , manage & delete it:	Direct notice (practical performance), Self- test, Home works, Short exams, Small projects.
6	Design integrated project include several dynamic elements such as: <ul style="list-style-type: none"> ○ E- commerce sites ○ Newspapers sites ○ Interactive educational sites 	Direct notice (practical performance), Self- test, Home works, Short exams, Small projects.
References	1- PHP and my SQL web development , Luke welling –Laura Thomson , last edition sams publishing. 2- active server pages – publishing – last edition.	

Department	Computer and Info. Technology			Major	Programming		
Course Name	Analysis & Design of Database Systems			Course Code	PRG 282		
Prerequisites	PRG 182						
Trimester	1	2	3	4	5	6	Cooperative
Credit Hours				4			
Contact Hours (hours per week)	L			3			
	W			2			
	T			0			
<i>L = Lecture Hours, W = Workshop/Laboratory Hours, T = Tutorial Hours</i>							
Course description:							
<p>This course introduces the basis concepts for analyze & design data base, how we use ERM representation design. convert ERM to mapping process tables & normalization basics. add to related topics of database security.</p>							
General Objective:							
<p>This course aims to know the trainee data base design & analyze concepts, use ERM, make mappings & normalization. add to related topics of data base security, provided that the trainee applying all concepts through a project discussed at the end of training semester.</p>							
Specific Objectives				NOSS Related tasks			
				Required Performance Specifications Criterion of Programmer assistant & developer of internet technology	Task No.		
A. Procedural Objectives: Trainee should be able to:							
1. Educate client's needs.				Needs spring from goal.		A, B, A3	
2. Participate in data base design.				Logical design of data base.		A, B, A6	
3. Documenting analyze.				Documentation upon standards.		A, B, A9	
4. Create data base.				Tables , relations & keys.		A, B, B1	
5. check designed database.				Check last weak points.		A, B, B2	
6. educate application analyze.				Analyze applications related to goal.		A, B, B3	
7. Control the applications security that been published on Internet.				*		A, B	
B. Behavioral and Cognitive Objectives: Trainee should be able to:							
1. Participate in design data flow chart.				Show all details in chart.		Information A5	
2. Documenting analyze.				Documentation upon standards.		Information in A9	
3. Create data base.				Tables , relations & keys.		Information in B1	
Safety conditions:							
<ul style="list-style-type: none"> ○ To keep secret information. ○ Observing copy rights. ○ Observing machines safety. ○ To follow safety procedures when tools is used. ○ To follow place safety procedures. 							



Theoretical and Practical Topics:	NOSS Related tasks Criterion of Programmer assistant & developer of internet technology	
	Task	Task Description
○ Analyze data base systems:	A5	Participates in creating the database flowcharts.
	B3	Studies the analysis.
○ Data base design:	B1	Designs the database.
	A6	Participates in creating database.
	B2	tests the pre-designed database.
○ Introduction to data base security:	A9	Documents the analysis.
○ Project:	A	Helps in System Analysis process.
	B	Participates in designing the application systems.

The Theoretical Detailed Content		
Hours	Contents	Evaluation Tools
9	Data base analysis: <ul style="list-style-type: none"> ○ basic types of information technology. ○ lifetime of systems sdlc. ○ determine & collect systems requirements. 	Self – test Home works Short – exam
20	Data base design: <ul style="list-style-type: none"> ○ Introduction to data base design. ○ Logical design of data base. ○ Symbols , used shapes in erm. ○ How to convert logical description of data base to erm pattern. ○ Cardinality & connectivity. ○ Change erm pattern to tables. ○ How to do normalization in three levels. 	Self – test Home works Short – exam
10	Data base protection: <ul style="list-style-type: none"> ○ Concept of data base protection. ○ Determining system privileges. ○ Determining special user on special object Privileges. ○ How to apply protection in all different levels of data base specially sql. 	Self – test Home works Short – exam

The Practical Detailed Content		
Hours	Contents	Evaluation Tools
12	Data base design: <ul style="list-style-type: none"> ○ Using data base design tools such as Visio or oracle designer to represent erm pattern. ○ Training on creating tables , relations , & applying three natural designs (normalization). 	Direct notice Self – test Home works Short – exam Small projects
8	Data base protection: <ul style="list-style-type: none"> ○ Grant validities to users on data bases. ○ Applying protection different levels on data base according to granted validates , using sql. . 	Direct notice Self – test Home works Short – exam Small projects
6	Integrated project to design active data base:	Direct notice, Self – test, Home works, Short – exam, Small projects

References	1- Data base systems design implementation & management – rob & Coronel 3rd edition. 2- Systems analysis design methods 5e – by Jeffrey 1 . Whitten , et al.
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Department	Computer and Info. Technology			Major	Programming		
Course Name	Advanced internet technologies			Course Code	PRG 279		
Prerequisites	PRG 274						
Trimester	1	2	3	4	5	6	Cooperative
Credit Hours				4			
Contact Hours (hours per week)	L			3			
	W			2			
	T			0			
<i>L = Lecture Hours, W = Workshop/Laboratory Hours, T = Tutorial Hours</i>							
Course description:							
<p>This course includes the new technologies of Web Programming that be execute in server side the that be execute in client site. The course present the principles of E-commerce and transactions and how to do that in secure and professional design.</p>							
General Objective:							
<p>This course aims to acquire the trainee the main skills to design and build professional Web Site can be use as E-transactions.</p>							
Specific Objectives				NOSS Related tasks			
				Required Performance Specifications Criterion of Programmer assistant & developer of internet technology	Task No.		
A. Procedural Objectives: Trainee should be able to:							
1. Create a Web page with User Controls.				*	H1,H2		
2. Create a database and deal with it.				*	H3,H4		
3. Control the Management and the appearance of the Web page.				*	H1,H2		
4. Manage the sessions of users access.				*	H1,H2		
5. Use the programming technology that be enhanced the pages.				*	H2,		
6. Publish the web applications.				*	H4		
7. Control the applications security that been published on Internet.				*	*		
B. Behavioral and Cognitive Objectives: Trainee should be able to:							
1. Acquire new techniques.				*	*		
2. Know the trends of Web Programming.				*	*		
3. Sensing the importance of site visitors satisfaction.				*	*		
4. Dealing with the hosting sites.				*	*		
5. Know the security precautions of sites.				*	*		
Safety conditions:							
<ul style="list-style-type: none"> ○ To keep secret information. ○ Observing copy rights. ○ Observing machines safety. ○ To follow safety procedures when tools is used. ○ To follow place safety procedures. 							

Theoretical and Practical Topics:	NOSS Related tasks	
	Criterion of Programmer assistant & developer of internet technology	
	Task	Task Description
○ Introduction to use the advanced technologies of programming web site:	A1	Participates in visiting the user.
	A2	Examines the current work status.
	A3	Studies the user's needs.
	A4	Extracts the database fields from the forms.
	B1	Designs the database.
	B2	Tests the pre-designed database.
	B4	Participates in creating program algorithms flow.
	B5	Participates in creating program flow chart.
	C2	Designs the computer screens (program the screens) according to the paper forms.
	C3	Joins the screens with the database (append, edit, delete, retrieve).
	D4	Installs the program.
	G1	Reads about the new programs.
	G2	Attends the training courses.
	G3	Participates in seminars, conferences, and specialized meetings.
	H1	Participation designing internet sites.
	H2	Writes websites programming codes.
H3	Links pages with database.	
H4	Extracts reports from database in HTML format.	
○ E-commece and transactions:	A1	Participates in visiting the user.
	A2	Examines the current work status.
	A3	Studies the user's needs.
	A4	Extracts the database fields from the forms.
	B1	Designs the database.
	B2	Tests the pre-designed database.
	B4	Participates in creating program algorithms flow.
	B5	Participates in creating program flow chart.
	C2	Designs the computer screens (program the screens) according to the paper forms.
	C3	Joins the screens with the database (append, edit, delete, retrieve).
	D4	Installs the program.
	G1	Reads about the new programs.
	G2	Attends the training courses.
	G3	Participates in seminars, conferences, and specialized meetings.
	H1	Participation designing internet sites.
	H2	Writes websites programming codes.
H3	Links pages with database.	
H4	Extracts reports from database in HTML format.	
○ The security of E-commerce sites:	A1	Participates in visiting the user.
	A2	Examines the current work status.
	A3	Studies the user's needs.
	A4	Extracts the database fields from the forms.
	B1	Designs the database.
	B2	Tests the pre-designed database.
	B4	Participates in creating program algorithms flow.
	B5	Participates in creating program flow chart.
	C2	Designs the computer screens (program the screens) according to the paper forms.
	C3	Joins the screens with the database (append, edit, delete, retrieve).
	D4	Installs the program.
	G1	Reads about the new programs.
	G2	Attends the training courses.
	G3	Participates in seminars, conferences, and specialized meetings.
	H1	Participation designing internet sites.
	H2	Writes websites programming codes.
H3	Links pages with database.	
H4	Extracts reports from database in HTML format.	

Detailed theoretical and Practical Content		
Hours	Contents	Evaluation Tools
8	Recognize the Environment that will be use in ASP.Net: <ul style="list-style-type: none"> ○ What is .Net Framework: ○ Recognize the components of Asp page. 	Self- test home works, short exams, small projects
8	Coding of ASP.Net: <ul style="list-style-type: none"> ○ Using ASP.Net Controls comparly with HTML controls. ○ Data Entry Validations. ○ Build User Control. ○ Build Class Library. 	Self- test home works short exams small projects
10	Build pages support multi language: <ul style="list-style-type: none"> ○ What is Database. ○ Database Connection. ○ Inquiry in Database. ○ Retrieve, add , update and delete from Database. 	Self- test home works short exams small projects
8	Master Page: <ul style="list-style-type: none"> ○ Application Theme. ○ Site Map. 	Self- test home works short exams small projects
10	Managing State: <ul style="list-style-type: none"> ○ Use Sessions and Application Variables and control the sessions period. ○ Save and retrieve Objects thru Session. ○ Create Cookie and determine its components. ○ Data Cookies Retrieving. ○ Delete Cookies. 	Self- test home works short exams small projects
12	Securing and Membership: <ul style="list-style-type: none"> ○ What is an ajax. ○ Use Ajax. ○ XMLHttpRequest. ○ Using Microsoft Ajax. 	Self- test home works short exams small projects
8	RSS: <ul style="list-style-type: none"> ○ Web Parts. ○ Wikidia. ○ SilverLight. 	Self- test home works short exams small projects
8	Internet Information Service (IIS): <ul style="list-style-type: none"> ○ Deploying Asp.Net applications. ○ Recognize the E-commerce and transactions. 	Self- test home works short exams small projects
8	Secure Transactions: <ul style="list-style-type: none"> ○ Secure Sockets Layer (SSL). ○ Screening user input. 	Self- test home works short exams



	<ul style="list-style-type: none">○ Secure storage.○ Ecommerce.	small projects
References	<ol style="list-style-type: none">1- Asp.Net E-Commerce Programming (English) (Problem - Design - Solution C# Edition - ISBN: 9781861008039) Publisher: Springer-Verlag New York Inc.2- Beginning ASP.NET 2.0 AJAX (Programmer to Programmer) (Paperback).3- Pro Asp.net 2.0 Website Programming (English) (ISBN: 9781590595466) Publisher: Springer-Verlag New York Inc.4- ASP.NET 2.0 Website Programming: Problem - Design - Solution (Programmer to Programmer) (Paperback).	

Department	Computer and Info. Technology			Major	Programming		
Course Name	Project -2			Course Code	PRG 294		
Prerequisites	PRG 282 & PRG 292						
Trimester	1	2	3	4	5	6	Cooperative
Credit Hours					3		
Contact Hours (hours per week)	L				2		
	W				2		
	T				0		
<i>L = Lecture Hours, W = Workshop/Laboratory Hours, T = Tutorial Hours</i>							
Course description:							
<p>This course consists of the second part of project which is project 2 , during which project 1 is completed & writing all agreed upon program in project 1 then make the necessary documentation of the program , introduce final report & make project show including team work with colleagues under supervision of course teacher.</p>							
General Objective:							
<p>This course aims to train the trainee on collective work inside team work in developing special program under supervision one of the teachers.</p>							
Specific Objectives	NOSS Related tasks						
	Required Performance Specifications Criterion of Programmer assistant & developer of internet technology					Task No.	
A. Procedural Objectives: Trainee should be able to:							
1. Assistant in system developing.	*					A, B, C, D, E, F, G, H	
2. Update the systems.	*					A, B, C, D, E, F, G, H	
3. Develop Web Site.	*					A, B, C, D, E, F, G, H	
4. Exchange the Expertise with others.	*					A, B, C, D, E, F, G, H	
5. Maintain the applications.	*					A, B, C, D, E, F, G, H	
B. Behavioral and Cognitive Objectives: Trainee should be able to:							
1. Recognize the role that he be able to do.	*					A, B, C, D, E, F, G, H	
2. Execute the role that be he able to do.	*					A, B, C, D, E, F, G, H	
3. Document the role that he been do it.	*					A, B, C, D, E, F, G, H	
4. Describe and discuss the role that he been do it.	*					A, B, C, D, E, F, G, H	
Safety conditions:							
<ul style="list-style-type: none"> ○ To keep secret information. ○ Observing copy rights. ○ Observing machines safety. 							

<ul style="list-style-type: none"> ○ To follow safety procedures when tools is used. ○ To follow place safety procedures. 		
Theoretical and Practical Topics:	NOSS Related tasks	
	Criterion of Programmer assistant & developer of internet technology	
	Task	Task Description
○ Confined according to the project:	A	Helps in System Analysis process.
	B	Participates in designing the application systems.
	C	Helps in System Development.
	D	Upgrades the systems.
	E	Performs the application maintenance.
	F	Offers the suggestions and consultations.
	G	Continue in developing himself.
	H	Develops internet sites.

Detailed theoretical Content		
Hours	Contents	Evaluation Tools
52	Confined according to the project:	Homeworks Report Discussion

Detailed Practical Content		
Hours	Contents	Evaluation Tools
52	Confined according to the project:	Homeworks Report Discussion

References	1- Confined according to the project.
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