National Vocational and Technical Training Commission
(NAVTTC)

Curriculum for
Computer Operator
(06 months – NVQF level 2)

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Table of Contents

1. Introduction

Computer has become the basic need of all. Day by day use of computers is growing rapidly in Pakistan. In every city, town, village, market, office, school, bank, shop, hospital, home etc., we can see increasing numbers of computers. As the number of computers the need of computer operators is growing. Employment as a computer operator is projected to grow rapidly because advancement in technology is causing an even bigger demand for duties performed by computer operators. Moreover, as computers are very common and everybody wants to learn more about computers the demand for computer skills and knowledge has increased in all sectors of economy.

This modular curricular programme is designed based on the job required to be performed by a computer operator. This course intends to fulfil the highly demanded skill force related to this occupation since it is needed in nearly every sort of industries nowadays. The course is mostly focused on the General Computer Applications.

Definition

A computer operator is the person responsible for monitoring and controlling computer systems in a company or organization. Responsibilities include troubleshooting software and hardware problems, maintaining and improving system performance and online availability, maintaining all system and application documentation, and assisting personnel with computer problems. Other responsibilities depend on the employer but might include system backups, maintaining computer room equipment including printers and tape storage devices, and providing customer support.

Overall objective of the course

The overall objective of this programme is to produce employable computer operators who can provide computer operating services in nearly any industry or organization, which involves computer in its operations. The graduates of this programme will also be able to be entrepreneurs. However, this will require providing additional input on entrepreneurship development for the one who is willing to start his/her own business. (Not included in the curriculum).

The structure of this course

This curriculum comprises 8 modules. The recommended delivery time is 800 hours. Delivery of the course can therefore be full time, 5 days a week, for 6 months. Training providers are at liberty to develop other models of delivery, including part-time and evening delivery.

The full structure of the course is as follow:

Module Title and Aim	Theory	Practical / Workplace	Total hours
Module 1: Maintain Computer System	13 hours	99 hours	112 hours
Module 2: Prepare Word Documents	20 hours	180 hours	200 hours
Module 3: Prepare Spreadsheets	16 hours	126 hours	142 hours
Module 4: Prepare Presentation	11 hours	77 hours	88 hours
Module 5: Prepare In-page documents	13 hours	27 hours	40 hours
Module 6: Manage e-mail / internet	9 hours	36 hours	45 hours
Module 7: Manage Information System	8 hours	42 hours	50 hours
Module 8: Identify and peruse new business opportunities in the field of Computer (ICT).	40 hours	40 hours	80 hours

The purpose of the Computer Operator course is to engage young people with a programme of development that will provide them with the knowledge, skills and understanding to start this career in Pakistan. The course has been developed to train specific applications, such as the MS Word, MS Excel, MS PowerPoint, Inpage and some trouble shootings etc. to meet the needs and expectations of potential employers.

Central aim of the training provider, trainer or teacher

The aim for the team of staff responsible for delivery of the Computer Operator curriculum is to develop work related skills through comprehensive action orientation. Action orientation can be understood as the willingness and ability of a student to act in professional, social and private situations appropriate, thoughtfully and in a socially responsible manner.

Teaching staff will support student in developing his/her willingness and ability, through their technical knowledge and abilities, to solve tasks and problems that are goal-oriented. They will need to use student-centred, practical oriented methods. They will also need to develop a programme of practical assessment that reflects the learning outcomes stated in the curriculum.

Student of the Computer Operator curriculum will also develop ability as to clarify issues, think through and to assess development opportunities. He/she will learn to consider requirements and constraints in family, professional and private life and to develop his/her own talents and future life plans. Teaching staff will also support student in developing characteristics such as self-reliance, reliability, responsibility, a sense of duty and the willingness and ability to criticize and to accept criticism well and to adapt his/her future behaviour accordingly. Teaching also needs to use the Computer Operator curriculum to address development of social competence. Student needs to acquire willingness and ability to live and shape his/her own social relationships.

Operating competency, internet competence and day to day operations / trouble shooting competence are inherent part of developing expertise, self-competence and technical competence in student through the Computer Operator curriculum. Method competence develops in student willingness and ability to use a targeted, tactical approach during the handling of tasks and problems (for example, in the planning of steps). Communication competence develops willingness and ability to understand and to shape communicative situations, including the ability for student to perceive, understand and to represent his/her own intentions and needs as well as those of his/her partners. Learning competence develops in student willingness and ability to understand and evaluate – independently and together with others – information about facts and contexts through the Computer Operator curriculum and to classify these in mental structures. As part of learning competencies, student will demonstrate the ability and willingness to develop in his or her professional or private life learning techniques and learning strategies and to use them for lifelong learning.

Entry level: Matric / Secondary School Certificate (SSC)

The candidate should have ideally completed Secondary School Certificate (SSC) and must possess Basic English Language understanding. No gender/age barriers are applicable for this training course.

Minimum Qualification of Trainer:

It is expected that the trainer for this training course must have at least the qualification of Bachelor degree holder in Computer Sciences along with some experience as Computer Operator in any field/sector or 3 years diploma in Computer Application or equivalent with minimum 3 years experienced in related field and good communicative instructional skills.

Medium of Instructions:

The medium of instructions for this course should be a combination of English, Urdu and local Languages.

Sequence of Modules

- Maintain Computer System
- Prepare word documents
- Prepare spreadsheets
- Prepare presentation
- Prepare In-page documents
- Manage email/internet

Class Size

Ideally the group size of this training program will be up-to 20 student, provided all necessary resources to practice the tasks/ competencies as specified in this curriculum are available.

Timeframe

Duration of course:	6 months
Total Training Hours:	800 hours
	Theory: 160 hours (20%)
	Practical: 640 hours (80%)
	Training day per week: 5 Days

The Training providers are at liberty to develop other models of delivery, including part time and evening delivery etc.

Competencies gained after completion of the course

After completion of training the trainees will be able to:

1. Maintain Computer System

2. Prepare MS Word Documents
3. Prepare MS Excel Spreadsheets
4. Prepare MS Power Point Presentations
5. Prepare In-page documents
6. Manage emails/internet

Personal requirements

A computer operator must effectively interact and communicate with others, be able to work independently, have strong analytical skills, and be able to recognize and respond to problem situations.

Computer Operator needs the following characteristics:

- A genuine interest in the field of ICT
- A desire to learn
- Stamina – ability to sit for long duty hours in office environment
- Ability to work as member of a team
- Strong analytical skills
- Ability to recognize and respond to problem situations

Opportunities for employment and advancement

Computer operators are employed in offices, factories, enterprises, hospitals, banks, airlines, shops, hotels, clubs, restaurants, institutes, colleges, universities, data houses, software houses, schools, homes, ICT outlets and in almost all fields of life. Self-employment by founding an enterprise in this field of activity is possible as well. Some jobs for Computer Operators are part-time as well. Experienced Computer Operator may advance through promotions with the same employer or by moving to more advanced positions with other employers. They can pursue careers as:

- Computer Operator in any private business entity, public sector, hotel, offices, schools, banks, shops, library, hospitals etc.
- Computer Assistant
- Senior Computer Operator (Future Career)
- IT Manager (Future Career)

Some experienced Computer Operators achieve a respected level of salaries. There are good prospects for travel both within Pakistan and abroad. The employment outlook in this industry will be influenced by a wide variety of factors including:

- Rapidly changing technological trends
- Emerging any new businesses
- Employment turnover (work opportunities generated by people leaving existing positions)
- Occupational growth (work opportunities resulting from the creation of new positions that never existed before)
- Size of the industry
- Flexibility of the applicant (concerning location and schedule of work).

2. Overview of Curriculum for Computer Operator

Module Title and Aim	Learning Units	Theory / Workplace hours
Module 1: **Maintain Computer System** **Aim:** This Module aims to provide knowledge and skills on computer system management. It also deals with basic introduction to computer system management, safety aspects, tools and equipments identification and handling techniques.	LU-1 Install operating system LU-2 Configure peripheral devices LU-3 Install peripheral devices LU-4 Install software application LU-5 Update/upgrade software application LU-6 Uninstall software application LU-7 Perform windows scan LU-8 Format external mass storage LU-9 Troubleshoot basic software errors LU-10 Troubleshoot basic hardware faults LU-11 Configure basic internet connectivity	**Total:** 112 hours **Theory:** 13 hours **Practical:** 99 hours

Module Title and Aim	Learning Units	Theory / Workplace hours
Module 2: **Prepare Word Documents** **Aim:** This basic module intends to provide knowledge and skills on preparation of word documents. It also deals with basic interface, tools/menu management, safety aspects, and word processing software handling techniques.	LU-1 Type document LU-2 Set up page in a word document LU-3 Edit word document LU-4 Format word document LU-5 Save word document LU-6 Insert in a word document LU-7 Import document LU-8 Protect document LU-9 Insert table in a word document LU-10 Hyperlink data in a word document LU-11 Perform mail merge in a word document LU-12 Insert header/footer in a word document LU-13 Insert section break in a word document LU-14 Set style in word document LU-15 Insert table of contents in word document	**Total:** 200 hours **Theory:** 20 hours **Practical:** 180 hours
Module 3: **Prepare Spreadsheets** **Aim:** This basic module intends to provide knowledge and skills on preparation of spreadsheets. It also deals with basic interface, tools/menu management, safety aspects, and spreadsheet application software handling techniques.	LU-1 Create workbook LU-2 Insert sheet LU-3 Apply basic formulae / functions LU-4 Crate charts/graphs LU-5 Filter data LU-6 Format cell LU-7 Edit worksheet LU-8 Insert page break LU-9 Split cells LU-10 Merge cells	**Total**: 142 hours **Theory:** 16 hours **Practical:** 126 hours

Module Title and Aim	Learning Units	Theory / Workplace hours
Module 4: **Prepare Presentation** **Aim:** This basic module intends to provide knowledge and skills on preparation of Presentation. It also deals with basic interface, tools/menu management, safety aspects, and presentation software handling techniques.	LU-1 Prepare Master slide LU-2 Insert Slide LU-3 Design Slide LU-4 Apply Animation LU-5 Apply sound effect LU-6 Format Slide	**Total**: 88 hours **Theory:** 11 hours **Practical:** 77 hours
Module 5: **Prepare In-page documents** **Aim:** This basic module intends to provide knowledge and skills on preparation of In-page documents. It also deals with basic interface, tools/menu management, safety aspects, and In-page application software handling techniques.	LU-1 Set keyboard preferences LU-2 Layout Page LU-3 Toggle between Languages LU-4 Insert Columns	**Total:** 40 hours **Theory:** 13 hours **Practical:** 27 hours
Module 6: **Manage e-mail/internet** **Aim:** This basic module intends to provide knowledge and skills for managing email/internet. It also deals with basic interface, tools/menu management, safety aspects, and email/internet software handling techniques.	LU-1 Configure Email Accounts LU-2 Sort out Emails LU-3 Manage Address Book LU-4 Archive email Data LU-5 Perform Browsing LU-6 Download Data LU-7 Send/Receive Email	**Total:** 45 hours **Theory:** 9 hours **Practical:** 36 hours

Module Title and Aim	Learning Units	Theory / Workplace hours
Module 7: **Manage Information System** **Aim:** This module intends to provide knowledge and skills on the management of information system.	LU-1 Perform Data Entry LU-2 Manage File/folder LU-3 Perform Scanning LU-4 Maintain Office Record LU-5 Perform Printing LU-6 Search Files/Folders LU-7 Convert Files	**Total:** 50 hours **Theory:** 8 hours **Practical:** 42 hours
Module 8: **Identify and peruse new business opportunities in the field of Computer (ICT).** **Aim:** This module intends to develop the knowledge and skills and understanding to develop a new business.	LU-1 Identify business opportunities in the field of Computer (ICT). LU-2 Develop structure of the new Computer Business LU-3 Communicate new computer business to the customers LU-4 Negotiate arrangements for the new computer business	**Total:** 80 hours **Theory:** 40 hours **Practical:** 40 hours

3. Teaching and Learning Guide for Computer Operator

The aim of the training is to enable student to act independently and responsibly in their field of study, by following an educational programme where this is part of the overall methodological concept. Different methodologies can therefore contribute to achieve the objective.

Methods that directly promote capacity-building for the student are particularly suitable and therefore should be included appropriately in the teaching approach. Theory methodologies should be supported by appropriate resources. Practical methodologies should be a set in an appropriate environment and supported by appropriate resources like multimedia, printer, scanner, computers (including CPUs, monitors, key boards mousses etc.). All technical equipment has to be in good working condition.

3.1 Module 1: Maintain Computer System

This Module aims to provide knowledge and skills on computer system management. It also deals with basic introduction to computer system management, safety aspects, tools and equipments identification and handling techniques.

Duration: 114 hours **Theory:** 13 hours **Practical:** 101 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1: Install operating system	**The student will be able to:** 1. Become familiar with basic parts of computer. 2. Identify the difference between hardware and software. 3. Define operating system and windows. 4. Ensure that necessary precautions have been taken before installing any operating system. 5. Install operating system in the PC/ computers by following instructional manual.	1. Know about basic Parts of computer like CPU, Monitor, Key Board, Mouse etc. 2. Develop understanding that hardware is the physical devices (tangible component) and software is the virtual programming (intangible component). 3. Learn about types of different operating systems like Window 2000, Linux, Unix, Window XP, Window Vista etc. 4. Know basic of the differences among the operating systems. 5. Read instructions manual carefully before installing. 6. Take necessary precautions like securing data, RAM size, size of Operating Windows, compatibility etc.	**Total Time:** 30 hrs. **Theory:** 2 hrs. **Practical:** 28 hrs.	• Computer systems • Laptop • CD ROM • CD's • Marker • White Board • Duster • Computers Instructional manual • Multimedia Projector • UPS	Class Room and Computer Lab

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU2: Configure peripheral devices	**The student will be able to:** 1. Define most commonly used peripheral devices. 2. Comprehend the working and uses of various peripheral devices. 3. Use different computer communication ports. 4. Configure peripheral devices, as per the instructions given in their respective manuals.	1. Learn that most commonly used peripheral devices are CD ROM, USB, Printer, Scanner, Key Board, Mouse, Web CAM etc. 2. Employ different types of computer communication ports are given as follows: • VGA • USB • Firewire • eSata • S-Video • Display Port etc.	**Total Time:** **12** hrs. **Theory:** 2 hrs. **Practical:** 10 hrs.	• Computer system • CD ROM • CD's • Scanner • Printer • Keyboard • Mouse • Webcam • Other peripheral devices with respective manuals • Computers for Student • Laptop for Trainer • Multimedia Projector • Marker • White Board • Duster • UPS	Class Room and Computer Lab
LU3: Install peripheral devices	**The student will be able to:** 1. Ensure that necessary precautions have been	1 Install most commonly used peripheral devices such as CD ROM, USB, Printer, Scanner, Key Board, Mouse, Web CAM etc.	**Total Time:** 10 hrs.	• Computer system • CD ROM	Class Room and Computer

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
	taken before installing any peripheral device 2. Install any peripheral device as per instructional manual 3. Pass functional test for the same peripheral device.	2 Describe various steps of installing different peripheral devices. 3 Perform functional test for the newly installed peripheral device for example test print, use of mouse, Key Board etc.	**Theory:** 1 hr. **Practical:** **9** hrs.	• CD's • Scanner • Printer • Keyboard • Mouse • Webcam • Peripheral devices with respective manuals • Computers for Student • Laptop for Trainer • Marker • White Board • Duster • Multimedia Projector • UPS	Lab
LU4: Install software applications	**The student will be able to:** 1. Understand about different software applications. 2. Ensure that necessary precautions have been taken before installing any	1. Practise kinds of different software applications such as MS Word, Excel, PowerPoint, Access, Publisher etc. 2. Describe purpose / uses of various software applications.	**Total Time:** **20** hrs. **Theory:**	• Computer system • CD ROM • CD's of software like MS Word, Excel,	Class Room and Computer Lab

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
	software application. 3. Register a software with the help of key 4. Carefully install a software application as per given instructional manual.	3. Demonstrate precautions which have to be taken while installing any software application 4. Demonstrate installation	**2** hrs. **Practical:** 18 hrs.	PowerPoint, Access, Publisher etc. • Computer Systems • Laptop for Trainer • Marker • White Board • Duster • Multimedia Projector • UPS • USB(for installation)	
LU5: Update/upgrade software application	**The student will be able to:** 1. Check the registry of the application 2. Use the instructional manual for updating/upgrading software applications 3. Update/upgrade software application with the help of CD or Online available	1. Describe various versions of software application. 2. Demonstrate precautions to be taken while updating/ upgrading the software like legal, not a spam etc. 3. Check out some of the applications available online 4. Upgrade some software through CDs.	**Total Time:** 9 hrs. **Theory:** 1 hr. **Practical:** 8 hrs.	• Computer system • CD ROM • CD's • Internet Facilities • Instructional Manual • Marker • White Board • Duster	Class Room and Computer Lab

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
	software. 4. Make sure that updated features are in accordance with the specifications / requirements.	5. Perform procedures for updating / upgrading software manually and where necessary automatic update.		• Multimedia Projector • UPS	
LU6: Perform un-installation of software	**The student will be able to:** 1. Ensure that necessary precautions have been taken before uninstalling any software application. 2. Uninstall any of the software applications. 3. Ensure that the same software application is removed. 4. Make sure that the action done from control panel. 5. Check the impact of un-installing on the memory space as well.	1. Take necessary precautions to uninstall software and make sure that no system file or dll file is deleted or un-installed. 2. Take necessary back-up of the files where necessary. 3. See various features available in the Control Panel. 4. Perform procedure for uninstalling application software as per computer instructions.	**Total Time:** **10** hrs. **Theory:** 1 hr. **Practical:** **9** hrs.	• Computer systems • Laptop for Trainer • Marker • White Board • Duster • Multimedia Projector • UPS	Computer Lab
LU7:	**The student will be able to:**	1. Demonstrate precautions to be taken to		• Computer	Computer

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
Perform windows scan	1. Ensure that necessary precautions have been taken before performing window scanning. 2. Perform Window scan on any infected system. 3. Detect the viruses available on the hard disk associated with windows software. 4. Delete / quarantine all the viruses successfully which are detected as a result of scan.	perform windows scan including back up of light, securing necessary data, key, compatibility etc. 2. Gain knowledge about types of viruses and spam quite common these days including direct virus, booting virus, overwrite virus, Torjan, Memory resident etc. 3. Study types of registered scanning software (Antivirus systems) including AntiVir Personal, Avast! Alwil Software, AVG, BitDefender, ClamWin Kaspersky Lab, McAfee NOD32, ESET's NOD32 Norton AntiVirus, Symantec etc. 4. Demonstrate procedure for error free scanning of windows, without losing any active data file.	**Total Time: 6** hrs. **Theory:** 1 hr. **Practical:** 5 hrs.	systems • CD ROM • CD's • USBs • Marker • White Board • Duster • Multimedia Projector • UPS	Lab
LU8: Format External Mass Storage	**The student will be able to:** 1. Ensure that necessary precautions have been taken before formatting an external mass storage 2. Format external mass	1. Apply all necessary precautions before formatting external mass storage e.g. back-up, data security, archive etc. 2. Study Some examples of external mass storage are USB, CD, memory card etc.	**Total Time: 6** hrs. **Theory:** 1 hr. **Practical:**	• Computer systems • CD ROM • CD's • USBs • Computers for Student	Computer Lab

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
	storage on a PC / computer **3.** Make sure that after formatting the external mass storage the device is clean and empty when open.	3. Apply various formatting options correctly like quick formatting, thorough formatting etc.	5 hrs.	• Marker • White Board • Duster • Laptop for Trainer • Multimedia Projector • UPS	
LU9: Trouble shoot basic software errors	**The student will be able to:** 1. Select the right troubleshooting software 2. Troubleshoot problems of corrupted software. **3.** Remove the errors from the PC / computers.	1. Troubleshoot software like window scan, Window optimizer, compress disk etc. 2. Know that general software errors include computer Bug, path /track corruption and its damages etc. 3. Apply the precautions for trouble shooting errors and system testing, structural testing, how to use windows help etc.	**Total Time: 6** hrs. **Theory:** 2 hr. **Practical:** 4 hrs.	• Computer systems • CD ROM • CD's • Internet Facility • Computers for Student • Laptop for Trainer • Marker • White Board • Duster • Multimedia Projector • UPS	Computer Lab
LU10: Troubleshoot basic hardware faults	**The student will be able to:** 1. Know about basic hardware faults.	1. The basic hardware faults can be power cable connection, cables of key Boards and Mouse and sometimes with printer or scanner etc		• Computer systems • Printer	Computer Lab

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
	2. Understand and Demonstrate types of hardware trouble shooting. 3. Exercise the precautions for trouble shooting errors. 4. Identify solution of hardware errors. 5. Execute the hardware troubleshooting. 6. Make sure that all kinds of hardware are functioning error free in the computer in his/her use.	2. Troubleshoot by checking that all ports are placed at proper place, printer is functioning properly and connected with the system, refresh, restart the system etc. 3. Check hardware like UPS and Printer and scanner before using. 4. Carry out maintenance for various hardware devices on a regular basis as per instructions given in respective manuals.	**Total Time:** 6 hrs. **Theory:** 1 hr. **Practical:** 5 hrs.	• Scanner • Computers for Student • Laptop for Trainer • CD ROM • CD's • Marker • White Board • Duster • Multimedia Projector • UPS	
LU11: Configure basic internet connectivity	**The student will be able to:** 1. Configure basic internet connectivity of a system. **2.** Perform connectivity test successfully.	1. Demonstrate what is internet 2. List types of internet connections. 3. Learn about Procedure of internet connectivity for each type.	**Total Time:** **7** hrs. **Theory:** 1 hrs.	• Computer system • CD ROM • CD's • Modem • LAN card • Wi-Fi device with	Computer Lab

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
			Practical: 6 hrs.	respective manuals • Marker • White Board • Duster • Internet Connectivity • Multimedia Projector • UPS	

Module 2: Prepare Word Documents

This basic module intends to provide knowledge and skills on preparation of word documents. It also deals with basic interface, tools/menu management, safety aspects, and word processing software handling techniques.

Duration: 200 hours **Theory:** 20 hours **Practical:** 180 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1: Type a Word Document	**The student will be able to:** 1. Open a new word file or use templates for documentation. 2. Give a name and location to save the word file. 3. Type in a MS word file with the help of any suitable typing tutor. 4. Make sure that typed document is spelling error free. 5. Develop the typing speed at least 20 words per minute. 6. Open and use some typing tutor programmes 7. Type by using systematic keyboard / finger setting. Preferably with both hands.	1. Type document in MS word including the use of shift and control keys, use of delete and back space keys, use of space bar key, use of entre, etc. with the help of standard key board. 2. Perform typing by using some numerical integers by using numeric pad on the key board 3. Use the left, right, up, down arrow keys on the key board. 4. Type using keyboard and mouse of computer etc. 5. Demonstrate systematic way of typing. Typing lesson from any of the typing tutor programmes. 6. Gain knowledge about at least 3 types of typing tutor programmes like free typing tutor, typing web, rapid typing etc.	**Total Time:** 60 hrs. **Theory:** 2 hrs. **Practical:** 58 hrs.	• MS Word Software • MS Office software installed Computer system • Typed document • Computers for student • Laptop for Trainer • Marker • White Board • Duster • Multimedia Projector • UPS	Computer Lab

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
	8. Perform some online typing test and to make sure that required typing outcome has been achieved through online evaluation.				
LU2: Set-up page in a Word Document	**The student will be able to:** 1. Apply page margins on the word document 2. Set a suitable orientation 3. Set the suitable size of the page 4. Insert some columns in the word file where appropriate 5. Set-up page in any word file document.	1 Demonstrate the components of page set up through toolbar dialog box. 2 Suitable orientation of the page like landscape of portrait etc. 3 Apply page margins like Top, bottom, left and right etc. 4 Use paper sizes like Letter, legal, executive, A5, A4 etc. 5 Perform switching between Landscape and portrait layouts etc. 6 Insert columns like one, two, three or left and right etc.	**Total Time:** 4 hrs. **Theory:** 1 hr. **Practical:** 3 hrs.	• MS Word Software • software installed Computer system • Typed document • Computers for student • Laptop for Trainer • Marker • White Board • Duster • Multimedia Projector • UPS	Computer Lab

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU3: Edit Word Document	**The student will be able to:** 1. Edit a typed word document. 2. Insert a new word or delete a word in the MS word file. 3. Insert a new paragraph or delete a paragraph in the MS word file 4. Add or delete a page or group of paras through selection 5. Check the spellings in the word file through available dictionary 6. Edit an MS document is as per given specification / criteria / demand.	1. Perform save as function 2. Demonstrate different features of editing through "Edit" toolbars and dialogue box 3. Learn the track changes command along with balloon, show mark-up, accept, reject and comments commands etc. 4. Become familiar with different editing options available in the toolbars of the Word file like, word count, set language, treasure, spell check, reviewing pane etc. 5. Understand the procedure and logic for using different features editing like insert delete text in the file, change name etc.	**Total Time:** 12 hrs. **Theory:** 2 hrs. **Practical:** 10 hrs.	• Word processing software installed Computer system • Typed document • Computers for student • Laptop for Trainer • Marker • White Board • Duster • Multimedia Projector • UPS	Computer Lab
LU4: Format Word Document	**The student will be able to:** 1. Format text in the word file 2. Format headings in the word file	1. Demonstrate different features of formatting the word file through toolbar and dialog box. 2. Use word file to justify, font selection, font size, insert, delete text and page layout etc.	**Total Time:** 20 hrs. **Theory:** 4 hrs.	• Word processing software installed Computer system	Computer Lab

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
	3. Insert page numbers in the word file. 4. Set appropriate page margins 5. Apply some background texture. 6. Add some colours to the text / headings. 7. Use bold and italic commands where necessary.	3. Different features of paragraph dialogue box and fonts etc like size, colour, bold, italic, Justify and styles etc. 4. Add page numbers to the word document. 5. Separate headings in the text. 6. Use appropriate style of different fonts.	**Practical:** 16 hrs.	• Typed document • Computers for student • Laptop for Trainer • Marker • White Board • Duster • Multimedia Projector • UPS	
LU5: Save Word Document	**The student will be able to:** 1. Assign a name to the word file. 2. Save word documents at given location in a storage device. 3. Retrieve saved files easily when required.	1. Carry out procedure of saving a word file like “ctrl S” on key board and file menu on menu bar etc. 2. Save a word file with different names 3. Save word file at different locations. 4. Understand and define storage device 5. Gain knowledge of memory and capacity functions.	**Total Time:** 4 hrs. **Theory:** 1 hr. **Practical:** 3 hrs.	• Word processing software installed Computer system • Typed document • Computers for student • Laptop for	Computer Lab

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
		6. Differentiate between "Save" and "Save as" by changing some location, name and paths etc.		Trainer • Marker • White Board • Duster • Multimedia Projector • UPS	
LU6: Insert Word Document	**The student will be able to:** 1. Insert a picture at a given location of a word document 2. Insert clip art at a given location of a word document 3. Insert shapes at a given location of a word document 4. Insert smart Art at a given location of a word document 5. Insert chart at a given location of a word document. 6. Make sure that inserted objects are as per the layout	1. Different types of objects (picture, clip art, shapes, smart Art and chart etc.) in a word file. 2. Describe the procedure of inserting object (Illustrations) in a word document 3. Comprehend that more insert commands are available like insert table, cover page, table of contents, header footer etc. which can be taught separately	**Total Time:** 10 hrs. **Theory:** 1 hr. **Practical:** 9 hrs.	• Word processing software installed Computer system • Typed document • Marker • White Board • Duster • Multimedia Projector • UPS	Computer Lab

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
	of supplied document.				
LU7: Import Document	**The student will be able to:** 1. Import some contents / material in a word document from any other file format. 2. Import some material and contents from internet available online. 3. Import some material from external memory devices.	1. Demonstrate the procedure of importing various kinds of material like slide, data, table, text into a word document. 2. Describe the online availability of material and process how to import contents materials into a document file. 3. Use reference to assign various imported material.	**Total Time:** 3 hrs. **Theory:** 1 hr. **Practical:** 2 hrs.	• Word processing software installed Computer system • Typed document • Computers for student • Laptop for Trainer • Marker • White Board • Duster • Multimedia Projector • UPS	Computer Lab
LU8: Protect the Word Document	**The student will be able to:** 1. Know and demonstrate the procedure of protecting a	1. Protect a word document as to limit its formatting for a style. 2. Apply protection to a word document for	**Total Time:** 3 hrs.	• Word processing software installed	Computer Lab

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
	word document with a particular password 2. Know about the logic of using a password on a word file as well as selection of a strong password. 3. Perform different kinds of protections in a word document such as editing restrictions, read only, restricted users or users with passwords only etc.	restricting its editing to a particular style only. 3. Save a word document by assigning a particular password in order to restrict its accessibility to others. 4. Open a protected word document with the help of a valid password at any stage of time.	**Theory:** 1 hr. **Practical:** 2 hrs.	Computer system • Typed document • Computers for student • Laptop for Trainer • Multimedia Projector • Marker • White Board • Duster • UPS	
LU9: Insert Table in a Word Document	**The student will be able to:** 1. Understand the procedure of inserting table in a word document 2. Know about various uses of different tables. 3. Exhibit different attributes of Insert table.	1. Explain the procedure of inserting table in the word file. 2. Explain various uses of tables in the word file. 3. Use toolbar and dialogue box for insert table. 4. Insert a table with five rows and six columns and headings with shaded area and bold	**Total Time:** 26 hrs. **Theory:** 2 hrs. **Practical:**	Word processing software installed Computer system Typed document Marker White Board Duster Multimedia Projector UPS	Computer Lab

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
		and all entries in a center text with some etc.	24 hrs.		
LU10: Hyperlink Data in a Word Document	**The student will be able to:** 1. Associate data as Hyperlink at a given location of a word document. 2. Access hyperlinked data when required.	1. Perform the procedure of data hyperlink in a word file on a appropriate location. 2. Perform open and close the same data when required. 3. Differentiate the use and purpose of inserting bookmark, cross reference and hyperlink in a word file.	**Total Time:** 3 hrs. **Theory:** 1 hr. **Practical:** 2 hrs.	• Word processing software installed Computer system • Computers for student • Laptop for Trainer • Marker • White Board • Duster • Multimedia Projector • UPS	Computer Lab
LU11: Perform mail merge in a Word Document	**The student will be able to:** 1. Know about the mail merge function. 2. Understand the purpose of	1. Explain the purpose of mail merge. 2. Exhibit mail merge function with the help of given/available data. 3. Practice the function of mail merge to	**Total Time:** **27** hrs.	• Word processing software installed Computer	Computer Lab

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
	mail merge. 3. Perform mail merge as per guidance.	create same from letters in word format and design mail labels and address book etc. 4. Learn attributes of mail merge box and demonstrate the same command at any point of time. 5. Understand and demonstrate the procedure for mail merge.	**Theory:** 2 hrs. **Practical:** 25 hrs.	system • Computers for student • Laptop for Trainer • Marker • White Board • Duster • Multimedia Projector • UPS	
LU12: Insert header/footer in a Word Document	**The student will be able to:** 1. Understand the attributes of Header and Footer in the word file. 2. Perform the attributes of Header and Footer in the word file. 3. Differentiate between header and footer. 4. Perform the inserting date	1. Explain the purpose of using Header and Footer in the word file. 2. Explain the process of inserting Header and Footer in the word file. 3. Differentiate between header and footer and their options available as a ready format in the toolbar of a Microsoft word. 4. Practice the same as per given instructions. 5. Demonstrate the procedure for inserting header and footer in a word file.	**Total Time:** 8 hrs. **Theory:** 1 hr. **Practical:** 7 hrs.	• Word processing software installed Computer system • Computers for student • Laptop for Trainer • Marker • White	Computer Lab

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
	and page numbers etc. in the footer	6. Perform inserting date and page numbers etc. in the footer		Board • Duster • Multimedia Projector • UPS	
LU13: Insert Section Break in a Word Document	**The student will be able to:** 1 Understand and the purpose and procedure of inserting section break in a word document. 2 Differentiate between section break and page break and their purpose and utility. 3 Perform the different attributes of inserting section breaks in a word file.	1. Explain the purpose of inserting section break in a word document. 2. Explain and demonstrate the procedure of inserting section break in a word document. 3. Identify difference between section break and page break and their purpose and utility. 4. Experience the different attributes of Breaks menu in a word file. 5. Demonstrate the command. 6. Insert a Section Break at a given location of a word document.	**Total Time:** 6 hrs. **Theory:** 1 hr. **Practical:** 5 hrs.	• Word processing software installed Computer system • Computers for student • Laptop for Trainer • Marker • White Board • Duster • Multimedia Projector • UPS	Computer Lab
LU14: Set Style in a Word	**The student will be able to:**	1. Demonstrate the procedure of set style with the help of Multimedia projector.	**Total Time:** 12 hrs.	• Word processing	Computer Lab

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
Document	1. Learn about different Styles available in a word file. 2. Know the purpose of setting different styles in a word document and its various utilities. 3. Set an appropriate style in a given document for the contents of document. 4. Perform set styles as per the standard / requirements of the instructor.	2. Explain the purpose of setting styles in a word document and its various utilities. 3. Practice to set the same style in the given word document file available at PC. Also choose some other style options. 4. Assess the quality of performance.	**Theory:** 2 hr. **Practical:** 10 hrs.	software installed Computer system • Computers for student • Laptop for Trainer • Marker • White Board • Duster • Multimedia Projector • UPS	
LU15: Insert Table of contents in a Word Document	**The student will be able to:** 1. Insert a table of contents in a given word document. 2. Perform different heading options in the toolbars for inserting table of content in a word document. 3. Perform and describe the	1. Demonstrate and explain the process of inserting a table of contents in the word file. 2. Demonstrate by using different heading options in the toolbars for inserting Table of content. 3. Become familiar with purpose and uses of inserting table of contents in a word file. 4. Practise various features of Table of	**Total Time:** 9 hrs. **Theory:** 1 hr.	• Word processing software installed Computers for student • Laptop for Trainer • Computer system	Computer Lab

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
	various steps to insert table of content in a word file.	Content menu in a word file.	**Practical:** 8 hrs.	• Marker • White Board • Duster • Multimedia Projector • UPS	

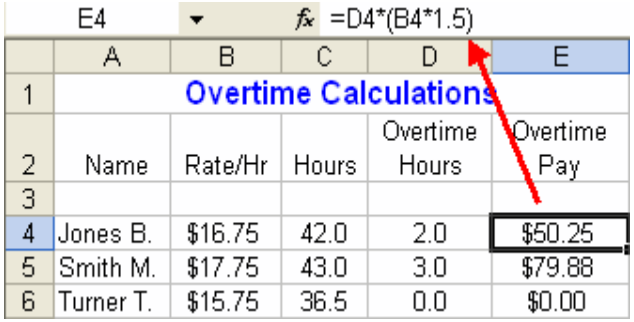
3.3 Module 3: Prepare Spreadsheet

This basic module intends to provide knowledge and skills on preparation of spreadsheets. It also deals with basic interface, tools/menu management, safety aspects, and spreadsheet application software handling techniques.

Duration: 142 hours **Theory:** 16 hours **Practical:** 126 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1: Create Workbook	**The student will be able to:** 1. Know about the excel spreadsheet application software. 2. Create a workbook on spreadsheet applications in the Excel software. 3. Demonstrate the procedure to create workbook using spreadsheet.	1. Use electronic spreadsheet programme to store, organize and manipulate data. 2. Explain the types and uses of excel sheets and other common operations that Excel can be used for including: • Graphing or charting data to assist users in identifying data trends. • Sorting and filtering data to find specific information. (The information garnered in a spreadsheet can easily be incorporated into electronic presentations, web pages, or printed off in report form). 3. Explain the process of opening a excel file and creating a workbook. 4. Practice the same command by creating a new workbook with their own names on the desktop of their PCs. 5. Gather information for the excel and its uses in the different sectors like accounting, budgeting, statics, database, management of a large data etc.	**Total Time:** 10 hrs. **Theory:** 2 hrs. **Practical:** 8 hrs.	• Spreadsheet software installed Computer system • Marker • White Board • Duster • Multimedia Projector • UPS	Computer Lab
LU2: Insert Sheet	**The student will be able to:** 1. Understand how to insert sheet in the Excel file.	1. Explain the main parts of the Excel spreadsheet work area. 2. Learn basics of creating a spreadsheet in the	**Total Time:** 5 hrs.	• Spreadsheet software installed	Computer Lab

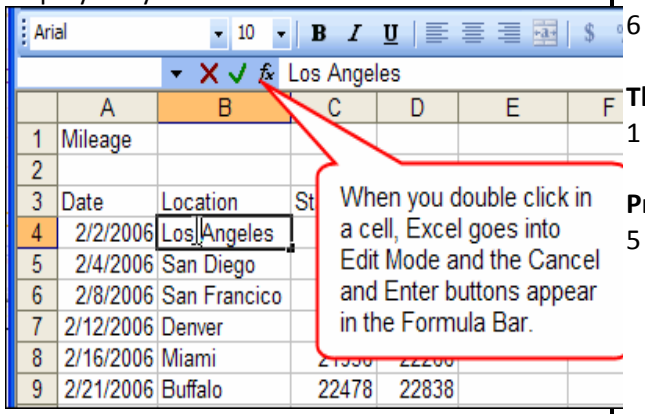
Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
	2. Demonstrate how to insert Sheet in the Excel file, as per given instructions.	latest versions of Excel. 3. Study entering data, creating name etc.	**Theory:** 1 hr. **Practical:** 4 hrs.	Computer system • Marker • White Board • Duster • Multimedia Projector • UPS	
LU3: Apply basic formulae/functions	**The student will be able to:** 1 Perform different basic formulae by using the options available in the spreadsheets of an excel file like sum, auto sum, division, multiplication or subtraction of one column with other and get the output in the third column etc. 2 Differentiate between formula and functions available in the excel software toolbar as ***(ƒx)*** and by using is equal symbol with sum and brackets different	1. Explain and demonstrate basics of creating a formula / function in the spreadsheet in the latest versions of Excel. 2. Create and use formulas, including a step by step example of a basic Excel formula. Such as: • How to enter a formula • Make it easy to change your spreadsheet • Automatic updating • Adding to formulas • Entering the Data • Add the Equal (=) Sign • Add Cell References Using Pointing	**Total Time:** 60 hrs. **Theory:** 5 hrs. **Practical:** 55 hr.	• Spreadsheet software installed Computer system • Marker • White Board • Duster • Multimedia Projector • UPS	Computer Lab

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
	options available. 3 Perform functions like Average, If, Sum, Count Max, Hyperlink, Date, VLookup, LOOKUP, Traspose etc.	Excel Formulas Overview  E4 =D4*(B4*1.5) Overtime Calculations Name / Rate/Hr / Hours / Overtime Hours / Overtime Pay Jones B. / $16.75 / 42.0 / 2.0 / $50.25 Smith M. / $17.75 / 43.0 / 3.0 / $79.88 Turner T. / $15.75 / 36.5 / 0.0 / $0.00 Example: Since adding rows and columns of numbers is one of the most common operations in Excel, Microsoft has included a shortcut to make the job easier. Instructor step by step walks through how to use Excel's SUM functions.			
LU4: Create Charts / Graphs	**The student will be able to:** 1. Demonstrate, understand and define charts/graphs and their use in the excel sheets with examples 2. Create different kinds of charts like, charts, graphs pie chart, bar chart, gant chart,	1. Draw a graph, or a chart in Microsoft Excel, a visual representation of worksheet data. 2. Show step by step how to create the most commonly used charts in Excel - column chart (bar graph) pie chart, line graph, and even how to use the Sparklines - which are new to Excel 2010. 3. A Change the display of the chart elements by moving them to other locations in the chart, resizing them, or by changing the format and also	**Total Time:** 30 hrs. **Theory:** 2 hrs. **Practical:** 28 hrs.	• Spreadsheet software installed Computer system • Multimedia Projector • UPS	Computer Lab

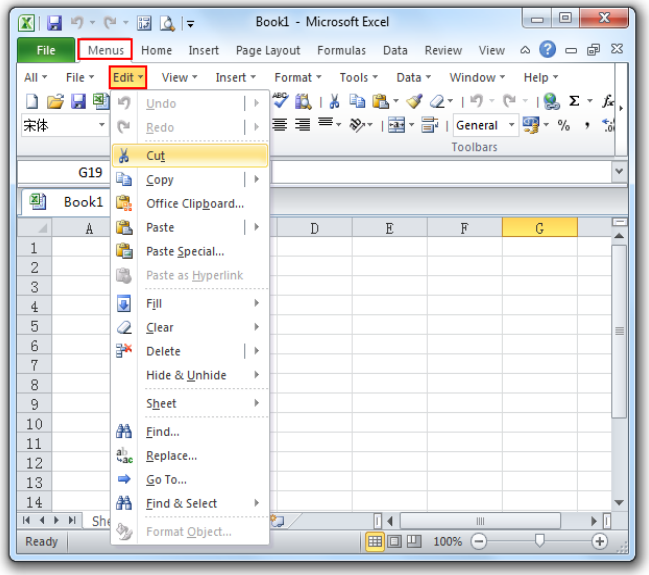
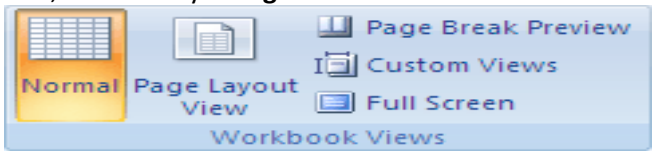
Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
	line graph, scattered chart, area chart etc. 3. Set a default chart in the file. 4. Assign a suitable name to the chart 5. Add values and labels in the chart 6. Convert a chart into another form 7. Demonstrate the procedure of creating different charts/graphs 8. Selecting type of chart, colour of chart area and present the same with labels and values etc. 9. Demonstrate editing in the different components of charts areas	remove chart elements that not wanting to display:  • The chart area of the chart. • The plot area of the chart. • The data points of the data series that are plotted in the chart. • The horizontal (category) and vertical (value) axis along which the data is plotted in the chart. • The legend of the chart. • A chart and axis title that you can use in the chart. • A data label that you can use to identify the details of a data point in a data series. 4. Modify any one element of the created chart. .			

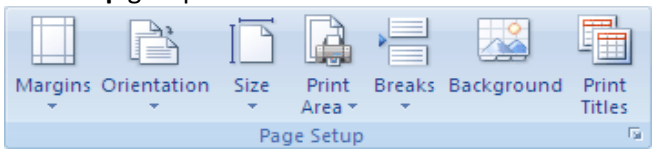
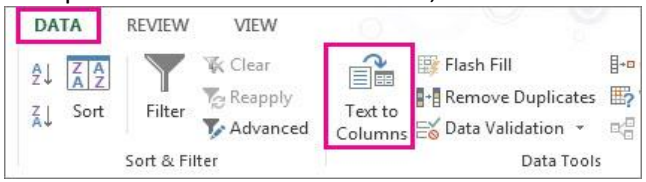
Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
		5. Modify a chart: • **Change the display of chart axes** specify the scale of axes and adjust the interval between the values or categories that are displayed. To make chart easier to read, you can also add tick marks to an axis, and specify the interval at which they will appear. • **Add titles and data labels to a chart** To help clarify the information that appears in your chart, you can add a chart title, axis titles, and data labels. • **Add a legend or data table** show or hide a legend, change its location, or modify the legend entries. In some charts, you can also show a data table that displays the legend keys and the values that are presented in the chart. • **Apply special options for each chart type** Special lines (such as high-low lines and trend lines), bars (such as up-down bars and error bars), data markers, and other options are available for different chart types.			
LU5: Filter Data	**The student will be able to:**	1. Filter data available in one column which filtering can copy, find, edit, format, chart, and print the		• Spreadsheet	Computer Lab

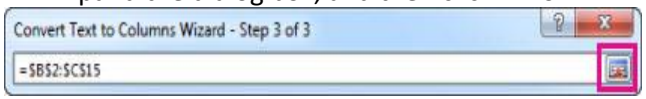
Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
	1. Demonstrate the procedure of filtering data by making some different fields and preferences on the same sheet as well as on some other sheets. 2. Differentiate filter and sort of data from different aspects. 3. Perform data sorting from A-Z and also from Z-A. 4. Perform some basic functions on the filter and some advance options like skipping the lower values or date wise etc.	subset of filtered data without rearranging or moving it. 2. Filter data by more than one column. Filters are additive, which means that each additional filter is based on the current filter and further reduces the subset of data. 3. Use AutoFilter Create three types of filters: by a list values, by a format, or by criteria. 4. Determine if a filter is applied, note the icon in the column heading: • A drop-down arrow means that filtering is enabled but not applied. • A Filter button means that a filter is applied. 5. Reapply a filter to achieve different results appear for the following reasons: • Data has been added, modified, or deleted to the range of cells or table column. • The filter is a dynamic date and time filter, such as **Today**, **This Week**, or **Year to Date**. • Values returned by a formula have changed	**Total Time: 6** hrs. **Theory:** 1 hrs. **Practical:** 5 hrs.	software installed Computer system • Marker • White Board • Duster • Multimedia Projector • UPS	

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
		and the worksheet has been recalculated.			
LU6: Format Cell	**The student will be able to:** 1. Demonstrate the features of Format Cell available in the toolbar and the dialog box. 2. Demonstrate the procedure to format different cells in different manners.	1. Add that extra column or delete unwanted rows. 2. Learn tochange or delete the 3. Employ ways to edit the contents of the cell.  4. Clear Contents of a cell. Select the cell and press the delete key	**Total Time:** 6 hrs. **Theory:** 1 hrs. **Practical:** 5 hrs.	• Spreadsheet software installed Computer system • Marker • White Board • Duster • Multimedia Projector • UPS	Computer Lab
LU7: Edit Worksheet	**The student will be able to:** 1. Demonstrate the procedure to edit worksheet with different requirements like size of cells, colours, shades and lines etc.	1. Enter Data values In worksheet and use • Edit, Clear, and Replace Cell Contents • Cut, Copy, Paste, and Move Cells • Understand Absolute and Relative Cell References	**Total Time:**	• Spreadsheet software installed Computer system • Marker	Computer Lab

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
	2. Describe the precautions to be taken while editing a spreadsheet worksheet also some basic functions like Wrap Text, font boarder, fill protection etc. 3. Demonstrate the concept of editing worksheet.	• Insert and Delete Cells, Rows, and Columns • Use Undo and Redo • Check Spelling in Learners Worksheet • Use Advanced Print Options • Basic File Management • Insert Cell Comments • shading alternate rows of data • adding currency and percent symbols • widening columns • changing data alignment 2. Format a worksheet.	8 hrs. **Theory:** 1 hrs. **Practical:** 7 hrs.	• White Board • Duster • Multimedia Projector • UPS	

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
					
LU8: Insert Page break	**The student will be able to:** 1. Understand the procedure of inserting page break in an excel file according to the given design 2. demonstrate the procedure of inserting page break in a excel file according to the	1. Print worksheet. 2. , Use facility of**Page Break Preview**.  • Apply page break 4. Click break on the **Page Layout** tab, in the **Page**	**Total Time:** 10 hrs. **Theory:** 1 hr. **Practical:** 9 hrs.	• Spreadsheet software installed Computer system • Marker White Board • Duster • Multime	Computer Lab

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
	given design	**Setup** group.  5. Click Insert Page Break. 6. Practise with the help of cursor and key board, toolbar and mouse etc. • Insert a page break • Move a page break • Delete a page break • Reset all page breaks • Return to Normal view • Display or hide page breaks in Normal view		dia Projector • UPS	
LU9: Split Cells	**The student will be able to:** 1. Know how to split cells in the worksheet 2. Perform the process of split cells by demonstrating various steps in an excel sheet.	1. Spread text in one or more cells, **.Columns**.  2. Collapse the dialog box.	**Total Time:** 6 hrs. **Theory:** 1 hrs. **Practical:** **5** hrs.	• Spreadsheet software installed Computer system • Marker • White Board • Duster	Computer Lab

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
		3. Select the cells in your workbook where you want to paste your split data. , and select the appropriate number of cells in two adjacent columns.  4. Expand the dialog box, and then click **Finish**.  		• Multimedia Projector • UPS	
LU10: Merge Cells	**The student will be able to:** 1. Know and perform the procedure for splitting cells in the excel file.	1. Demonstrate how to merge the cells.  	**Total Time:** 6 hrs. **Theory:** 1 hr. **Practical:**	• Spreadsheet software installed Computer system • Marker • White	Computer Lab

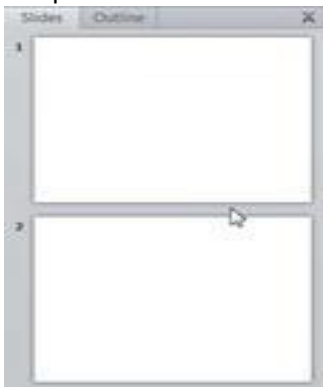
Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
		2. Un merged the same cells.	5 hrs.	Board • Duster • Multimedia Projector • UPS	

3.4 Module 4: Prepare Presentation

This basic module intends to provide knowledge and skills on preparation of Presentation. It also deals with basic interface, tools/menu management, safety aspects, and presentation software handling techniques.

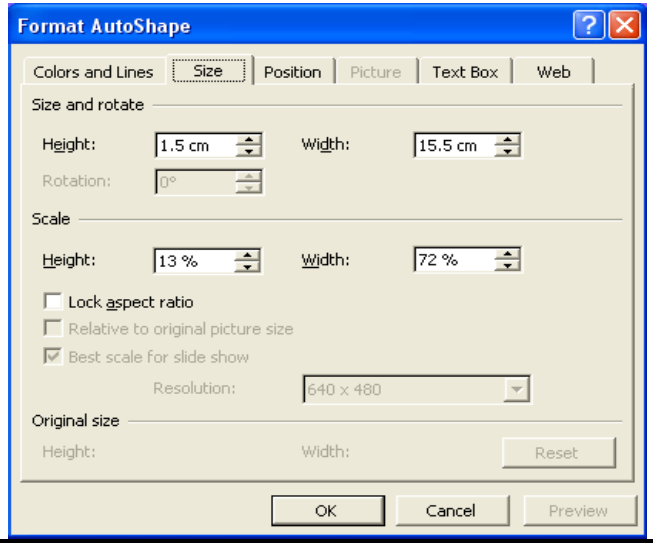
Duration: 88 hours **Theory:** 11 hours **Practical:** 77 hours

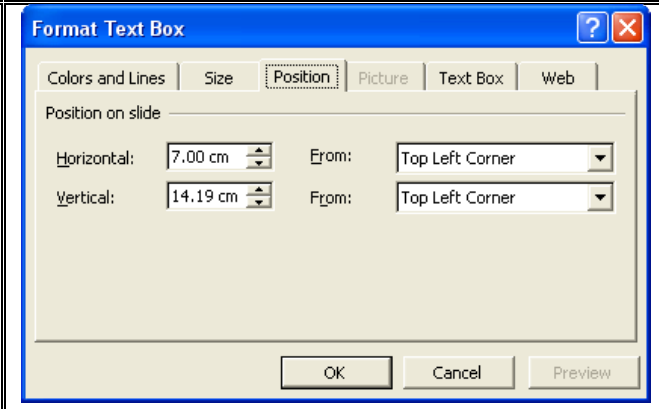
Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1: Prepare Master Slide	**The student will be able to:** 1. Demonstrate the interface of presentation software 2. Define Master Slide as per options available in the software of Power Point. 3. Describe the significance of preparing master slide before preparing a presentation. 4. Perform step wise procedure for preparing master slide including slide orientation and layout of the master slide.	1. Learn in detail about master slide. 2. Comprehend the key benefit of using slide masters. 3. Create and edit a slide master or corresponding layouts. 4. Use multiple slide masters in a presentation.  Learn to add another slide master 5. Remove any of the built-in slide layouts. 6. Apply a theme to presentation. 7. Set the page orientation for all of the slides in presentation.	**Total Time:** 20 hrs. **Theory:** 2 hrs. **Practical:** 18 hrs.	• Presentation software installed computer system • Marker • White Board • Duster • Multimedia Projector • UPS	Computer Lab
LU2:	**The student will be able to:**	1. Add one or more slides to presentation from		• Presentatio	Computer

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
Insert Slides	1. Perform stepwise procedure to insert slide in the power Point presentation. 2. Insert different types of slides like new slide, duplicate slide or any other slide with a different look and theme.	another presentation, without having to open the other file. Add slides from a file that is located on same computer or on a network share 	**Total Time:** 6 hrs. **Theory:** 1 hr. **Practical:** 5 hrs.	n software installed computer system • Marker • White Board • Duster • Multimedia Projector • UPS	Lab
LU3: Design Slide	**The student will be able to:** 1. Define design slide 2. Demonstrate the procedure to design a slide in the power point 3. Change the design and colour, fonts, effects and background etc.	1. Create a template and add it to the **Slide Design** task pane. 2. Apply such elements as a background and color scheme, font style, layout, and art. . 3. Switch to master view. 4. Make the changes to the slide master including formatting background, apply slide designs,	**Total Time:** 40 hrs. **Theory:** 4 hrs. **Practical:** 36 hrs.	• Presentation software installed computer system • Marker • White Board • Duster • Multimedia Projector	Computer Lab

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
		format colour schemes etc. 5. **Save As**. 6. **Save**.the template in the Templates folder. (This is the folder that PowerPoint uses by default when you select **Design Template** as the file type in the **Save As** dialog box.) 7. Save template in the **New Presentation** task pane (**File** menu, **New**) under **Recently used templates**.		• UPS	
LU4: Apply animation	**The student will be able to:** 1. Understand the concept of adding animation in the power Point slide show. 2. Demonstrate the basic techniques of animation like wipe down, wipe up, Wedge, Shape diamond, Wheel clockwise etc. 3. Demonstrate the features/attributes of	1. Learn meaning and usage of animation.Create animation on one slide or on some slides of the presentationusing . slide master. 2. Use Microsoft power point to support animations, in the Slide Show group of the main menu. 3. Perform custom animation on one slide. 4. Apply a custom animation to all slides 5. Study • Chart Animation • The Order of Animations	**Total Time: 10** hrs. **Theory:** 2 hrs. **Practical:** 8 hrs.	• Presentation software installed computer system • Marker • White Board • Duster • Multimedia Projector • UPS	Computer Lab

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
	animation pane available in the power Point software. 4. Apply animation to a single slide and to various slides 5. Differentiate between animation and transition of a slide and setting a transition time (Fast, Medium or Slow) for a slide or setting it on a single click, or mouse click etc.	• The Start Timing Effect of an Animation • The Dimming Effect of an Animation • Animations and Sounds • Effects on Slides Transitions			
LU5: Apply Sound effects	**The student will be able to:** 1. Describe sound effect. 2. Demonstrate the uses of sound effect 3. Demonstrate the procedure to apply sound effect e.g. Camera, Bomb, arrow, applause, drum roll etc.	1. Demonstrate how to use sound effects during presentation, by associating some sound effects with the animation. 2. Select the animation to associate with a sound effect. 3. Demonstrate different sound effects by associating with different actions. Teacher can also demonstrate how to use the combination of different sound effects in a single power Point presentation/slide.	**Total Time:** 6 hrs. **Theory:** 1 hr. **Practical:** 5 hrs.	• Presentation software installed computer system • Marker • White Board • Duster • Multimedia Projector • UPS	Computer Lab
LU6:	**The student will be able to:**	1. Format the Master Title.		• Presentatio	Computer

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
Format Slide	1. Know and understand the procedure to format slide 2. Perform the procedure to format slide 3. Format the slide in different ways	2. Format slide by changing the font colour, font size, location of text, background colours, inserting a picture or clip art etc. 	**Total Time:** 8 hrs. **Theory:** 1 hr. **Practical:** 7 hrs.	n software installed computer system • Marker • White Board • Duster • Multimedia Projector • UPS	Lab

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
		 3. Deleted or change properties of slide format.			

3.5 Module 5: Prepare In-page documents

This basic module intends to provide knowledge and skills on preparation of In-page documents. It also deals with basic interface, tools/menu management, safety aspects, and In-page application software handling techniques.

Duration: 40 hours **Theory:** 13 hours **Practical:** 27 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1: Setting Keyboard preferences	**The student will be able to:** 1. Perform keyboard preferences 2. Perform step wise setting of keyboard preferences on the PC with In-Page interface. 3. Demonstrate key position of any keyboard preferences by switching the language from English to Urdu, as per user requirement	Setting key board preferences. 1. Learn toswitch between different input languages (= keyboard languages) by pressing the Alt + Shift keys	**Total Time:** **6** hrs. **Theory:** 1 hr. **Practical:** 5 hrs.	• Computer systems installed with In page software • White board • Erasable marker • Multimedia Projector • UPS	Classroom Computer Lab
LU2: Page Layout	**The student will be able to:** 1. Demonstrate different page sizes in the In-Page file. 2. Elaborate page margins in the in page format 3. Exhibit to add page numbering in the file	• Specify page layout and paragraph formatting attributes for selected text.	**Total Time:** 20 hrs. **Theory:** 4 hr. **Practical:**	• Computer systems • In page Urdu software • Marker • White Board • Duster • Multimedia Projector • UPS	Classroom Computer Lab

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
			16 hrs.		
LU3: Toggle between languages	**The student will be able to:** 1. Perform supportive languages in In-page such as Urdu, Arabic or Persian etc. 2. Perform how to toggle between different languages 3. Elaborate procedure of toggling between languages	1 Study how to toggle between languages. 2 it Learn to operate it. 3 Practice how to toggle between languages.	**Total Time:** 10 hrs. **Theory:** 6 hrs. **Practical:** 14 hrs.	• Computer system • In page Urdu software • Marker • White Board • Duster • Multimedia Projector • UPS	Classroom Computer Lab
LU4: Insert Columns	**The student will be able to:** 1. Understand the importance of columns in In-page and perform them manually. 2. State and demonstrate supporting options for inserting columns. 3. Describe the steps/procedure of inserting columns	1. Practice selecting the whole text and inserting in columns. 2. Select a specific text and insert in columns to see that specific text has been divided in two or three columns; where as rest of the text remains the same as before.	**Total Time:** **6** hrs. **Theory:** 1 hr. **Practical:** 5 hrs.	• Computer system • In page Urdu software • Marker • White Board • Duster • Multimedia Projector • UPS	Classroom Computer Lab

3.6 Module 6: Manage e-mail/internet

This basic module intends to provide knowledge and skills for managing email/internet. It also deals with basic interface, tools/menu management, safety aspects, and email/internet software handling techniques.

Duration: 45 hours **Theory:** 9 hours **Practical:** 36 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1: Configure e-mail account	**The student will be able to:** 1. Define Email 2. Demonstrate the steps for Email configuration 3. Identify Errors while Email configuration	1. Configure the Internet email information service to send and receive messages in Microsoft Outlook software. • 2. Send a test message from the newly formed email id. 3. Retrieve the test message from the newly formed email account.	**Total Time: 8** hrs. **Theory:** 2 hrs. **Practical:** 6 hrs.	Internet Connection White Board Internet connectivity Computer system Board Marker Eraser Multimedia Projector UPS	Classroom Computer Lab
LU2: Sort out email	**The student will be able to:** 1. Demonstrate sorting out of emails on the PC. 2. Describe procedure of sorting out emails in the outlook and its benefits 3. Perform successfully sorting out of emails as per instructions.	1 Sort out emails in inbox of "MS Outlook" by the account through which they were received using various applications.	**Total Time: 6** hrs. **Theory:** 1 hrs. **Practical:** 5 hrs.	• Internet Connection • White Board • Internet connectivity • Computer system	Classroom Computer Lab

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
				• Board Marker • Eraser • Multimedia Projector • UPS	
LU3: Manage Address Book	**The student will be able to:** 1. Understand and define address book 2. demonstrate the method of managing the address book by adding some contacts, removing contacts, importing, exporting sorting and updating etc.	1. Use address book and send a message from names while completing To, Cc, and Bcc fields 2. Specify which address list is shown by default in the Outlook Address Book 3. Copy contacts from a personal Address Book to Contacts by opening the Address Book, right-click the contact, and choosing add to contacts. 4. Change the way names appear in the Address Book. by clicking E-mail Accounts. 5. Include or exclude a Contacts folder from the Outlook Address Book using the Navigation Pane 6. Move contacts from one Contacts folder to another making sure the target folder is configured for Contact	**Total Time:** 6 hrs. **Theory:** 1 hr. **Practical:** 5 hrs.	• Internet Connection • White Board • Internet connectivity • Computer system • Board Marker • Eraser	Classroom Computer Lab

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
		items. 7. Copy contacts from a Contacts folder to a Personal Address Book 8. Set a Personal Address Book as the place to store addresses. 9. Import contacts from a Personal Address Book to Contacts		• Multi media Projector • UPS	
LU4: Achieve e-mail Data	**The student will be able to:** 1. Define procedure of Archiving Email data 2. Demonstrate practically the procedure of archiving emails, as per requirements	1. Keeps the size of main PST file small and manageable. Use Outlook do some of that using AutoArchiveor you divide your messages between more PST files. 2. Create an archive of old messages in Outlook separate from the PST file used every day. 3. Retrieve messages from an archive PST file that has been closed: •	**Total Time: 6** hrs. **Theory:** 1 hr. **Practical:** 5 hrs.	• Internet Connection • White Board • Internet connectivity • Computer system • Board Marker	Classroom Computer Lab

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
				• Eraser • Multi media Projec tor • UPS	
LU5: Perform Browsing	**The student will be able to:** 1. Define Browsing 2. Perform the components of browsing as per given instructions	1. Define different browsing search engines, like google, yahoo, altavista etc. 2. Define the key word and how to browse the data by using the key word. 3. Perform browsing on some different search engines 4. Perform browsing of images, news, books, articles, document files, power point presentations and latest stories etc. 5. Ask each student to perform Browsing in a manner that exact information is browsed and data is fetched as per instructions	**Total Time:** 10 hrs. **Theory:** 2 hrs. **Practical:** 8 hrs.	• Intern et Conne ction • White Board • Intern et conne ctivity • Comp uter syste m • Board Marke r • Eraser • Multi media Projec	Computer Lab

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
				tor • UPS	
LU6: Download Data	**The student will be able to:** 1. Define downloading 2. Demonstrate the procedure of downloading data 3. Take precautions to be taken to download data	1. Define what is downloading and different types of downloading. 2. Demonstrate how to save the file and give a path to the file, where it is required. 3. Demonstrate the step wise procedure of downloading data to the students in the lab 4. Demonstrate precautions to be taken to download data	**Total Time: 7** hrs. **Theory:** 1 hr. **Practical:** 6 hrs.	• Internet Connection • White Board • Internet connectivity • Computer system • Board Marker • Eraser • Multimedia Projector • UPS	Computer Lab

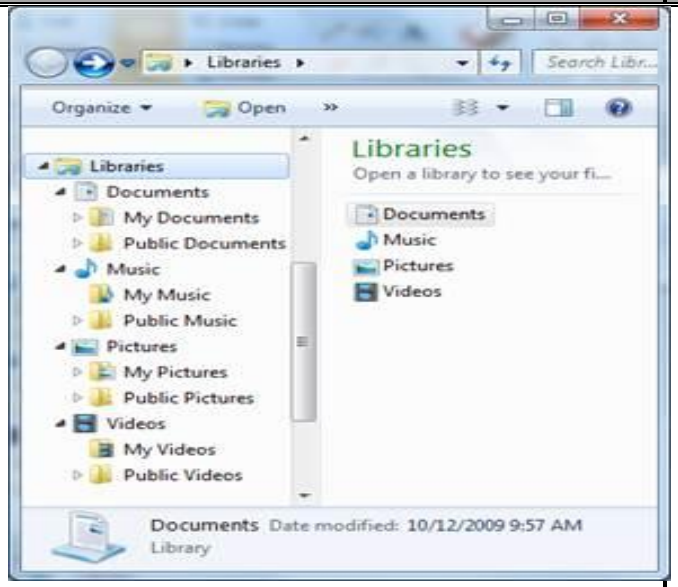
Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU7: Send and receive e-mails	**The student will be able to:** 1. Demonstrate the procedure to send an email. 2. Demonstrate the procedure to receive an Email. 3. Describe precautions to be taken for sending/receiving Emails 4. Perform the components to send/Receive Emails	1. Learn to send e-mail. 2. Use keyboard to send and receive emails in all Windows Mail or Outlook Express accounts. 3. Make sure that all spellings are correct, appropriate subject has been added, necessary attachment (if any) has been added and correct e-mail addresses are used to send e-mails. 4. Add addresses in the CC and BCC where required.	**Total Time:** 5 hrs. **Theory:** 1 hrs. **Practical:** 4 hrs.	• Internet Connection • White Board • Internet connectivity • Computer system • Board Marker • Eraser • Multimedia Projector UPS	Classroom Lab

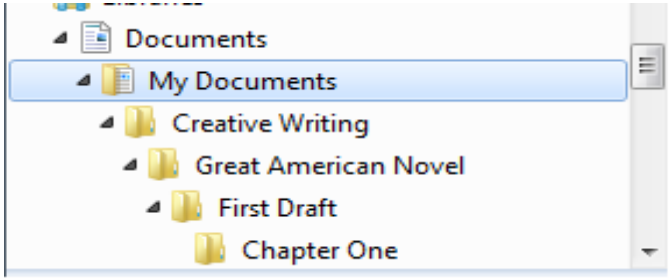
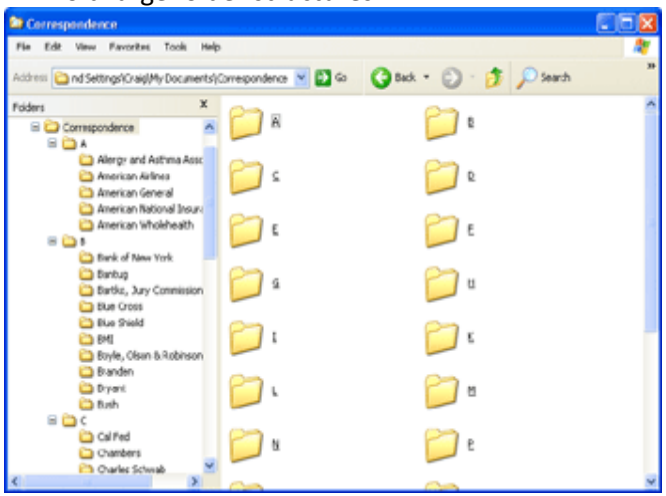
3.7 Module 7: Manage Information System

This module intends to provide knowledge and skills on the management of information system.

Duration: 50 hours **Theory:** 8 hours **Practical:** 42 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1: Perform Data Entry	**The student will be able to:** 1. Demonstrate data entry procedures. 2. Enlist types of data. 3. Demonstrate the techniques to enter the data efficiently.	1 Organize raw data (which has little value) into something useful. 2 Process the data to make it useful in decision-making. . 3 Acquire skills related to keyboarding and in the use of word processing, spreadsheet, and database management computer software packages. 4 Use software programs available such as **Typing and Data Entry** to learn how to enter data without having to go to formal classes.	**Total Time:** 16 hrs. **Theory:** 2 hrs. **Practical:** 14 hrs.	• Typing Tutor Software • White Board • Multimedia • Computer system • Board Marker • Eraser • UPS	Classroom Computer Lab
LU2: Manage File folder	**The student will be able to:** 1. Differentiate between files/folders 2. Demonstrate types of files 3. Define storage devices 4. Manage data on Hard disk	1. Customize the Documents library (in addition to the Music, Pictures, and Videos libraries that are also included by default) in Windows 7 to group files and folders from any location on computer—without actually moving them or build own libraries to easily organize files.	**Total Time:** 6 hrs. **Theory:** 1 hrs. **Practical:** 5 hrs	• White Board • Multimedia Projector • Computer system • Board Marker • Eraser • UPS	Classroom Computer Lab

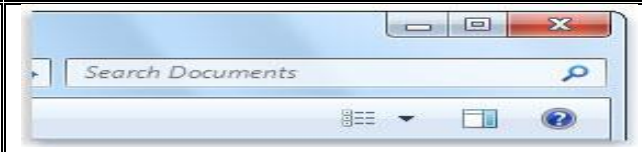
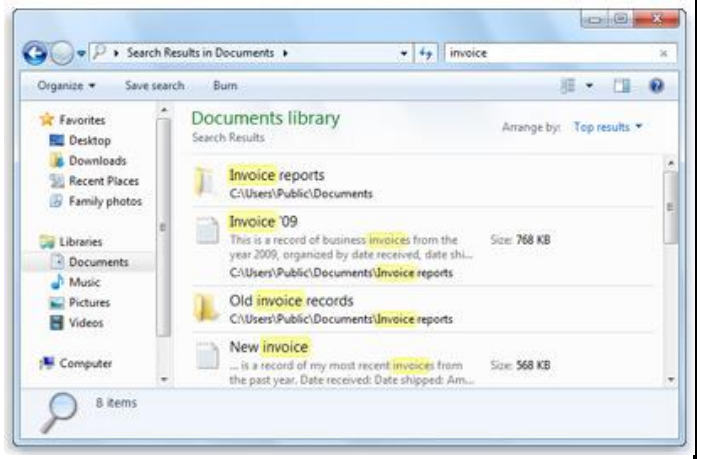
Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
		 2. Demonstrate how to find files. 3. Discover an easy way to store personal documents by explaining difference between a file and a folder in different storage devices like Hard Disk, USB, CD etc. 4. Demonstrate how to get back up files. 5. Adopt consistent methods for file and folder naming. 6. Keep names short.			

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
		7. Let folder structure do some of the naming. For example, rather than creating a file called Great American Novel Chapter One First Effort, you can build a structure like this:  8. Avoid large folder structures.  *Alphabetized folders.*			

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU3: Perform Scanning	**The student will be able to:** 1. Explain the procedure of scanning 2. Perform the pre-requisites for scanning 3. Demonstrate step by step procedure of scanning a computer	1. Scan computer completely and correctly for malware like viruses, Trojan horses, rootkits, spyware, adware, worms, etc. is often a very important troubleshooting step. A simple virus scan will no longer do. 2. Download and run the Microsoft Windows Malicious Software Removal Tool. This free, Microsoft provided malware removal tool will not find everything, but it will check for "specific, prevalent malicious software" which is a good start. 3. Update anti-virus and any anti-malware software installed on computer. 4. Make sure the virus definitions are up to date. These regular updates tell anti-virus software how to find and remove the latest viruses from PC. 5. Run a complete virus scan on entire computer. If malware scanner is used that does more than look for viruses, run a full scan using that program too. 6. Properly check computer for malware when working to solve many problems.	**Total Time:** 6 hrs. **Theory:** 1 hr. **Practical:** 5 hrs.	• Scanner • Papers • White Board • Multimedia • Computer system • Board Marker • Eraser • UPS	Classroom Computer Lab
LU4: Maintain office record	**The student will be able to:**	1. Ensure that the content, context and structure of records is preserved and protected when the	**Total Time:**	• Scanner • Papers	Classroom Computer

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
	1. Explain the importance of indexing 2. Identify steps for maintain the office record 3. Perform indexing	records do not have a physical existence. This has important implications for the authenticity, reliability, and trustworthiness of records. 2. Manage electronic record's backup to meet functional requirement for computer. 3. Enhance the ability to access and read electronic records over time, since the rapid pace of change in technology can make the software used to create the records obsolete, leaving the records unreadable.	**6** hrs. **Theory:** 1 hr. **Practical:** 5 hrs.	• White Board • Multimedia • Computer system • Board Marker • Eraser • UPS	Lab
LU5: Perform Printing	**The student will be able to:** 1. Perform steps involved in printing 2. Perform printing options 3. Explain essential requirements before printing 4. Explain types of printers	1. Get print-out from the PC. 2. Handle problem that occur while printing: A) If a file is processed in a Windows based program (like MS Word, Excel or PowerPoint or L-View, PhotoShop etc.), first you have to open it to the desktop. B) From "File" menu click "Print" command. Choose the printer which is using a driver e.g. "HP LaserJet etc." (written near "type" on the printer window) C) If you would like to print on both sides of the paper,	**Total Time: 6** hrs. **Theory:** 2 hrs. **Practical:** 4 hrs.	• Plotters • Printer • Cartridge • Papers • White Board • Multimedia • Computer system • Board Marker • Eraser • UPS	Computer Lab

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
		add the number 2 next to the names of the printers. D) If you just want to print a mail press "Ctrl P" key on the keyboard.			
LU6: Search Files / Folders	**The student will be able to:** 1. Perform types of files 2. Enlist wild cards 3. Describe search procedure	1. Use different methods to find files in different situations. 2. Use the search box on the Start menu to find files, folders, programs, and e-mail messages stored on computer. 3. Demonstrate steps to find an item e.g. using the Start menu: • Click the Start button  , and then type a word or part of a word in the search box. Search results will appear as soon as learners start typing in the search box. 3. Find a folder or a file that somebody knows is in a particular folder or library, such as Documents or Pictures. Browsing for the file might mean looking through hundreds of files and subfolders. To save time and effort, use the search box at the top of the open window.	**Total Time:** 5 hrs. **Theory:** 1 hr. **Practical:** 4 hrs.	• White Board • Multimedia Projector • Computer system • Board Marker • Eraser • UPS	Computer Lab

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
		 4. Search for a file or folder by using the search box type a word or part of a word in the search box. When done, the contents of the folder or library are filtered to reflect each successive character typed. When the wanted file is seen stop typing. : 			

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU7: Convert Files	**The student will be able to:** 1. Identify file conversion software 2. Describe the procedures of files conversion	1. Define how to convert a file into a different format like a MS word file can be converted into a pdf file which is an adobe acrobat file. 2. Explain different software, which help convert a particular file into another format. 3. Demonstrate how the extension of a file can be changedwith the help of typing manually or by saving the same file with the help of "save as" option. 4. Use online convertor to give a practical demonstration e.g. Go to **ZamZar.com**, browse for file and choose **PNG** format to convert. PNG is another newer picture format that is slowly replacing the JPG format. Most programmes that can open JPG files can open PNG.	**Total Time:** 5 hrs. **Theory:** 1 hr. **Practical:** 4 hrs.	• Internet Connection • White Board • Multimedia • Computer system • Conversion software • Adobe Acrobat reader • Board Marker • Eraser	Classroom Computer Lab

3.8 Module 8: Identify and pursue new business opportunities in the field of Computer (ICT).

Module 8: Identify and pursue new business opportunities in the field of Computer (ICT).

Objective of the module: The aim of this module is to develop the skills knowledge and understanding to develop a new business in the field of Computer (ICT).

Duration 74 hours **Theory:** 34 hours **Practical:** 40 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1: Identify business opportunities in the Computer sector	**The student will be able to:** 1. Look for, and recognise, business opportunities in the Computer sector 2. Create Computer business opportunities where they do not obviously exist 3. Quickly identify potential Computer business developments and how they will affect the new business 4. Identify the additional benefits of potential Computer business opportunities	1. Look for and identify opportunities, including new business or existing business, check profitability, market research (including with customers, competitors, qualitative research – thoughts and opinions, quantitative research – numerical), sales forecasts, competition, strengths and weaknesses, market trends; environmental issues; setting goals and targets 2. Learn to face challenges and opportunities in the new business environment (for example, changes in the marketplace, employment issues, competition, government policies or other changes in the environment) 3. Consider implications of any new venture for the new business's direction, image and profitability. Value creativity and innovation when recognising new opportunities for the new business, including recognizing new areas of business or residential development, responding to new trends in ICT. Take	**Total:** 20 hours **Theory:** 5 hours **Practical:** 15 hours	• Directories of existing ICT based businesses • Examples of computer related business plans • Examples of financial plans • Advertising materials for potential business premises • Copies of job advertisements for Computer Operator jobs • Information	Classroom Visits to Computer businesses Visits to advisors including Chambers of Commerce and Trade Associations, Pakistan Computer Association, professional and legal advisors, government agencies, accountants, banks and other loan agencies

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
		advantage of opportunities presented, including discussing opportunities with advisors, developing a business plan, seeking funding. Take into account the lessons learned from previous business successes or failures, including poor planning, insufficient staffing, weak arrangements with suppliers and/or customers, lack of marking plan. 4. Identify and weigh the risks linked to different courses of action, including considering the likelihood and the impact of the risk, discussing with stakeholders, taking and justifying decisions. Collect and use evidence to support decisions, including appropriate research, developing a sound business plan 5. Assess Own costs to deliver the deal, including margins and break-even point. Anticipate effect of own behaviour on other people or organisations, including positive and negative behaviours, willingness of others to work with or for the new business. 6. Listen to what the other person really says including asking appropriate questions, repeating important information to the other person, looking attentive. Build rapport, empathy and long-lasting relationships, including the value of information available, refocusing the development, identifying strengths and weaknesses, winning customers, improving		on sources of finance • Business planner templates • Start-up-costs estimator • Business information including company annual reports, journals magazinesco mpany websites and newspapers	

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
		efficiency, reducing uncertainty 7. Behaving ethically on customers' use of the new business in the future, including behaviour that is fair, honest, not detrimental to the business or its customers			
LU2: Develop the business plan for the new Computer business	**The student will be able to:** 1. Check what laws and other regulations will affect the new Computer business 2. Work out what money needed to start the new Computer business and keep it running 3. Identify own contribution to running the new Computer business 4. Determine the staff needed for the new Computer business 5. Sourcing suppliers for the new Computer business 6. Decide how to use	1. Study business laws and regulations, including trading terms and conditions, obtaining approval of company name through the Securities and Exchange Commission of Pakistan, paying fees for name registration and company incorporation, registering the company, applying for a national tax number and registering for income tax, registering for sales tax by applying for a Sales Tax Number; record keeping 2. Comprehend finance, including bank loans, family finance, other investors; personal (and family) survival budget, cost of premises / equipment / supplies, running and staffing costs, forecasting, record keeping 3. Find and secure the services of a good accountant, including checking advertisements, references, recommendations from other ICT sector colleagues 4. Make own contribution, including technical/operational – relating to products/services, management, recording and checking performance of	**Total:** 15 hours **Theory:** 5 hours **Practical:** 10 hours	• Directories of existing businesses • Examples of business plans • Examples of financial plans • Advertising materials for potential business premises • Copies of job advertisements for Computer Operator jobs • Information on sources of finance	Classroom Visits to any Computer Operator businesses in nearby area or visit to advisors including Chambers of Commerce and Trade Associations, Pakistan Computer Association, professional and legal advisors, government agencies, accountants,

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
	quality standards in the new Computer business 7. Decide on the new Computer business's policy for looking after customers 8. Investigate suitable premises for the new Computer business 9. Decide how you will get equipment, tools and materials **10.** Identifying other sources of support	business, personal selling, administration, previous experience, strengths and weaknesses 5. Learn to do staffing for the new business, including skilled, unskilled, number of staff needed, cost implications, timescales, training needed, getting professional help, engaging and dismissing staff, contracts for staff, labour rights, including Industrial Relations Ordinance 2008, Workers Welfare Fund Ordinance 1971, Minimum Wages Ordinance, 1961 and similar legislation 6. Follow quality standards, including inspections by Pakistan Tourism Board and similar organisations 7. Study Customer service policy and the customer, certification and accreditation from Consumer Rights Commission of Pakistan 8. Find out about suitable premises, including purchase or rental, size suitability, services (gas, water telephone, electricity), location, need for maintenance and repair; fire and security protection, sources of advice including associates and other Computer professionals, legal advice, financial advice 9. Arrange tools, equipment, materials and consumables, including choosing a supplier, reliability of supplier and equipment, range of tools, equipment and materials required, cost (for equipment, premises, including purchase new, second hand or rent; for computer accessories, including discounts for bulk purchasing) 10. Identify and employ sources of support, including		• Business planner templates • Start-up-costs estimator • Business information, including company annual reports, journals, magazines, company websites and newspapers	banks and other loan agencies

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
		Chambers of Commerce, colleagues in the ICT industry, associates, training providers			
LU3: Communicate /Marketing the new Computer business's services to customers	**The student will be able to:** 1. Know the competition from other Computer businesses and be able to explain to customers the advantages of own offer 2. Clearly define what products or services the new business delivers and make sure that it is presented to customers in a way they can relate to tell potential customers how the new Computer Operator business is aiming to meet their needs and about new developments **3.** Check that the marketing strategy is based on an accurate understanding of potential customer's	1. Grasp the vision of the new business, the products or services it provides, and how best to communicate this information clearly and passionately to potential customers, including ensuring information is clear, focused and persuasive. 2. Employ methods of marketing that are available to tell potential customers about the new business, including advertising, promotions, word of mouth, personal reputation and personal selling, friends and family etc. 3. Improve the experience new customers have when dealing with the new business, including maintaining contact with them, tailoring products or services to meet their specific needs, offering discounts for customer loyalty. 4. Remind customers regularly of the benefits of dealing with the new business, including in person, by e-mail, through advertising or promotional campaigns	**Total:** 20 hours **Theory:** 10 hours **Practical:** 10 hours	• Directories of existing businesses • Examples of business plans • Examples of financial plans • Advertising materials for potential business premises • Copies of job advertisements for Computer Operator jobs • Information on sources of finance • Business planner templates • Start-up-costs estimator • Business information,	Classroom Visits to any Computer Operator businesses in nearby area or visit to advisors including Chambers of Commerce and Trade Associations, Pakistan Computer Association, professional and legal advisors, government agencies, accountants, banks and other loan agencies

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
	needs and preferences			including company annual reports, journals, magazines, company websites and newspapers	
LU4: Negotiate arrangements for the new Computer business	**The student will be able to:** 1. Clearly explain the features of the arrangements that need to be made and the benefits to the other person or organisation 2. Think whether there is anything to negotiate on other than price 3. Negotiate arrangements calmly and effectively 4. Behave ethically throughout negotiations **5.** Sign off arrangements so they are clear to all	1. Make arrangements, including with staff, with suppliers, with customers 2. Negotiate other than on price (for example delivery costs and times, product and service specification, service level and extras) 3. Negotiate the advantages other than profitability 4. Comprehend the importance of not getting emotional or personal about a deal, including getting upset or angry, and the impact of this on the deal, including losing or modifying the deal as a result 5. Recalculate and present an offer in a different way to meet developments whilst making a deal 6. Close a deal, including making assumptions beyond the deal, creating a sense of urgency, using competition as a lever, being prepared not to close	**Total:** 19 hours **Theory:** 9 hours **Practical:** 10 hours	Case studies of arrangements agreed between Computer Operator business owners and other people or organisations	Classroom Visits to any Computer Operator businesses in nearby area or visit to advisors including Chambers of Commerce and Trade Associations, Pakistan Computer Association, professional and legal advisors, government agencies, accountants,

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
	parties	7. Record the outcome of the deal so it is clear to all parties and legally sound, including contractual arrangements, communicating the agreement by e-mail or fax			banks and other loan agencies

4. General Assessment guidance for the Computer Operator trade

Good practice in Pakistan makes use of sessional and final assessments, the basis of which is described below. Good practice by vocational training providers in Pakistan is to use a combination of these sessional and final assessments, combined to produce the final qualification result.

Sessional assessment is carried out continuously. Its purpose is to provide feedback on student is learning:

- to the student: to identify achievement and areas for further work
- to the teacher: to evaluate the effectiveness of teaching to date, and to focus future plans.

Assessors need to devise sessional assessments for both theoretical and practical work. Guidance is provided in the assessment strategy

Final assessment is the assessment, usually taken on completion of a course or module, which says whether the student has "passed" or not. It is – or should be – undertaken with reference to all the objectives or outcomes of the course, and is usually fairly formal. Considerations of security – ensuring that the student who gets the credit is the person who did the work – assume considerable importance in final assessment.

Methods of assessment

For lessons with a high quantity of theory, written or oral tests related to learning outcomes and/ or learning content can be conducted. For workplace lessons, assessment can focus on the quality of planning the related process, the quality of executing the process, the quality of the product and/or evaluation of the process.

Methods include direct assessment, which is the most desirable form of assessment. For this method, evidence is obtained by direct observation of the student's performance.
Examples for direct assessment of a computer operator may include:

- Work performances, for example installing software, making a word document, formatting a slide etc.
- Demonstrations, for example demonstrating file management techniques, such as making folder, file names, sequence and numbers etc.
- Direct questioning, where the assessor would ask the student why he/she is preparing system in a certain way, or how the student will present the work when it is ready for assessment
- Paper-based tests, such as multiple choice or short answer questions on health and safety issues, or working with others.

Indirect assessment is the method used where the performance can not be watched and evidence is gained indirectly.

Examples for indirect assessment of a computer operator include:

Student may be asked to create a new Microsoft word file in their respective system, save it with their own names on the C drive having page margins of Top 1, left and right 1.5 and bottom 0.5, add two paragraphs in the same file by typing the uses of Word files, format the file by using New Time Roman font of 14, justify the two paragraphs, mention their names and roll number by inserting a table of two columns and two rows in the second row learners may add the path of file saving and learners PC number. They may also be asked to add header as ***TEST ONE*** and Footer as in **Module 2**. Add Page numbers and date. Finally, they may print the file and give the print out to the teacher in the stipulated time.

Indirect assessment should only be a second choice. (In some cases, it may not even be guaranteed that the work products were produced by the person being assessed.)

Principles of assessment

All assessments should be valid, reliable, fair and flexible:

Fairness means that there should be no advantages or disadvantages for any assessed person. For example, it should not happen that one student gets prior information about the type of work performance that will be assessed, while another candidate does not get any prior information.

Validity means that a valid assessment assesses what it claims to assess. For example, if the hardware ability is to be assessed and certificated, the assessment should involve performance criteria directly related to that hardware activity only. An interview about different hardware / peripherals will not meet the performance criteria.

Reliability means that the assessment is consistent and reproducible. For example, if the work performance of preparing a chart in excel has been assessed, another assessor (eg the future employer) should be able to see the same work performance and witness the same level of achievement.

Flexibility means that the assessor has to be flexible concerning the assessment approach. For example, if there is power failure during the assessment, the assessor should modify the arrangements to accommodate the student's needs.

Assessment strategy for the Computer Operator Curriculum

Sessional assessment

The sessional assessment for all 6 modules shall be in two parts: theoretical assessment and practical assessment. The sessional marks shall contribute to the final qualification. Theoretical assessment for all learning modules must consist of a written paper lasting at least one hour per module. This can be a combination of multiple choice and short answer questions. For practical assessment, all procedures and methods for the modules must be assessed on a sessional basis. Guidance is provided below under Planning for assessment.

Final assessment

Final assessment shall be in two parts: theoretical assessment and practical assessment. The final assessment marks shall contribute to the final qualification. The final theoretical assessment shall consist of one 3-hour paper, consisting of multiple choice and short answer questions, covering all modules. For the final practical assessment, each student shall be assessed over a period of two days, with two 3-hour sessions on each day. This represents a total of four sessions, 12 hours of practical assessment, for each student. During this period, each student must be assessed on his/her ability for each of the module.

The assessment team

The number of assessors must meet the needs of the students and the training provider. For example, where two assessors are conducting the assessment, there must be a maximum of four students per assessor. In this example, a group of 20 students shall therefore require assessments to be carried out over a five - day period.

Planning for assessment

Sessional assessment: assessors need to plan in advance how they will conduct sessional assessments for each module. The tables on the following pages are for assessors to use to insert how many hours of theoretical and practical assessment will be conducted and what the scheduled dates are.

Final assessment: Training providers need to decide ways to combine modules into a cohesive two-day final assessment programme for each group of five students. Training providers must agree to the questions for practical assessments in advance.

Planning for sessional assessment

Duration 6 hours **Theory:** 2 hours **Practical:** 4 hours

Module 1: Maintain Computer System				
Learning Units	**Theory Days Hours**	**Workplace Days hours**	**Recommended sessional assessment**	**Scheduled Dates**
LU 1: Install Operating System	15 minutes	30 minutes	Each student will install operating system and be assessed during the class separately	
LU2: Configure Peripheral devices	5 minutes	10 minutes	Each student will configure at least one peripheral devise and be assessed during the class	
LU3: Install peripheral devices	10 minutes	20 minutes	Each student is suppose to install at least one peripheral devise and must be assessed during the class	
LU4: Install Software applications	15 minutes	30 minutes	Each student will install at least one software and be assessed during the class	
LU5: Update/ Upgrade software applications	10 minutes	20 minutes	Each student will upgrade/up-date at least one software and be assessed during the class	

LU6: Uninstall software applications	5 minutes	10 minutes	Each student will uninstall at least one software application and be assessed during the class.	
LU7: Perform windows Scan	15 minutes	30 minutes	Every student will perform at least once to scan windows and be assessed during the class, separately.	
LU8: Format External mass storage	10 minutes	20 minutes	Each student will format external mass storage during the class.	
LU9: Troubleshoot basic software errors	15 minutes	30 minutes	Each student is supposed to troubleshoot any basic software error during the class.	
LU10: Troubleshoot basic hardware faults	10 minutes	20 minutes	Each student is supposed to troubleshoot any basic hardware error during the class.	
LU11: Configure basic internet connectivity	10 minutes	20 minutes	Each student is supposed to configure basic internet connectivity during the class.	

Duration 6 hours **Theory:** 2 hours **Practical:** 4 hours

Module 2: Prepare Word Document

Learning Units	Theory Days hours	Workplace Days hours	Recommended sessional assessment	Scheduled Dates
LU1: Type Word Document	5 minutes	60 minutes	Each student is supposed to develop a word document by typing during the class.	
LU2: Set-up page in word document	10 minutes	10 minutes	Each student is supposed to set-up a word page during the class.	
LU3: Edit Word Document	10 minutes	10 minutes	Each student is supposed to edit a word file during the class.	
LU4: Format Word Document	10 minutes	10 minutes	Each student is supposed to format a word file during the class.	
LU5: Save Word Document	5 minutes	10 minutes	Each student is supposed to save a word file with his name during the class.	
LU6: Insert in a Word Document	5 minutes	10 minutes	Each student is supposed to insert a word document during the class.	
LU7: Import Document	10 minutes	10 minutes	Each student is supposed to import a word file during the class.	

LU8: Protect Document	5 minutes	10 minutes	Each student is supposed to protect a word file during the class.	
LU9: Insert Table in Document	10 minutes	20 minutes	Each student is supposed to insert a table in a word file during the class.	
LU10: Hyperlink Data in document	5 minutes	10 minutes	Each student is supposed to link a data in word file as hyperlink during the class.	
LU11: Perform mail merge in a word document	5 minutes	30 minutes	Each student is supposed to perform mail merge during the class.	
LU12: Insert header/footer in word document	10 minutes	10 minutes	Each student is supposed to insert header and footer in a word file during the class.	
LU13: Insert Section Break in word document	10 minutes	10 minutes	Each student is supposed to insert section break in a word file during the class.	
LU14: Set Style I word document	10 minutes	20 minutes	Each student is supposed to set style for a word file during the class.	
LU15: Insert Table of contents in word document	10 minutes	30 minutes	Each student is supposed to insert a table of contents in a word file during the class.	

Duration 7 hours **Theory:** 3:30 hours **Practical:** 3:30 hours

Module 3: Prepare Spreadsheet				
Learning Units	**Theory Days Hours**	**Workplace Days hours**	**Recommended sessional assessment**	**Scheduled Dates**
LU1: Create Workbook	10 minutes	10 minutes	Each student is supposed to develop a new Excel workbook by typing during the class.	
LU2: Insert Sheet	10 minutes	10minutes	Each student is supposed to insert an Excel sheet during the class.	
LU3: Apply basic formulae/functions	60 minutes	60 minutes	Each student is supposed to apply basic formule in an Excel sheet during the class.	
LU4: Create Charts / Graphs	20 minutes	20 minutes	Each student is supposed to create one Chart graph in a Excel file during the class.	
LU5: Filter Data	10 minutes	10 minutes	Each student is supposed to filter data in Excel file during the class.	
LU6: Format Cell	20 minutes	20minutes	Each student is supposed to format cell in Excel sheet during the class.	
LU7: Edit Worksheet	20 minutes	20 minutes	Each student is supposed to edit Excel sheet during the class.	
LU8: Insert Page break	20 minutes	20 minutes	Each student is supposed to insert page break Excel file during the class.	
LU9: Split Cells	20 minutes	20 minutes	Each student is supposed to split cells in Excel file during the class.	
LU10:	20	20 minutes	Each student is supposed to merge cells in Excel sheet during the class.	

Merge Cells	minutes			

Duration 3 hours **Theory:** 1 hours **Practical:** 2 hours

Module 4: Prepare Presentations				
Learning Units	**Theory Days Hours**	**Workplace Days hours**	**Recommended sessional assessment**	**Scheduled Dates**
LU1: Prepare Master Slide	10 minutes	20 minutes	Each student is supposed to prepare at least one Master Slide during the class.	
LU2: Insert Slides	10 minutes	20 minutes	Each student is supposed to insert slides during the class.	
LU3: Design Slide	15 minutes	30 minutes	Each student is supposed to design at least one slide during the class.	
LU4: Apply animation	5 minutes	10 minutes	Each student is supposed to apply animation to at least one slide during the class.	
LU5: Apply Sound effects	5 minutes	10 minutes	Each student is supposed to apply sound effects in a presentation during the class.	
LU6: Format Slide	15 minutes	30 minutes	Each student is supposed to format slides during the class.	

Duration 3hours **Theory:** 1 hour **Practical:** 2 hours

Module 5: Prepare In-Page Documents				
Learning Units	**Theory Days Hours**	**Workplace Days hours**	**Recommended sessional assessment**	**Scheduled Dates**

LU1: Setting Keyboard preferences	20 minutes	40 minutes	Each student is supposed to set up keyboards preferences in an in page file, during the class.	
LU2: Deal withPage Layout	20minutes	40 minutes	Each student is supposed to apply page layout in an In-page file during the class.	
LU3: Toggle between languages	10 minutes	20 minutes	Each student is supposed to toggle between the English and Urdu languages during the class.	
LU4: Insert Columns	10 minutes	20 minutes	Each student is supposed to insert columns in an In-page file during the class.	

Duration 6 hours **Theory:** 2 hours **Practical:** 4 hours

Module 6: Manage e-mail/internet				
Learning Units	**Theory Days Hours**	**Workplace Days hours**	**Recommended sessional assessment**	**Scheduled Dates**
LU1: Configure e-mail account	20 minutes	40 minutes	Each student is supposed to configure an email account during the class.	
LU2: Sort out email	10 minutes	20 minutes	Each student is supposed to sort mail during the class.	
LU3: Manage Address Book	20 minutes	40 minutes	Each student is supposed to manage address book during the class .	

LU4: Achieve e-mail Data	20 minutes	40 minutes	Each student is supposed to archive e-mail data without loosing it during the class.	
LU5: Perform Browsing	10 minutes	20 minutes	Each student is supposed to perform browsing on net during the class.	
LU6: Download Data	20 minutes	40 minutes	Each student is supposed to download data during the class.	
LU7: Send and receive e-mails	20 minutes	40 minutes	Each student is supposed to send and receive e-mails during the class.	

Duration 6 hours **Theory:** 2 hours **Practical:** 4 hours

Module 7: Manage Information System				
Learning Units	**Theory hours**	**Workplace Hours**	**Recommended sessional assessment**	**Scheduled Dates**
LU1: Perform Data Entry	20 minutes	40 minutes	Each student is supposed to perform data entry in office during the class	
LU2: Manage File folder	20 minutes	40 minutes	Each student is supposed to manage file folders during the class	
LU3: Perform Scanning	20 minutes	40 minutes	Each student is supposed to perform scanning on the computer during the class	
LU4: Maintain office record	20 minutes	40 minutes	Each student is supposed to maintain office record during the class	
LU5: Perform Printing	20 minutes	40 minutes	Each student is supposed to perform Printing during the class	
LU6: Search Files /	20 minutes	40 minutes	Each student is supposed to search at least one file during the class	

Folders				
LU7: Convert Files	5 minutes	10 minutes	Each student is supposed to convert at least one file during the class	

Duration 6 hours **Theory:** 4 hours **Practical:** 2 hours

Module 8: Identify and pursue new business opportunities in the field of Computer (ICT).				
Learning Units	**Theory hours**	**Workplace Hours**	**Recommended sessional assessment**	**Scheduled Dates**
LU1: Identify business opportunities in the field of Computer (ICT).	60 minutes	30 minutes	Each student is supposed to perform data entry in office during the class	
LU2: Communicate the new business's services in the field of Computer (ICT) to customers	60 minutes	30 minutes	Each student is supposed to manage file folders during the class	
LU3: Negotiate arrangements for the new business in the field of Computer (ICT)	60 minutes	30 minutes	Each student is supposed to perform scanning on the computer during the class	
LU4: Negotiate arrangements for the new business in the field of Computer (ICT)	60 minutes	30 minutes	Each student is supposed to perform scanning on the computer during the class	

Student can be assessed preferably during the class, otherwise at the end of each module must be gone through the sessional assessment for that particular module.

5. Physical Facilities* (optional)

Ideally the theory class rooms at least should have area of 10 square feet per trainee and in the computer lab it should be at least of 30 square feet per trainees. All the rooms and laboratory should be well illuminated and ventilated.

- Well equipped lab with adequate space 1 (No.)
- Well furnished class room with adequate space 1 (No.)
- Office room equipped with modern facilities 1 (No.)
- Principle room equipped with modern facilities 1 (No.)
- Reception room equipped with modern facilities 1 (No.)
- CAT-6 cable for LAN - 6 (No.)
- 2 KVA on- line UPS for server - 1 (No.)
- 500 VA or higher off – line UPS for nodes - 20 Nos
- Vacuum cleaner - 01 No
- Pigeon hole cabinet : 20 compartments - 01 No
- Chair and table for the instructor - 01 each (for class room & laboratory)
- Dual Desk or Chair and Tables for Trainees (For the batch of 16+4=20 Trainees)
- Computer table sunmica top 150X650X750 mm with sliding tray for key board and one shelf
- of storage - 10 Nos
- Operators chair (without arms mounted on castor wheels, adjustable height – 20 Nos
- Door mat - 02 Nos
- Wall clock - 01 No
- Printer table 650X500X750mm can be varied as per local specifications — 03 Nos
- Window or Split type air conditioners 1.5 tons – 03 Nos
- Storage cabinet 60X700X450mm -- 01 No

6. List of Tools & Equipment

A) Hardware

(Class size: 20 trainees/student)

Name of Trade: Computer Operator		
Duration of the course: 1 year		
Sr. No.	**Name of Item/ Equipment / Tools**	**Qty.**
1.	Laptop: Latest Processor with major minimum features as below: Quad Core 32/64 Bit Processor (3.06 GHz or Higher, 4MB 4- Core/ 8- Threads, Turbo up to 3.46 GHz) or Higher Network Card: Integrated Gigabit Ethernet (10/100/1000); RAM: 8 GB Dual Channel DDR3, 1333 MHz SDRAM Memory expandable up to 8 GB Cache: L3 Smart 8 MB Cache speed 2.3 MHz or Higher 1TB HDD, Wi-Fi with licensed Operating System and Antivirus.	1
2.	File server for LAN. Xeon Latest 64 bit processor or Higher with PCI Express Video Card 4GB VRAM, 8 GB RAM, 22" TFT, Keyboard, Mouse, DVD OR BLU-RAY writer with latest license of OS - Server Edition, Internet, **Antivirus - Server Edition** & UPS for Power Back up.	1
3.	LAB should have Structured cabling	1
4.	Workstation/ Nodes (computer) Latest Processor, HDD, Monitor, DVD Writer, Keyboard/Internet, USB Optical Mouse, USB Keyboard with latest license of OS and Antivirus – Professional/Ultimate Edition	20
5.	Workstation for Multimedia i700 (i7) PROCESSOR or Quadcore or Higher, 8 GB RAM, 1 Terabyte HDD, 22" TFT Monitor101, DVD OR BLU-RAY Writer, Keybord/Internet, USB Optical Mouse, USB Keyboard with latest license of OS with Antivirus -, Professional/Ultimate Edition	1
6.	24 Port switch with wireless connectivity	1
7.	RJ 45 Connectors	1
8.	Internet or Intranet Connectivity	1

9.	On-Line UPS	1
10.	Printer	1
11.	Scanner	1
12.	Web cam (digital camera)	20
13.	DVD or BLU-RAY writer	2
14.	Pen-drive	20
15.	External Hard disks	4
16.	DSL Wireless Router	1
17.	Wireless Router	1
18.	Wireless LAN Card	1
19.	LCD Projector	1
20.	Well equip computer lab with Multimedia Projector	1
21.	Well equip class room with Multimedia Projector	1
22.	Tool box	2 sets
23.	USB Floppy Drive	1

B) Software

- Professional Office Suite (MS Office, Open Office)
- In-Page
- Antivirus Software - Server Edition for Servers and Client Edition for Workstations
- Operating System (Windows, Linux)

- Internet Browsing software

NOTE- *Latest version of hardware and software should be provided*

7. List of Consumable

(Class size: 20 trainees/student)

Sr. No.	Name of Item/ Equipment / Tools	Qty.
1.	CD/DVD Writer	400
2.	Photocopy Paper	5 rim
3.	Board Marker	3 pkt
4.	Plastic file	25
5.	Paper markers (red 10 and blue/black 20)	30
6.	Flip chart paper	50
7.	Meta Cards (Red 200, White or Blue 800)	500
8.	Pin board pin	1 pkt
9.	writing pad	25
10.	Paper knife	5

11.	Ball pen	25
12.	Pencil (please sharpen)	25
13.	Eraser	25
14.	Glue stick	5
15.	Paper clip	1 pkt
16.	Stapler + Stapler pin	2 sets
17.	Scissors	2
18.	Punching machine	2