

COMPUTER OPERATOR



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COMPETENCY STANDARDS

National Vocational Certificate Level 2

Version 1 - July 2013



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Authors

Mr. Muhammad Naeem Akhtar (Deputy Team Leader Component 2 TVET Reform Support Programme)

Responsible

Director General Skills Standard and Curricula, National Vocational and Technical Training Commission
National Deputy Head, TVET Reform Support Programme, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

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Module 1: Maintain Computer System

Overview: 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.

| Competency Unit | Performance Criteria | Knowledge and Understanding |
|---|---|---|
| A1: Install operating system | <p>The student will be able to:</p> <p>P1- Ensure that necessary precautions have been taken before installing any operating system</p> <p>P2- Install operating system in the PC / computers by following instructional manual.</p> | <p>K1- Become familiar with basic parts of computer.</p> <p>K2- Identify the difference between hardware and software.</p> <p>K3- Define operating system and windows.</p> |
| A2: Configure peripheral devices | <p>The student will be able to:</p> <p>P1-Configure peripheral devices, as per the instructions given in their respective manuals.</p> <p>P2-Pass functional test for the configured peripheral device, as per instructions.</p> | <p>K1- Define most commonly used peripheral devices.</p> <p>K2- Explain working and uses of various peripheral devices.</p> <p>K3- Elaborate the use of different computer communication ports.</p> |

| Competency Unit | Performance Criteria | Knowledge and Understanding |
|--|---|---|
| A3: Install peripheral devices | <p>The student will be able to:</p> <p>P1. Ensure that necessary precautions have been taken before installing any peripheral device</p> <p>P2. Install any peripheral device, as per instructional manual.</p> <p>P3. Pass functional test for the installed peripheral device.</p> | <p>K1-Elucidate installation of various peripheral devices, as per instructions given in their respective manuals.</p> <p>K2-Demonstrate functional test for the same peripheral devices.</p> |
| A4: Install software applications | <p>The student will be able to:</p> <p>P1. Ensure that necessary precautions have been taken before installing any software application.</p> <p>P2. Register a software with the help of key.</p> <p>P3. Carefully install a software application as per given instructional manual.</p> | <p>K1- Understand different software applications.</p> <p>K2- Explain the procedure to install a software application as per given instructional manual.</p> |
| A5: Update/upgrade software application | <p>The student will be able to:</p> <p>P1. Check the registry of the application.</p> <p>P2. Use the instructional manual for updating/upgrading software applications.</p> | <p>K1- Explain the use of instructional manual for updating/upgrading software applications.</p> |

| Competency Unit | Performance Criteria | Knowledge and Understanding |
|---|--|--|
| | <p>P3. Update/upgrade software application with the help of CD or Online available software.</p> <p>P4. Make sure that updated features are in accordance with the specifications / requirements.</p> | |
| <p>A6: un-install software application</p> | <p>The student will be able to:</p> <p>P1-Ensure that necessary precautions have been taken before un-install any software application</p> <p>P2-Uninstall any of the software applications.</p> <p>P3-Ensure that the same software application is removed</p> <p>P4-Make sure that the action done from control panel.</p> <p>P5-Check the impact of un-installing on the memory space as well.</p> | <p>K1- Define un-install of the software.</p> <p>K2- Explicate the procedure on uninstalling a software application.</p> |

| Competency Unit | Performance Criteria | Knowledge and Understanding |
|--|---|---|
| A7: Perform windows scan | The student will be able to: P1. Ensure that necessary precautions have been taken before performing window scanning. P2. Perform Window scan on any infected system. P3. Detect the viruses available on the hard disk associated with windows software. P4. Delete / quarantine all the viruses successfully which are detected as a result of scan. | K1- Define how to perform Window scan on any infected system. K2- Give some example of virus and scanning. |
| A8: Format External Mass Storage | The student will be able to: P1. Ensure that necessary precautions have been taken before formatting an external mass storage P2. Format external mass storage on a PC / computer P3. Ensure that after formatting the external mass storage the device is memory is empty when open. | K1- Classify how to format the external mass storage device. |
| A9: Trouble shoot basic software errors | The student will be able to: P1- Select the right troubleshooting software | K1- Define troubleshooting |

| Competency Unit | Performance Criteria | Knowledge and Understanding |
|---|--|--|
| | P2- Troubleshoot problems of corrupted software. P3- Remove the errors from the PC / computers. | K2- Describe troubleshooting of various problems of corrupted software. |
| A10: Troubleshoot basic hardware faults | The student will be able to: P1-Demonstrate the precautions for trouble shooting errors. P2-Identify solution of hardware errors. P3-Execute the hardware troubleshooting. P4- Ensure that all kinds of hardware are functioning error free in the computer in his/her use. | K1- Clarify how to make sure that all kinds of hardware are functioning error free in the computer. K2- Know about basic hardware faults K3- Understand and Demonstrate types of hardware trouble shooting |
| A11: Configure basic internet connectivity | The student will be able to: P1-Configure basic internet connectivity of a system. P2-Perform connectivity test successfully. | K1- Gain knowledge about key words used to browse on the internet. |

Module 2: Prepare Word Documents

Overview: 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.

| Competency Unit | Performance Criteria | Knowledge and Understanding |
|--|--|--|
| <p>B1: Type a Word Document</p> | <p>The student will be able to:</p> <p>P1-Open a new word file.</p> <p>P2-Give a name and location to save the word file.</p> <p>P3-Type in a MS word file with the help of any suitable typing tutor.</p> <p>P4- Ensure that typed document is spelling error free.</p> <p>P5-Develop the typing speed at least 20 words per minute.</p> <p>P6-Open and use some typing tutor programs</p> <p>P7-Type by using systematic keyboard / finger setting. Preferably with both hands.</p> <p>P8-Perform some online typing test and to make sure that required typing outcome has been achieved through online evaluation.</p> <p>P-9 Make sure when done typing in MS word the file should be saved in a known location to access when wanted.</p> | <p>K1- Explain how to open a new or saved file in MS Word.</p> <p>K2- Explain how to save file in MS Word.</p> <p>K3. Give details for use of Key Board for typing</p> |

| Competency Unit | Performance Criteria | Knowledge and Understanding |
|---|--|---|
| B2: Set-up page in a Word Document | <p>The student will be able to:</p> <p>P1-Apply the page margins on the word document.</p> <p>P2-Set a suitable orientation.</p> <p>P3-Set the suitable size of the page.</p> <p>P4- Insert some columns in the word file where appropriate.</p> <p>P5-Perform Page set-up in the given any word file document.</p> <p>P6- Ensure new page is added to be edited/worked on.</p> | <p>K1- Explain how to apply the page margins in a word document.</p> <p>K2- Define page set-up for word format.</p> |
| B3: Edit Word Document | <p>The student will be able to:</p> <p>P1-Edit a typed word document .</p> <p>P2-Insert a new word or delete a word in the MS word file.</p> <p>P3-Insert a new paragraph or delete a paragraph in the MS word file.</p> <p>P4-Add or delete a page or group of paragraph through selection.</p> <p>P5-Check the spellings in the word file through available dictionary .</p> | <p>K1-Explain editing the following:</p> <ul style="list-style-type: none"> • Add or delete a word • Delete or add a paragraph • Add or delete a page. • Apply spell checking |

| Competency Unit | Performance Criteria | Knowledge and Understanding |
|------------------------------------|---|--|
| | P6-Edit a MS document as per the given specification / criteria / demand. | |
| B4: Format Document | Word The student will be able to: P1-Format text in the word file. P2-Format headings in the word file. P3-Insert page numbers in the word file. P4-Set appropriate page margins. P5-Apply some background texture. P6-Add some colours to the text / headings. P7-Use bold and italic commands where necessary. P8-Verify appropriate margins, columns, rows are added and the expected result is achieved. | K1- Classify the different ways to format a word file. K2- Explain some examples of formatting a word file. |
| B5: Save Document | Word The student will be able to: P1-Assign a name to the word file. P2-Save word documents at given location in a storage device. P3-Retrieve saved files easily when required. | K1- Elaborate how to save a word file on the hard disk. |

| Competency Unit | Performance Criteria | Knowledge and Understanding |
|--|--|---|
| B6: Insert in a Word Document | The student will be able to: P1-Insert a picture at a given location of a word document. P2-Insert clip art at a given location of a word document. P3-Insert shapes at a given location of a word document. P4-Insert smart Art at a given location of a word document. P5-Insert chart at a given location of a word document. P6-Make sure that inserted objects are as per the layout of supplied document. | K1- Learn how to insert shapes/clips/smart Arts and pictures etc. at a given location of a word document. |
| B7: Import Document | The student will be able to: P1-Import some contents / material in a word document from any other file format. P2-Import some material and contents from internet available online. P3-Import some material from external memory devices. | K1- Define procedure to import some material and contents from internet or any other directory at the required location in a word file. |
| B8: Protect the Word | The student will be able to: | K1- Know the procedure of protecting a word document with |

| Competency Unit | Performance Criteria | Knowledge and Understanding |
|---|--|---|
| Document | <p>P1-Demonstrate the procedure of protecting a word document with a particular password.</p> <p>P2-Change a password on a word file by selecting stronger password.</p> <p>P3-Perform different kinds of protections in a word document such as editing restrictions, read only, restricted users or users with passwords only etc.</p> | <p>a particular password.</p> <p>K2- Know about the logic of using a password on a word file as well as selection of a strong password.</p> |
| B9: Insert Table in a Word Document | <p>The student will be able to:</p> <p>P1-Demonstrate the procedure of inserting table in a word document.</p> <p>P2-Identify various uses of different tables.</p> <p>P3-Exhibit different attributes of Insert table</p> | <p>K1- Understand the procedure of inserting table in a word document.</p> <p>K2- Know about various uses of different tables.</p> <p>K3- Explain different attributes of Insert table.</p> |
| B10: Hyperlink Data in a Word Document | <p>The student will be able to:</p> <p>P1-Associate data as Hyperlink at a given location of a word document.</p> <p>P2-Access hyperlinked data when required.</p> | <p>K1- Define the procedure to associate data as Hyperlink at a given location of a word document will display with one click.</p> |

| Competency Unit | Performance Criteria | Knowledge and Understanding |
|---|---|---|
| B11: Perform mail merge in a Word Document | The student will be able to: P1-Perform the mail merge function. P2-Demonstrate the purpose of mail merge. P3-Modify mail merge as per guidance. | K1- Know about the mail merge function. K2- Understand the purpose of mail merge. |
| B12: Insert header/footer in a Word Document | The student will be able to: P1-Perform various attributes of Header and Footer in the word file. P2-Differentiate between header and footer. P3-Perform the inserting date and page numbers etc. in the footer. | K1- Understand the attributes of Header and Footer in the word file. K2- Differentiate between header and footer. |
| B13: Insert Section Break in a Word Document | The student will be able to: P1-Demonstrate procedure of inserting section break in a word document. P2-Differentiate between section break and page break and their purpose and utility. P3-Perform the different attributes of inserting section breaks in a word file. | K1- Understand and the purpose and procedure of inserting section break in a word document. K2- Explain the difference between section break and page break. |

| Competency Unit | Performance Criteria | Knowledge and Understanding |
|---|--|--|
| B14: Set Style in a Word Document | <p>The student will be able to:</p> <p>P1-Learn about different Styles available in a word file.</p> <p>P2-Carry out setting different styles in a word document and its various utilities.</p> <p>P3-Set an appropriate style in a given document for the contents of document.</p> <p>P4-Perform set styles as per the standard / requirements of the instructor.</p> <p>P5- Carry out the procedure to print a document.</p> | <p>K1- Know the purpose of setting different styles in a word document and its various utilities to differentiate between different dialogues.</p> |
| B15: Insert Table of contents in a Word Document | <p>The student will be able to:</p> <p>P1-Insert a table of contents in a given word document.</p> <p>P2-Perform different heading options in the toolbars for inserting table of content in a word document.</p> <p>P3-Perform and describe the various steps to insert table of content in a word file.</p> | <p>K1- Define the procedure to insert a table of contents in a given word document.</p> |

Module 3: Prepare Spread sheet

Overview: 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.

| Competency Unit | Performance Criteria | Knowledge and Understanding |
|---|---|--|
| C1: Create Workbook | <p>The student will be able to:</p> <p>P1-Learn about the excel spreadsheet application software.</p> <p>P2-Create a workbook on spreadsheet applications in the Excel software.</p> <p>P3-Demonstrate the procedure to create workbook-using spreadsheet.</p> | <p>K1- Know about the excel spreadsheet application software.</p> <p>K2- Brief how to create a workbook on spreadsheet applications in the Excel software.</p> |
| C2: Insert Sheet | <p>The student will be able to:</p> <p>P1-Insert sheet in the Excel file.</p> <p>P2-Demonstrate how to insert Sheet in the Excel file, as per given instructions.</p> | <p>K1- Understand how to insert sheet in the Excel file.</p> <p>K2- Explain how to insert Sheet in the Excel file</p> |
| C3: Apply basic formulae / functions | <p>The student will be able to:</p> <p>P1-Apply 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</p> | <p>K1- Learn some functions like Average, If, Sum, Count Max, Hyperlink, Date, VLookup, LOOKUP, Traspose etc.</p> |

| Competency Unit | Performance Criteria | Knowledge and Understanding |
|--|--|---|
| | <p>column with other and get the output in the third column etc.</p> <p>P2-Differentiate between formula and functions available in the excel software toolbar as (fx) and by using is equal symbol with sum and brackets different options available.</p> <p>P3-Perform some functions like Average, If, Sum, Count Max, Hyperlink, Date, VLookup, LOOKUP, Traspose etc.</p> | <p>K2- Helps adding, evaluating and doing function as required, saves a lot of time and make expected result accurate.</p> |
| <p>C4: Create Charts / Graphs</p> | <p>The student will be able to:</p> <p>P1-Demonstrate, understand and define charts/graphs and their use in the excel sheets with examples.</p> <p>P2-Create different kinds of charts like, charts, graphs pie chart, bar chart, giant chart, line graph, scattered chart, area chart etc.</p> <p>P3-Perform how to set a default chart in the file.</p> <p>P4-Assign a suitable name to the chart.</p> <p>P5-Add values and labels in the chart.</p> <p>P6-Convert a chart into another form.</p> <p>P7-Demonstrate the procedure of creating different</p> | <p>K1- Describe how to show numbers in charts, graphs pie chart, bar chart, giant chart, line graph, scattered chart, area chart etc.</p> |

| Competency Unit | Performance Criteria | Knowledge and Understanding |
|-----------------------------------|---|--|
| | <p>charts/graphs.</p> <p>P8-By selecting type of chart, color of chart area and way to present the same with labels and values etc.</p> <p>P9-Demonstrate editing in the different components of charts areas.</p> | |
| <p>C5: Filter Data</p> | <p>The student will be able to:</p> <p>P1-Demonstrate the procedure of filtering data by making some different fields and preferences on the same sheet as well as on some other sheets.</p> <p>P2-Perform data sorting from A-Z and also from Z-A.</p> <p>P3-Perform some basic functions on the filter and some advance options like skipping the lower values or date wise etc.</p> | <p>K1-Differentiate filter and sort of data from different aspects.</p> |
| <p>C6: Format Cell</p> | <p>The student will be able to:</p> <p>P1-Demonstrate the features of Format Cell available in the toolbar and the dialog box. For example make sure that student have understand the purpose of formatting cells as width, height, Auto fit, delete, insert etc.</p> | <p>K1- Explain the purpose of formatting cells as width, height, Auto fit, delete, insert etc.</p> <p>K2- Elaborate the features of format cell available in the toolbar and the dialog box.</p> |

| Competency Unit | Performance Criteria | Knowledge and Understanding |
|---|---|---|
| | <p>P2-Demonstrate the procedure to format different cells in different manners like merger of cells and deletion of cells or conditional formatting etc.</p> | |
| <p>C7: Edit Worksheet</p> | <p>The student will be able to:</p> <p>P1-Demonstrate the procedure to edit worksheet with different requirements like size of cells, colors, shades and lines etc.</p> <p>P2-Describe the precautions to be taken while editing a spreadsheet worksheet also some basic functions like Wrap Text, font boarder, fill protection etc.</p> <p>P3-Execute the concept of editing worksheet to this extent that they can demonstrate the same at any point of view.</p> | <p>K1- Describe the precautions to be taken while editing a spreadsheet worksheet also some basic functions like Wrap Text, font boarder, fill protection etc.</p> <p>K2- Understand the concept of editing worksheet to this extent that they can demonstrate the same at any point of view.</p> |
| <p>C8: Insert Page break</p> | <p>The student will be able to:</p> <p>P1-Execute the procedure of inserting page break in a excel file according to the given design.</p> <p>P2-Demonstrate the procedure of inserting page break in a excel file according to the given design.</p> | <p>K1- Understand the procedure of inserting page break in a excel file according to the given design.</p> <p>K2- Differentiate between section break and page break and their purpose and utility.</p> |

| Competency Unit | Performance Criteria | Knowledge and Understanding |
|-----------------------------|---|--|
| C9: Split Cells | <p>The student will be able to:</p> <p>P1-Learn to split cells in the worksheet.</p> <p>P2-Perform the process of split cells by demonstrating various steps in an excel sheet.</p> | <p>K1- Know how to split cells in the worksheet.</p> <p>K2- Explain an easy way out not to mix different values. Used to make the data accurate.</p> |
| C10: Merge Cells | <p>The student will be able to:</p> <p>P1-Perform the procedure for splitting cells in the excel file independently, as per requirements.</p> <p>P2-Show two values in one cell.</p> | <p>K1- Know the procedure for splitting cells in the excel file independently, as per requirements.</p> |

Module 4: Prepare Presentation

Overview: 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.

| Competency Unit | Performance Criteria | Knowledge and Understanding |
|--|--|---|
| D1: Prepare Slide Master | <p>The student will be able to:</p> <p>P1-Demonstrate the interface of presentation software.</p> <p>P2-Define Master Slide as per options available in the software of Power Point.</p> <p>P3-Perform the stepwise procedure for preparing master slide including slide orientation and layout of the master slide.</p> | <p>K1- Elaborate the procedure to prepare master slide.</p> <p>K2- Describe the significance of preparing master slide before preparing a presentation.</p> |
| D2: Insert Slides | <p>The student will be able to:</p> <p>P1-Perform stepwise procedure to insert slide in the power Point presentation.</p> <p>P2-Perform how to insert different types of slides like new slide, duplicate slide or any other slide with a different look and theme.</p> <p>P3-To show different theme of work on different slide you can insert slides.</p> | <p>K1- State stepwise procedure to insert slide in the power Point presentation.</p> |

| Competency Unit | Performance Criteria | Knowledge and Understanding |
|--------------------------------|--|--|
| D3: Design Slide | <p>The student will be able to:</p> <p>P1-Demonstrate the procedure to design a slide in the power point.</p> <p>P2-Change the design and color, fonts, effects and background etc.</p> | <p>K1- Define design slide</p> <p>K2- Explain how to change the design and color, fonts, effects and background etc.</p> |
| D4: Apply animation | <p>The student will be able to:</p> <p>P1-Demonstrate the basic techniques of animations like wipe down, wipe up, Wedge, Shape diamond, Wheel clockwise etc this make the document fruitful while presentation and make it more easier to be understandable.</p> <p>P2-Demonstrate the concept of adding animation in the power Point slide show.</p> <p>P3-Demonstrate the basic techniques of animations like wipe down, wipe up, Wedge, Shape diamond, Wheel clockwise etc.</p> <p>P4-Demonstrate the features/attributes of animation pane available in the power Point software.</p> <p>P5-Perform the procedure to apply animation to a single slide and to various slides.</p> | <p>K1- Define the basic techniques of animations like</p> <ul style="list-style-type: none"> • wipe down • wipe up • Wedge • Shape • diamond • Wheel clockwise etc. <p>K2- 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.</p> |

| Competency Unit | Performance Criteria | Knowledge and Understanding |
|------------------------------------|---|---|
| D5: Apply Sound effects | <p>The student will be able to:</p> <p>P1-Demonstrate the procedure to apply sound effect e.g. Camera, Bomb, arrow, applause, drum roll etc. Bring a life while presenting and attracts audience.</p> <p>P2-Apply sound effect.</p> <p>P3-Demonstrate the uses of sound effect.</p> <p>P4-Demonstrate the procedure to apply sound effect e.g. Camera, Bomb, arrow, applause, drum roll etc.</p> | <p>K1- Describe the procedure to apply sound effect e.g. Camera, Bomb, arrow, applause, drum roll etc. Bring a life while presenting and attracts audience.</p> |
| D6: Format Slide | <p>The student will be able to:</p> <p>P1-Perform the procedure to format slide</p> <p>P2-Format the slide in different ways</p> <p>P3-Add/edit any new requirement to the same document.</p> | <p>K1- Explain and understand the procedure to format slide</p> |

Module 5: Prepare In-page documents

Overview: 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.

| Competency Unit | Performance Criteria | Knowledge and Understanding |
|---|---|---|
| E1: Set Keyboard preferences | The student will be able to: P1-Perform keyboard preferences P2-Perform step-wise setting of keyboard preferences on the PC with In-Page interface. P3-Demonstrate key position of any keyboard preferences by switching the language from English to Urdu, as per user requirement | K1- Classify keyboard preferences |
| E2: Lay out Page | The student will be able to: P1-Demonstrate different page sizes in the In-Page file. P2-Elaborate page margins in the in page format P3-Exhibit to add page numbering in the file | K1- Explain procedure for page margins in the in page format K2-Define to add page numbering in the file |

| Competency Unit | Performance Criteria | Knowledge and Understanding |
|---|---|--|
| E3: Toggle between languages | <p>The student will be able to:</p> <p>P1-Perform supportive languages in In-page such as Urdu, Arabic or Persian etc.</p> <p>P2-Perform how to toggle between different languages.</p> <p>P3-Elaborate procedure of toggling between languages.</p> | <p>K1- Explain the procedure to toggle between languages in In-page such as Urdu, Arabic or Persian etc.</p> |
| E4: Insert Columns | <p>The student will be able to:</p> <p>P1-Learn the importance of columns in In-page and perform them manually.</p> <p>P2-Demonstrate supporting options for inserting columns.</p> <p>P3-Exhibit the steps/procedure of inserting columns.</p> | <p>K1- Understand the importance of columns in In-page and can perform them manually to show data systematically.</p> <p>K2- State supporting options for inserting columns.</p> <p>K3- Describe the steps/procedure of inserting columns.</p> |

Module 6: Manage e-mail/internet

Overview: 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.

| Competency Unit | Performance Criteria | Knowledge and understanding |
|---|--|--|
| F1: Configure e-mail account | <p>The student will be able to:</p> <p>P1-Demonstrate the steps for Email account configuration.</p> <p>P2-Identify Errors while Email configuration.</p> | <p>K1- Define Email.</p> <p>K2- State how to configure an e-mail account.</p> |
| F2: Sort out email | <p>The student will be able to:</p> <p>P1-Demonstrate sorting out of emails on the PC</p> <p>P2-Perform successfully sorting out of emails as per instructions.</p> | <p>K1- Describe procedure of sorting out emails in the outlook and its benefits.</p> <p>.</p> |
| F3- Manage Address Book | <p>The student will be able to:</p> <p>P1-Open address book.</p> <p>P2-Demonstrate the method of managing the address book by adding some contacts, removing contacts, importing, exporting sorting and updating etc.</p> | <p>P3-K1- Understand and define address book</p> <p>K2- Explain procedure of using and maintaining address book</p> <p>.</p> |

| Competency Unit | Performance Criteria | Knowledge and understanding |
|--|--|---|
| F4: Achieve e-mail Data | The student will be able to: P1-Learn the procedure of Archiving Email data P2-Demonstrate practically the procedure of archiving emails, as per requirements | K1- Brief the procedure of archiving emails, as per requirement. K2- Narrate the specific procedure with dates to archive e-mails. |
| F5: Perform Browsing | The student will be able to: P1-Perform the components of browsing as per given instructions. P2-Suffering through different sources and finding what's required | K1-. Define Browsing. K2- Explain procedure of Browsing |
| F6: Download Data | The student will be able to: P1-Demonstrate the procedure of downloading data. P2-Demonstrate precautions to be taken to download data. P3-View this downloaded data any time, the format should be compatible and should be virus free. | K1- Define downloading. K2- Explain procedure of Downloading |

| Competency Unit | Performance Criteria | Knowledge and understanding |
|---|--|--|
| F7: Send and receive e-mails | The student will be able to: P1-Demonstrate the procedure to send an email. P2-Demonstrate the procedure to receive an Email. P4- Perform the components to send/Receive Emails. P5- Demonstrate the procedure to receive an Email and send an Email. | K1- Describe precautions to be taken for sending/receiving Emails. |

Module 7: Manage Information System

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

| Competency Unit | Performance Criteria | Knowledge and understanding |
|----------------------------------|--|--|
| G1: Perform Data Entry | <p>The student will be able to:</p> <p>P1 - Demonstrate data entry procedures.</p> <p>P2 - Enlist types of data.</p> <p>P3 - Demonstrate the techniques to enter the data efficiently.</p> <p>P4 - Use software programs available such as Typing and Data Entry to learn how to enter data.</p> | <p>K1 - Organize raw data (which has little value) into something useful.</p> <p>K2 - Process the data to make it useful in decision-making. .</p> <p>K3 - Acquire skills related to keyboarding and in the use of word processing, spreadsheet, and database management computer software packages.</p> <p>K4 - Explain how to use software programs for typing</p> |
| G2: Manage File folder | <p>The student will be able to:</p> <p>P1 - Demonstrate how to find files.</p> <p>P2 - Demonstrate types of files</p> <p>P3 - Customize the Documents library (in addition to the Music, Pictures, and Videos libraries that are also included by default).</p> <p>P4 - Manage data on Hard disk</p> | <p>K1- Differentiate between files/folders</p> <p>K2- Define storage devices</p> <p>K3- 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.</p> |

| Competency Unit | Performance Criteria | Knowledge and understanding |
|--|--|---|
| | <p>P5 - Demonstrate how to get back up files.</p> <p>P6 - Adopt consistent methods for file and folder naming.</p> <p>P7 - Keep names short.</p> <p>P8 - Let folder structure do some of the naming.</p> <p>P9 - Avoid large folder structures.</p> | |
| <p>G3: Perform Scanning</p> | <p>The student will be able to:</p> <p>P1 - Scan computer completely and correctly for malware like viruses, Trojan horses, rootkits, spyware, adware, worms, etc. is often a very important troubleshooting step.</p> <p>P2 - Perform the pre-requisites for scanning</p> <p>P3 - Demonstrate step by step procedure of scanning a computer</p> <p>P4 - Download and run the Microsoft Windows Malicious Software Removal Tool.</p> <p>P5 - 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.</p> | <p>K1 - Explain the procedure of scanning</p> <p>K2 - Explain Update anti-virus and any anti-malware software installed on computer.</p> <p>K3 - 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.</p> <p>K4 - Define procedure for properly checking computer for malware when working to solve many problems.</p> |

| Competency Unit | Performance Criteria | Knowledge and understanding |
|--------------------------------------|--|--|
| G4: Maintain office record | The student will be able to: P1 - Ensure that the content, context and structure of records is preserved and protected when the records do not have a physical existence. This has important implications for the authenticity, reliability, and trustworthiness of records. P2 - Manage electronic record's backup to meet functional requirement for computer. P3 - Perform indexing | K1 - Explain the importance of indexing K2 - Identify steps for maintain the office record Manage electronic record's backup to meet functional requirement for computer. K3 - 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. |
| G5: Perform Printing | The student will be able to: P1 - Perform steps involved in printing P2 - Perform printing options P3 - Demonstrate essential requirements before printing P4 - Handle problem that occur while printing: | K1 - Define how to get print-out from the PC. K2 - Explain types of printers K3 - Explain types of printing problems |
| G6: Search Files / Folders | The student will be able to: P1 - Perform types of files P2 - Enlist wild cards | K1 - Explain the use of different methods to find files in different situations. K2 - Use the search box on the Start menu to find files, folders, programs, and e-mail messages stored on computer. |

| Competency Unit | Performance Criteria | Knowledge and understanding |
|---------------------------------|---|---|
| | <p>P3 - Demonstrate steps to find an item e.g. using the Start menu</p> <p>P4 - Find a folder or a file that somebody knows is in a particular folder or library, such as Documents or Pictures.</p> <p>P5 - Search for a file or folder by using the search box type a word or part of a word in the search box.</p> | <p>K3 - Describe search procedure</p> |
| <p>G7: Convert Files</p> | <p>The student will be able to:</p> <p>P1 - Identify file conversion software</p> <p>P2 - Describe the procedures of files conversion</p> <p>P3 - Demonstrate how the extension of a file can be changed with the help of typing manually or by saving the same file with the help of “save as” option.</p> <p>P4 - Use online convertor to give a practical demonstration e.g. Go to ZamZar.com, browse for file and choose</p> | <p>K1 - 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.</p> <p>K2 - Explain different software, which help convert a particular file into another format.</p> <p>K3 - Describe the procedures of files conversion</p> |

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

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

| Competency Unit | Performance Criteria | Knowledge and Understanding |
|--|--|---|
| <p>H1: Identify business opportunities in the Computer sector</p> | <p>The student will be able to:</p> <p>P1 - Look for, and recognise, business opportunities in the Computer sector</p> <p>P2 - Create Computer business opportunities where they do not obviously exist</p> <p>P3 - Quickly identify potential Computer business developments and how they will affect the new business</p> <p>P4 - Identify the additional benefits of potential Computer business opportunities</p> | <p>K1 - Explain some basic terms of business</p> <p>K2 - Learn to face challenges and opportunities in the new business environment</p> <p>K3 - Explain 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.</p> <p>K4 - 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.</p> <p>K5 - Listen to what the other person really says including asking appropriate questions, repeating important information to the other person, looking attentive.</p> <p>K6 - 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</p> |

| Competency Unit | Performance Criteria | Knowledge and Understanding |
|---|--|---|
| <p>H2: Develop the business plan for the new Computer business</p> | <p>The student will be able to:</p> <p>P1 - Check what laws and other regulations will affect the new Computer business</p> <p>P2 - Work out what money needed to start the new Computer business and keep it running</p> <p>P3 - Identify own contribution to running the new Computer business</p> <p>P4 - Determine the staff needed for the new Computer business</p> <p>P5 - Sourcing suppliers for the new Computer business</p> <p>P6 - Decide how to use quality standards in the new Computer business</p> <p>P7 - Decide on the new Computer business's policy for looking after customers</p> <p>P8 - Investigate suitable premises for the new Computer business</p> <p>P9 - Decide how you will get equipment, tools and materials</p> <p>P10 - Identifying other sources of support</p> | <p>K1 - Brief about obtaining approval of company name through the Securities and Exchange Commission of Pakistan,</p> <p>K2 - Know a little bit about financing from the banks.</p> <p>K3 - Find and secure the services of a good accountant, including checking advertisements, references, recommendations from other ICT sector colleagues</p> <p>K4 - 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</p> <p>K5 - Follow quality standards, including inspections by Pakistan Tourism Board and similar organisations</p> <p>K6 - Study Customer service policy and the customer, certification and accreditation from Consumer Rights Commission of Pakistan</p> <p>K7 - Find out about suitable premises, including purchase or rental, size suitability, services</p> |

| Competency Unit | Performance Criteria | Knowledge and Understanding |
|--|--|--|
| <p>H3: Communicate /Marketing the new Computer business's services to customers</p> | <p>The student will be able to:</p> <p>P1 - Know the competition from other Computer businesses and be able to explain to customers the advantages of own offer</p> <p>P2 - Check that the marketing strategy is based on an accurate understanding of potential customer's needs and preferences</p> <p>P3 - 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.</p> <p>P4 - 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.</p> <p>P5 - Remind customers regularly of the benefits of dealing with the new business, including in person, by e-mail, through advertising or promotional campaigns</p> | <p>K1 - 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.</p> <p>K2 - 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</p> |

| Competency Unit | Performance Criteria | Knowledge and Understanding |
|--|---|--|
| <p>H4: Negotiate arrangements for the new Computer business</p> | <p>The student will be able to:</p> <p>P1 - Clearly explain the features of the arrangements that need to be made and the benefits to the other person or organisation</p> <p>P2 - Think whether there is anything to negotiate on other than price</p> <p>P3 - Negotiate arrangements calmly and effectively</p> <p>P4 - Behave ethically throughout negotiations</p> <p>P5 - Sign off arrangements so they are clear to all parties</p> <p>P6 - 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</p> | <p>K1 - Make arrangements, including with staff, with suppliers, with customers</p> <p>K2 - Negotiate other than on price (for example delivery costs and times, product and service specification, service level and extras)</p> <p>K3 - Negotiate the advantages other than profitability</p> <p>K4 - 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</p> <p>K5 - Recalculate and present an offer in a different way to meet developments whilst making a deal</p> <p>K6 - Close a deal, including making assumptions beyond the deal, creating a sense of urgency, using competition as a lever, being prepared not to close</p> |

List of Tools and Equipment

A) Hardware

(Class size: 20 trainees/student)

| Sr. No. | Name of Item/ Equipment / Tools | Qty. |
|---------|--|------|
| 1. | Laptop: Latest Processor with licensed Operating System and Antivirus. | 1 |
| 2. | File server | 1 |
| 3. | LAB should have Structured cabling | 1 |
| 4. | Workstation/ Nodes (computer) | 20 |
| 5. | Workstation for Multimedia | 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

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 |

