Co-funded by the European Union

german cooperation
DEUTSCHE ZUSAMMENARBEIT

Norwegian Embassy
Islamabad

CABINET MAKER

Learner Guide

National Vocational Certificate Level 2

Version 1 - January 2020

NAVTTC

Implemented by
giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Published by
National Vocational and Technical Training Commission
Government of Pakistan

Headquarter
Plot 38, Kirthar Road, Sector H-9/4, Islamabad, Pakistan
www.navttc.org

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

Layout & design
SAP Communications

Photo Credits
TVET Sector Support Programme

This document has been produced with the technical assistance of the TVET Sector Support Programme, which is funded by the European Union, the Federal Republic of Germany and the Royal Norwegian Embassy and has been commissioned by the German Federal Ministry for Economic Cooperation and Development (BMZ). The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH in close collaboration with the National Vocational and Technical Training Commission (NAVTTC) as well as provincial Technical Education and Vocational Training Authorities (TEVTAs), Punjab Vocational Training Council (PVTC), Qualification Awarding Bodies (QABs)s and private sector organizations.

Document Version
January, 2020
Islamabad, Pakistan

CABINET MAKER

Learner Guide

National Vocational Certificate Level 2

Version 1 - January 2020

Developed by,

Engr. Inayat-ur-Rehman
Ex. Professor Mechanical
KP TEVTA,
Qualification Development Expert

Contents

Introduction

Welcome to your Learner's Guide for the *Cabinet Maker* Program. It will help you to complete the program and to go on to complete further study or go straight into employment.

The *Cabinet Maker* program is to engage young people with a program of development that will provide them with the knowledge, skills and understanding to start this career in Pakistan. The program has been developed to address specific issues, such as the national, regional and local cultures, the manpower availability within the country, and meeting and exceeding the needs and expectations of their customers.

The main elements of your learner's guide are:

- **Introduction:**
  - This includes a brief description of your guide and guidelines for you to use it effectively
- **Modules:**
  - The modules form the sections in your learner's guide
- **Learning Units:**
  - Learning Units are the main sections within each module
- **Learning outcomes**:
  - Learning outcomes of each learning units are taken from the curriculum document
- **Learning Elements:**
  - This is the main content of your learner's guide with detail of the knowledge and skills (practical activities, projects, assignments, practices etc.) you will require to achieve learning outcomes stated in the curriculum
  - This section will include examples, photographs and illustrations relating to each learning outcome
- **Summary of modules**:
  - This contains the summary of the modules that make up your learner's guide
- **Frequently asked questions**:
  - These have been added to provide further explanation and clarity on some of the difficult concepts and areas. This further helps you in preparing for your assessment.
- **Multiple choice questions for self-test**:
  - These are provided as an exercise at the end of your learner's guide to help you in preparing for your assessment.

CABINET MAKER

Learner Guide

National Vocational Certificate Level 2

Version 1 - January 2020

Module-5

Module 5: Develop basic computer operating skills

Objective of the Module: This module covers the skills and knowledge required to Operate MS word, Operate MS Excel, Operate MS Power Point, Perform Browsing and Print Document.

Duration: 100 Hours **Theory: 20 Hours** **Practice: 80 Hours**

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1. Operate MS word	***Trainee will be able to:*** • Perform Microsoft basic commands in MS word • Open File • Format a file i. Font (Type/size/bold/Italic) ii. Header Footer iii. Page number iv. Insert pics / table/hyperlink • Save a File • Save a folder	• Knowledge of Basic parts of computers • Importance and use of MS Word • Procedure to perform various functions in Home tab	Theory- 06 Hrs. Practical- 33 Hrs. Total- 39 Hrs.	• Computer • Windows CD • MS office CD	Class Room and Computer lab
LU2. Operate MS Excel	***Trainee will be able to:*** • Perform basic commands in Microsoft MS Excel • Open a worksheet. • Sum functions • If functions	• Importance and uses of MS Excel • Procedure to perform various functions in Home tab	Theory- 06 Hrs. Practical- 33 Hrs. Total- 39 Hrs.	• Computer • Windows CD • MS office CD	Class Room and Computer lab

	• Basic calculations • Table and graphs • Save a worksheet/folder				
LU3. Operate MS Power Point	***Trainee will be able to:*** • Prepare Microsoft power point presentation with basic commands • Make a power point file • Insert pics/table/hyperlink • Design a theme for slides • Save a power point file	• Importance and use of MS Power Point • Procedure to develop presentation	Theory- 06 Hrs. Practical- 30 Hrs. Total- 36 Hrs.	• Computer • Windows CD • MS office CD	Class Room and Computer lab
LU4. Perform Browsing	***Trainee will be able to:*** • Perform browsing on the internet as per needs • Perform search online on new trends in the market with the help of internet	• Importance of Internet. • Use of various search engines like Google, YouTube etc.	Theory- 04 Hrs. Practical- 30 Hrs. Total- 34 Hrs.	• Computer • Internet connection	Class Room and Computer lab
LU5. Print Document	***Trainee will be able to:*** • Select Printer • Select page setup • Print relevant pages	• Printing Procedure and techniques.	Theory- 03 Hrs. Practical- 09 Hrs. Total- 12 Hrs.	• Computer • Printing • papers • (A4 and Legal size)	Class Room and Computer lab

Examples and Illustrations:

Basic Parts of a Computer

A. Input Devices:

1. **Keyboard**
2. **Mouse**
3. **Microphone**

B. Process:

CPU Central Processing Unit

C. Output Devices

1. **Monitor**
2. **Printer**
3. **Speaker**

MS Word:

Microsoft Word is a word processing program that was first made public by Microsoft in the early 1980s. It allows users to type and manipulate text in a graphic environment that resembles a page of paper. Extra features, such as tables, images and advanced formatting give users more options to customize their documents. Over the past three decades, there have been a number of updates and additions to Microsoft Word. Today it is one of the most widely used word processors available for Macs and PCs. It is often taught to students in schools and required as part of the basic computer requirements for many office jobs. Here you will learn the basic functions of Microsoft Word and how to use them.

Alignment – The alignment options dictate whether the left and right edges of the text in a document adhere to the right side, left, center or justified. Alignment can be set from the formatting toolbar at the top of the window or under by choosing “Paragraph” under the Format menu.

Bullets/Numbering – When creating a list of text items, users can choose from several bullet or numbering system to add a small graphic icon or series of numbers before each item. To add bullets or numbering to a series of text, click on the corresponding buttons in the formatting toolbar or choose “Bullets and Numbering” from the Format menu.

Copy – Copying text simply means making a replica of any text that is currently selecting and saving it to the clipboard. Pressing the Control and C keys in Windows or Command and C on a Mac will copy the text. Alternatively, users can also select the text and then click the “Copy” option under the Edit menu or in the main toolbar.

Cut – Cutting text removes the text entirely from the viewable document and stores it in the clipboard. Control-X or Command-X are the keyboard shortcuts for the Cut function on Windows and Mac respectively. The Cut function can also be found under the Edit menu or the toolbar.

Document – Each document in Microsoft Word is essentially a new file. Each document can be several pages long. A new document can be created by hitting Control-N or Command-N, or by choosing the “New Blank Document” option from the File menu or the standard toolbar.

Edit – The edit menu or toolbar in Microsoft Word allows users to perform basic editing functions in their document such as copying, cutting and pasting. It also contains options for the Undo and Find/Replace functions.

Font – A font is a type of design for text and typically incorporates this design into each letter, number and symbol found on a keyboard. Fonts can range from formal to whimsical. Microsoft Word comes with a series of provided fonts and additional ones can also be downloaded if needed. To change the font used in a document, select the text and either click on the main Font menu, the Font drop-down menu in the formatting toolbar or hit Control-D or Command D.

Footer – The footer is the text that consistently appears on every page of a document, at the bottom of each page. Footers normally include details such as the page number, or a company’s name and contact details in formal documents. Add or edit a footer by choosing “Header and Footer” under the View menu.

Format – The Format menu (or toolbar) goes one step further than the Edit menu. Users can make stylistic changes by changing the look of the text itself, paragraphs, lists and more.

Header – The header is similar to a footer except that it sits at the very top of every page in a document. Headers often contain page numbers, the document name or sub-titles within a document. The header can be edited by clicking on “Header and Footer” within the View menu.

Justify, left justified, right justified – Justification is a type of alignment for text in a word processor. Justify ensures that both the left and right sides of the text in every paragraph run in a straight line. Left justify makes only the left side of the text aligned, while the right side remains ragged. Right justified does the complete opposite, with only the right side of the text aligned. Users can apply justification to their text by clicking on the corresponding buttons in the formatting toolbar or by selecting the text and clicking on “Paragraph” under the Format menu.

Open – The Open command opens an existing document in Microsoft Word. Command or Control plus O, or choosing “Open…” from the File menu will provide a pop-up window for users to select the document they wish to open.

Paste – The paste command takes any previously copied or cut text and lays it down within the document where the cursor is pointing. Control or Command plus V, or “Paste” from the Edit menu or standard toolbar will run the paste function.

Print – The print command first opens a window where users can specify parameters of the paper, printer and ink they wish to print with and it provides a preview of what the physical print will look like. Control or Command plus P, or clicking on “Print” in the File menu or standard toolbar lets users access the print window.

Save – The save command is one of the most important ones. It saves all of the work done to date within a document. The save command enables users to return to the same document later and continue writing, editing or printing. Control or Command plus S, or clicking “Save” under the File menu or standard toolbar will save the document. The “Save As” option is slightly different; it allows users to save the document as a different version by adding a different file name.

Undo – The undo feature keeps track of each command that a user issues while working on their document. Issuing the undo command allows the user to go back one step and restore the document as it was before their latest editing command. Related to the Undo command is Redo, which lets the user redo the same formatting command again. Control or Command plus Z, or “Undo” under the Edit menu is used to undo a command, while Control or Command plus Y or “Redo” under Edit is to redo a command.

Keyboard Shortcuts for Microsoft Word

Shortcuts Keys	Operation
Ctrl+X	Cut
Ctrl+C	Copy
Ctrl+V	Paste
Ctrl+Z	Undo
Ctrl+Y	Redo
Ctrl+S	Save
Ctrl+P	Print

Shortcuts for moving around easily / quickly in Word

Home	Beginning of line
End	End of line
Ctrl + Home	Go to start of document
Ctrl + End	Go to end of document
Right Arrow	Right one character
Left Arrow	Left one character
Ctrl+Right Arrow	Right one word
Ctrl+Left Arrow	Left one word

Text Formatting Shortcuts in Word

Ctrl+B	Bold
Ctrl+I	Italics
Ctrl+U	Underline
Ctrl+Shift+L	Bulleted list
Ctrl+L	Align left
Ctrl+R	Align right
Ctrl+E	Align centre

MS Excel

Microsoft Excel is a program that provides worksheets comprised of rows and columns. Data can be stored in the worksheet, also called a spreadsheet, similarly to a Microsoft Word table, but the power of Excel is its ability to perform simple to complex mathematical calculations, and other functions. An Excel worksheet, or spreadsheet, is a two-dimensional grid with columns and rows.

What are Excel Formulas?

Excel formulas help you identify relationships between values in the cells of your spreadsheet, perform mathematical calculations using those values, and return the resulting value in the cell of your choice. Formulas you can automatically perform include sum, subtraction, percentage, division, average, and even dates/times

1. SUM

All Excel formulas begin with the equals sign, =, followed by a specific text tag denoting the formula you'd like Excel to perform. The SUM formula in Excel is one of the most basic formulas you can enter into a spreadsheet, allowing you to find the sum (or total) of two or more values. To perform the SUM formula, enter the values you'd like to add together using the format, =SUM (value 1, value 2, etc.). The values you enter into the SUM formula can either be actual numbers or equal to the number in a specific cell of your spreadsheet.

You can also practice the Division, Multiplication, subtraction, Percentage etc.

2. IF

The IF formula in Excel is denoted =IF (logical test, value_if_true, value_if_false). This allows you to enter a text value into the cell "if" something else in your spreadsheet is true or false. For example, =IF(D2="Pass","10","0") would award 10 points to cell D2 if that cell contained the word "Gryffindor."

There are times when we want to know how many times a value appears in our spreadsheets. But there are also those times when we want to find the cells that contain those values, and input specific data next to it.

We'll go back to the example for this one. If we want to award 10 points to everyone who belongs in the Pass Group, instead of manually typing in 10's next to each Pass student's name, we'll use the IF-THEN formula to say: If the student is in Pass, then he or she should get ten points.

The formula: IF(logical test, value_if_true, value_if_false)

Logical Test: The logical test is the "IF" part of the statement. In this case, the logic is D2="Pass." Make sure your Logical Test value is in quotation marks.

Value_if_True: If the value is true -- that is, if the student is Pass -- this value is the one that we want to be displayed. In this case, we want it to be the number 10, to indicate that the student was awarded the 10 points. Note: Only use quotation marks if you want the result to be text instead of a number.

Value_if_False: If the value is false -- and the student does not Pass -- we want the cell to show "0," for 0 points.

Microsoft PowerPoint

Microsoft PowerPoint is undoubtedly the most popular app used to give presentations. You're likely to see PowerPoint presentations used for everything from the world's largest companies to grade school teachers sharing lessons.

Here are the key actions you'll need to take to build a PowerPoint presentation:

You'll need to add slides, the individual pages in the presentation.

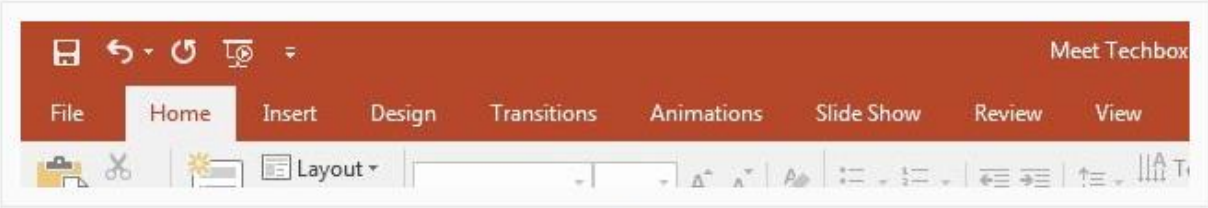
You'll add content to the slides, such as text boxes, images, charts and graphs.

Change themes and styles to make your presentation look professional and fit the occasion at hand.

Prepare presentation aids like Speaker Notes and Presenter View to help you feel comfortable with presenting

The Ribbon

The ribbon menu is found across many of Microsoft's apps, such as Word, Excel, and PowerPoint. It lives above the main area of the application.



The PowerPoint ribbon lets you switch between various tabs.

The ribbon contains a series of tabs that you can switch between. Each of these have a unique set of tools to work with your presentation differently. When you switch tabs on the ribbon, you'll see new buttons and options to modify your presentation:

- **File**. Save, share, and export your presentation.
- **Home**. A general purpose collection of the most common tools that you'll use in PowerPoint.
- **Insert**. An all-in-one tool to add every imagine-able type of content, such as tables, pictures, charts, video, and more.
- **Design.** Controls the overall look and feel of your presentation with theme and style settings.
- **Transitions**. Add animations when you switch slides.
- **Animations**. Controls the order and style that objects will enter or exit your slide with.
- **Slide Show**. Control settings related to the way your presentation appears when sharing it with an audience.

Now that you understand the layout, you have a better idea of how you can jump to the feature you need.

Print a Document

- Open the document or file you want to print.
- In the top portion of the window of the program or browser you are using, the File menu is in the upper-left corner of the screen.
- If you clicked File, select Print from the drop-down menu.
- Either option opens a Print properties window or automatically starts printing the document or file.
- If the Print properties window is showing, you can specify additional printing options, such as how many copies you want or which specific pages you want to print. Once you've selected the options, click Ok or Print to start the printing process.

CABINET MAKER

Learner Guide

National Vocational Certificate Level 2

Version 1 - January 2020

Module-6

Module 6: Interpret Basic Drawing & Design

Objective: This competency standard covers the skills and knowledge required to Interpret drawing/ design, Perform Interconversion of Scales, Interpret drawing symbols, Take Measurement and interpret Hatching

Duration: 100 Hours **Theory: 20 Hours** **Practice: 80 Hours**

Learning Unit	Learning Outcomes	Learning Elements	Materials Required
LU1. Interpret drawing/ design	***Trainee will be able to:*** • Identify drawing/ design/cutting list/material list • Interpret the drawing/design • Follow the drawing/ design • Identify various drawing views • Interpret cutting list	• Size/type of drawing paper • Define drawing tools/equipment • Elaborate cutting list • Elaborate different views of drawing	
LU2. Perform Interconversion of Scales	***Trainee will be able to:*** • Interpret scales. • Follow interpretation of scale ➢ Full ➢ Enlarge ➢ Reduce	• Describe Scales and its interconversion.	
LU3. Interpret drawing symbols	***Trainee will be able to:*** • Identify various drawing symbols • Follow the drawing symbols	• Describe drawing symbols	

LU4. Take Measurement	***Trainee will be able to:*** • Identify measuring tools • Perform measurement as per drawing • Mark the job as per drawing	• Types of measurement tools	
LU5. interpret Hatching	***Trainee will be able to:*** • Interpret section drawing • Identify hatching symbols • select the required materials for hatching as per job requirement	• Understand the hatching symbols/pattern	

Examples and Illustration:

Drafting

Drafting is the process of creating a technical drawing to communicate how something is to be constructed. Therefore, it is essential to draft a plan before you begin any woodworking project. The failure to do so results in lost time, lost material, lost money, and lost focus. Without a drafted plan your r attention is divided between cutting and assembling. In other words, while cutting wood without a plan you are also thinking about how the project will go together, what the next cut needs to look like, and what needs to happen next. Since the number one reason for accidents in the woodshop occurs when people do not have their mind on their work, it is reasonable to say that drafting a plan not only makes sense to know what to do, but it is also safe. Therefore, plan the work, work the plan. Think it through before you ever begin cutting. Draft a plan!

Plan the work…

To plan the work, you need to first know what the finished product will look like. This can be accomplished by looking at an already completed project, a picture of the project, or a sketch. Having the finished product in mind will help you understand the drafted plans.

Next, you will need to know how the pieces go together to make the project. This is done by drafting a scaled technical drawing, or a plan. Drawing to scale means that the images on the drawing sheet are drawn in proportion to the finished product. That is to say, the drawing is an exact representation of the actual product, only smaller or bigger. With this drawing the woodworker can see clearly the exact sizes and shapes to be cut and assembled.

A scaled drawing can easily be accomplished by using graph paper. For more sophisticated projects the use of an architect's scale will be necessary. Graph paper is a sheet of paper with a series of squares aligned in columns and rows filling the sheet. The most common size square is ¼".

When using graph paper, simply predetermine the "value" of each square. This value is called the scale. That is to say, decide what each square will equal to draw your project proportionally (¼" = 1", ¼" = 2",

¼” = ½”, and so on). For example, if your drawing scale is ¼” =1”, for every inch of actual size of your project, you will draw it ¼”, or one square. Let’s say that the side of your picture frame is 9”. On your drawing, you would draw a line 9 squares long, or 2 ¼”. You will learn more about scaling a drawing in Unit III: Measuring. For now, you just need to know the basics.

Once you have decided your scale and are certain that your drawing will fit on the sheet of graph paper with the scale that you chose, it’s time to start drawing. Your drawing should include all of the necessary information required for building your project. This means you will have to “think it through.”

Think it through…

Thinking it through means that you consider how each joint will be fastened, the size of lumber you will need, and the size of each cut. You should know all of this BEFORE you begin cutting. As you draft your project, build it in your mind. Then, communicate it clearly on your drawing. Your drawing should have the answer to every question a builder may ask about the project.

Work the Plan…

Once you are finished drafting your project, you will know everything there is to know about how to build it: the size of your cuts, the diameter of your holes, the radius of an arch, the method of joining wood together, and the size of lumber to pull from the rack. Now, work the plan. Simply follow what you have drawn. Cut all of the pieces first. Then, assemble them.

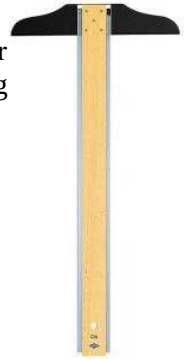
Drafting Tools:

Before we begin drafting, let's first look at the tools you will need.

1. **Graph paper:** A sheet of paper with a series of squares aligned in columns and rows filling the sheet useful for drawing images to scale.

2. **Pencil:** Do not draw in ink. Always use a pencil, and begin with a light sketch. You will darken the lines later.

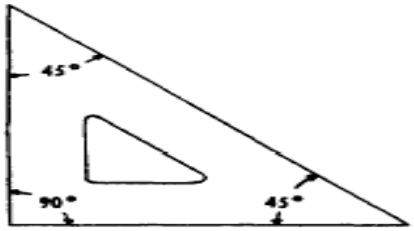
3. **Straight edge:** A straight edge is precisely that…a straight edge. It is a hard, smooth tool used for guiding your pencil to assure that your lines are straight. Always use a straight edge. Do not freehand sketch a finished drafted plan. The most common straight edge used for drawing horizontal lines is a T-square, which is also used to hold drafting triangles (see below).



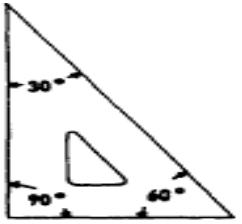
4. Circle template: A circle template is a smooth, hard flat tool used for drawing circles or arcs.

5. Drafting compass: A drafting tool used for drawing circles or arcs.

6. Triangles: Triangles are flat surfaces shaped like triangles used for drawing straight lines



45° TRIANGLE



30°/60° TRIANGLE

Multi-View Drawings

In order to effectively plan a woodworking project and think through each step of assembly before you begin, it is necessary to study it from a number of different angles, or views. This study is called a multi view technical drawing. Simply put, a view is how something is seen, and in drafting there are many different types of views to help you see exactly how something is built. The standard views required in any drafting project are the front, top, and right side views. On more complex projects more views are required, but for the most part, these three views will communicate everything you need to know as to how to construct a simple project.

Before you Begin:

As we discussed in the last chapter, begin by choosing the scale of your drawing. Because we want to fit all three views on the same piece of paper, we will use a ¼" = 1" scale. After determining the scale, draw a title block around your paper. The title block is a thick line boundary, like margins of an essay, this boundary will frame your drawing and provide space to include important information about the project (see sample on the next page).

Where to Begin:

Since the cd rack is a small project and all three views will fit on the same page, begin drawing the first image, the front view, near the bottom left-hand corner of your paper. When drawing multi view images, the views fold out from one another. We place the front view in the bottom corner because all other views will *fold out* from it. That is to say, the top view will be directly above the front view, and the right side view will be directly to the right.

Lightly sketch your drawing on the piece of graph paper first. This will make it easy to make changes before you draw your finished product. We will worry about line quality and thickness in the next chapter.

Front View:

The front view is the image of the object looking straight at it. Every line represents a line as seen in the actual product. Wood has a thickness, so do not draw a single line to represent a piece of lumber.

The sides of this cd rack are 13" tall. On a 1/4" scale, that means the line you will draw to represent one edge of the lumber is 3 ¼" long, or on ¼" graph paper, 13 squares long. Now, you must draw the other edge of the lumber. The wood you will use is ¾" thick. Measure over from your first line a little less than one square on your graph paper, or 3/16", and draw your next line parallel to the first. These lines represent each edge of the board.

Connect the top and the bottom with horizontal lines and, congratulations, you've drawn one front view side of your cd rack. Now, repeat the process for each piece of the cd rack and when completed, it will look something like the illustration on the right.

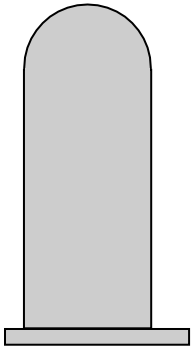
Top View:

The top view is the image of the object looking down on it. This view is drawn directly above the front view. In fact, every corner of the front view drawing should line up exactly with the top view.

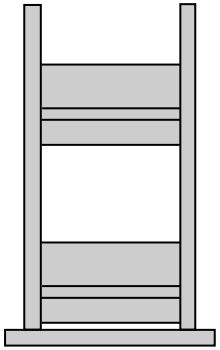
Right Side View:

The right side view is drawn directly to the right of the front view. It is what is seen if you stepped to the right and looked at your image. Every corner on the front view should line up exactly with the same corners on your right side view.

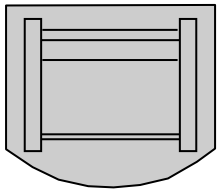
Right Side view



FRONT VIEW



TOP VIEW



Average Furniture Sizes

Furniture	Height (in.)	Depth (in.)	Length/Width (in.)
Tables			
Coffee	14–18	18–24	36–60
Card/game	29	30	30
End	30	15	24
Hall	30–40	15	24–40
Writing	30	24	36–40
Kitchen	30–32	30	42
Dining	29–32	42	60–84
Chairs			
Desk/task	16½	16–18	16–20
Dining	16–18	16–18	16–18
Couch/lounge	14–18	18–24	24–90
Cabinets			
Buffet	30	16–24	48–72
China/display	54–60	12–22	Any
Kitchen	32–36	12 or 24	Any
Other			
Chests	32–54	24	Any
Bookcases	32–82	14–18	Any
Desks	30	24–30	40–60

CABINET MAKER

Learner Guide

National Vocational Certificate Level 2

Version 1 - January 2020

Module-7

Module 7: Develop Basic Communication Skills

Objective: This module covers the skills and knowledge required to Adopt effective listening, Develop nonverbal communication, Develop verbal communication, Develop confidence and Pick the right medium.

Duration: 100 Hours **Theory: 20 Hours** **Practice: 80 Hours**

Learning Unit	Learning Outcomes	Learning Elements	Materials Required
LU1. Adopt Effective Listening	**Trainee will be able to:** • Practice active listening • Ask clarifying questions • Listen and sympathize with other person	• Describe importance of active listening • Describe clarity of questioning • Explain importance of sympathizing a person	• Multimedia • Stationery • Effective Listening Modules
LU2. Develop Nonverbal Communication	**Trainee will be able to:** • Adopt hand gestures if required • Encourage others to speak openly with you • Make eye contact with communicator • Make relaxed, open stance during communication • Perform friendly tone during communication	• Explain importance of hand gestures • Describe importance of encouraging others to speak openly • Describe the importance of eye contact in communication • Describe the importance of open stance and relaxed communication • Explain the usefulness of friendly tone	• Multimedia • Stationery • Non Verbal Communication Modules
LU3. Develop verbal communication	**Trainee will be able to:**	• Explain face to face conversation	• Multimedia • Stationery

	• Adopt face to face conversations • Convey your message clearly and directly • Adopt phrases as simple as possible • Respect others and their ideas	• Explain importance of clarity in direct messaging • Describe use of simple phrases • Describe importance of individual respect and their ideas	• Verbal Communication Modules
LU4. Develop Written Communication Skills	**Trainee will be able to:** • Convey your message in few words. • Convey message through live phone calls. • Convey message through Whatas. • Convey message through email. • Convey message through writing.	• Describe self confidence in interaction with others • Describe usefulness of firm communication in friendly tone • Explain the importance of behavioral skills • Describe the usefulness of sound interpersonal skills • Define good understanding	• Multimedia • Stationery • Written Communication skills Modules

Good Listening Skill:

Listening is one of the most important skills you can have. How well you listen has a major impact on your job effectiveness, and on the quality of your relationships with others.

For instance:

- We listen to obtain information.
- We listen to understand.
- We listen for enjoyment.
- We listen to learn.

Becoming an Active Listener

There are five key active listening techniques you can use to help you become a more effective listener:

1. Pay Attention

Give the speaker your undivided attention, and acknowledge the message. Recognize that non-verbal communication also.

- Look at the speaker directly.
- Put aside distracting thoughts.
- Don't mentally prepare a rebuttal!
- Avoid being distracted by environmental factors. For example, side conversations.
- "Listen" to the speaker's body language.

2. Show That You're Listening

Use your own body language and gestures to show that you are engaged.

- Nod occasionally.
- Smile and use other facial expressions.
- Make sure that your posture is open and interested.
- Encourage the speaker to continue with small verbal comments like yes, and "uh huh."

3. Provide Feedback

Our personal filters, assumptions, judgments, and beliefs can distort what we hear. As a listener, your role is to understand what is being said. This may require you to reflect on what is being said and to ask questions.

Ask questions to clarify certain points. "What do you mean when you say...." "Is this what you mean?" Summarize the speaker's comments periodically.

4. Defer Judgment

Interrupting is a waste of time. It frustrates the speaker and limits full understanding of the message. Allow the speaker to finish each point before asking questions. Don't interrupt with counter arguments.

5. Respond Appropriately

Active listening is designed to encourage respect and understanding. You are gaining information and perspective. You add nothing by attacking the speaker or otherwise putting her down.

- Be candid, open and honest in your response.
- Assert your opinions respectfully.
- Treat the other person in a way that you think s/he would want to be treated.

What is nonverbal communication?

Nonverbal communication is the transfer of information through the use of body language including eye contact, facial expressions, gestures and more. Verbal communication is the use of language to transfer information through written text, speaking or sign language.

Nonverbal communication is important because it gives us valuable information about a situation including how a person might be feeling, how someone receives information and how to approach a person or group of people. Paying attention to and developing the ability to read nonverbal communications is an invaluable skill you can leverage at every stage of your career.

Types of nonverbal communication

There are several types of nonverbal communications you should be aware of, including:

Body language: Body language is the way someone situates their body naturally depending on the situation, the environment and how they are feeling. For example, someone might cross their arms if they are feeling angry or nervous.

Gestures: While gestures vary widely across communities, they are generally used both intentionally and unintentionally to convey information to others. Someone in the United States might display a “thumbs up” to communicate confirmation or that they feel positively about something, for example.

Facial expressions: One of the most common forms of nonverbal communication is facial expressions. Using the eyebrows, mouth, eyes and facial muscles to convey can be very effective when communicating both emotion and information.

Touch: Some people also use touch as a form of communication. Most commonly, it is used to communicate support or comfort. This form of communication should be used sparingly and only when you know how the receiving party feels about touch. It should never be used to convey anger, frustration or any other negative emotions in the workplace.

Verbal Communication

Strong verbal communication skills are important for everyone to master. They are extremely valuable in both your personal and professional life. When speaking clearly, confidently, and with poise, you are much more likely to command the respect of others and build rapport. This is particularly important in business interactions

Nonverbal elements such as posture, gestures, and facial expressions are also important factors in developing good verbal communication skills. Ultimately, good speakers should make frequent eye contact with the audience, let their facial expression show their interest in the ideas they are presenting, dress in a way that is appropriate for the occasion and keep their energy levels high.

Here are the reasons why Oral Communication is great

- It saves time,
- It is more effective as emotions are well portrayed,
- The feedback loop is faster,
- Verbal communication is economical,
- The tone is easy to read

Factors of Effective Verbal communication:

1. Think before you speak

By organizing your thoughts in advance, you can eliminate many of the awkward pauses that occur when speaking. It will also help you relay your information more concisely.

While writing down your thoughts is not always possible in spontaneous discussions, it is still effective to take a minute to organize your thoughts in your mind before you begin to speak.

2. Speak with confidence

Speaking in a confident manner will help you build trust and command the respect of your audience. There are several factors which can impact your ability to speak confidently, including your command of the subject matter, your word choice, the tone of your voice, your body language, and your ability to make direct eye contact with your audience.

3. Be clear and concise

The most effective way to get your point across is to make it in a clear and concise manner. Avoid using complex, convoluted sentences, and try to state your argument in direct language. Before speaking, ask yourself, “What is the clearest way I can make my point?”

4. Be aware of your non-verbal communication cues

Your body language significantly impacts the way others interpret what you say. Pay attention to the gestures you make, your facial expressions, and your body language to ensure they align with the message you are trying to get across.

5. Be a good listener

Being a good listener is as important as being a good speaker, and it will improve the quality of your verbal interactions. It shows the people you are speaking with that you genuinely care about their ideas, and it helps ensure you understand their needs. This will enable you to build trust and rapport much quicker.

6. Think about the perspective of your audience

Just because you have a strong command of a topic doesn't mean the people you are speaking to have the same knowledge as you.

Try to think about how someone else will understand what you are trying to communicate, particularly if they lack the technical knowledge about a subject that you possess.

7. Vary your vocal tone

Speaking in a monotone voice is a surefire way to bore your audience. Instead, use voice inflection to add emphasis to important points, and vary the pitch of your voice to express emotion. This will help keep your audience engaged in your message.

Effective verbal communication is an important skill to understand. Having the courage and ability to convey your thoughts in a respectable way will help enhance mutual understanding, trust, decision-making, and problem-solving between yourself and others, making the act of properly speaking and listening to an imperative influence on how we learn and think for ourselves.

Written Communication Skills:

Written communication skills can be useful, even crucial, for career success. If you're good at business writing, you're more likely to create a good impression. But if you aren't getting the message across clearly with your words, your chances for getting jobs, promotions, raises and bonuses may be harmed.

Whether you’re sending a winning cover letter to a hiring manager, a memo to a colleague, a report to your team or an email to a client, crisp, highly focused and error-free writing signals that you’re someone who is organized, knowledgeable and detail oriented.

Conversely, written communications that are long-winded, imprecise or strewn with typos leave readers wondering how you handle other aspects of your job. If your business writing abilities are a weakness, the time to improve is now.

How to Make Your Writing Communicate?

Effective writing allows the reader to thoroughly understand everything you are saying. This is not always easy to do. Here are a few tips that will help you:

1. Know your goal and state it clearly. Do you want the reader to do something for you or are you merely passing along information? Do you want a response from the reader or do you want him to take action? Your purpose needs to be stated in the communication. Avoid information that is not relevant. Clarity is key.
2. Tone can help your writing be more effective. Certain forms of communication, like memorandums and proposals need a formal tone. Writing to someone you know well would need a more informal tone. The kind of tone depends on the audience and purpose of the writing.
3. Explain in clear terms what you want the reader to do. They cannot oblige if they do not understand. Also, they may not even want to try to help if the communication is vague and sloppily written. It is good to include why it is beneficial to them to do what you ask or to help you.
4. Language needs to be simple. Do not overuse clichés, jargon, and expressions or try to impress with big words. Keep sentences and paragraphs short and concise.
5. Less is more when it comes to length. Leave out words that do not contribute to the main focus of the communication. This can make the reader work harder to know why you wrote.
6. Using an active voice will strengthen your writing. Sentences that are written in the active voice will flow better and are easier to understand. Long, complicated sentences will slow the reader down, even more so if they are written in the passive voice. An active example is "I caught the ball." and a passive example is "The ball was caught by me." Active voice will engage the reader and keep his attention.
7. Good grammar and punctuation are very important. It is a good idea to have someone else proofread your writing before you send it. If you cannot do that, then try reading it out loud.

CABINET MAKER

Learner Guide

National Vocational Certificate Level 2

Version 1 - January 2020

Module-8

Module 8: Identify Machines & Its Attachments

Objective: This module covers the skills and knowledge required to Identify Machine and its sizes, Identify components & Attachments, Identify capacities & capabilities of Machine, Identify basic tools and supplies associated with Machines and Maintain Inventory of tools and equipment.

Duration: 100 Hours **Theory: 20 Hours** **Practice: 80 Hours**

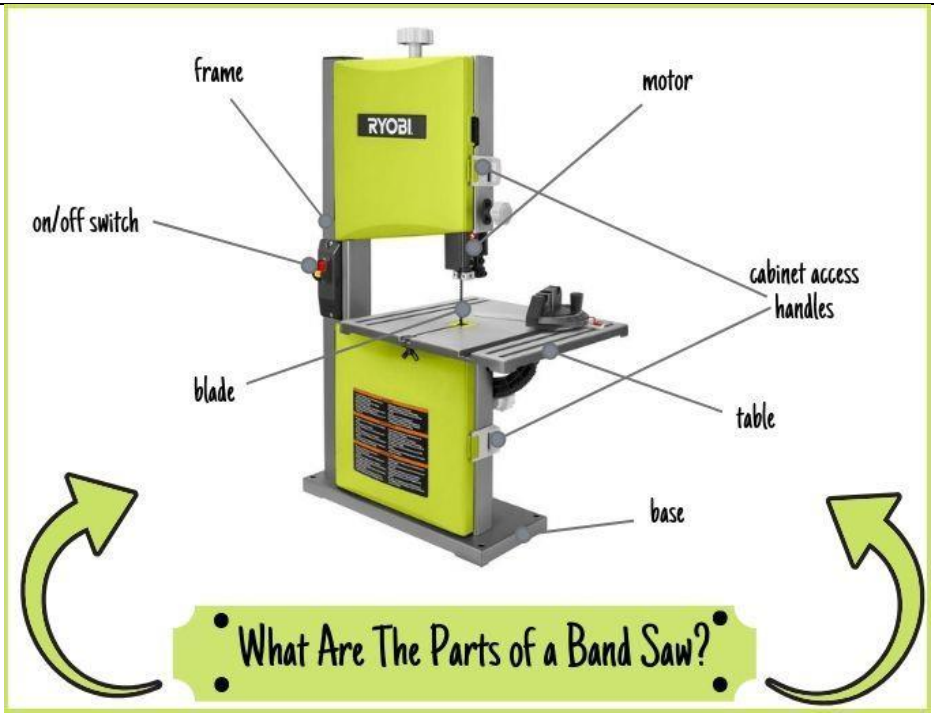
Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1. Identify Machine and its sizes.	***Trainee will be able to:*** • Identify Wood working machines • Check specifications of Band Saw machine • Check specifications of Circular Saw machines • Check specifications of Wood Turning Lathe • Check specifications of Jointer/ Planner machines • Check specifications of Thicknesses machines • Check specifications of Sanding machines • Check specifications of Boring machines	• Functions and sizes of the following machines. ➢ Band Saw machine ➢ Circular Saw machine ➢ Wood Turning Lathe ➢ Jointer/Planner machine ➢ Thicknesser machine ➢ Sanding machines ➢ Boring machines	Theory- 03 Hrs. Practical- 14 Hrs. Total- 17 Hrs.		Class Room and workshop

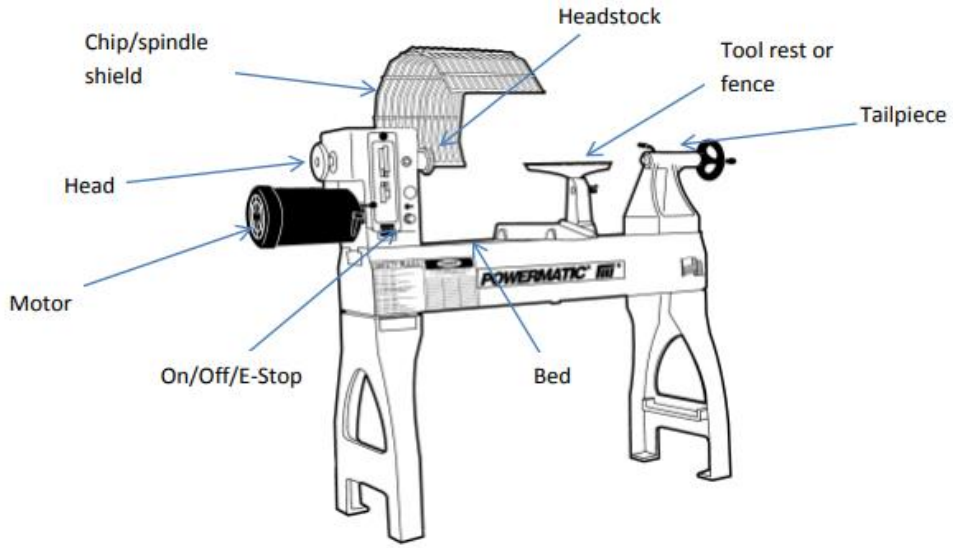
LU2. Identify components & Attachments	***Trainee will be able to:*** • Identify different components of relevant machine • Identify different attachments of relevant machine	• Knowledge about various components of wood working machines. • Knowledge about various attachments of wood working machines.	Theory- 04 Hrs. Practical-15 Hrs. Total- 19 Hrs.		Class Room and workshop
LU3. Identify capacities & capabilities of Machine	***Trainee will be able to:*** • Check capacity as per manufacturers specifications • Check capability as per manufacturers specifications • Interpret proper capacity of machine • Interpret proper capability of machine	• Purpose of Attachments used with Wood working machines, • Knowledge about machines capacities and Capabilities	Theory- 03 Hrs. Practical-15 Hrs. Total- 18 Hrs.		Class Room and workshop
LU4. Identify basic tools and supplies associated with Machines	***Trainee will be able to:*** • Check standard tools supplied with machines • Check spares/consumable materials • Follow manufacturers specifications for tools and supplies	• Knowledge of basic Tools, Supplies & Lubricants associated with Wood working machines	Theory- 05 Hrs. Practical-18 Hrs. Total- 23 Hrs.		Class Room and workshop
LU5. Maintain Inventory of Machines	***Trainee will be able to:*** • Check number of machines as per record • Report for faulty machine • Generate demand for defective parts of machines	• Procedure of Inventory management for Wood working machines.	Theory- 05 Hrs. Practical-18 Hrs. Total- 23 Hrs.		Class Room and workshop

	• Maintain record of all machines.				

Examples and Illustrations:

The Circular Saw A circular saw is a power-saw using a toothed or abrasive disc or blade to cut different materials using a rotary motion spinning around an arbor. A hole saw and ring saw also use a rotary motion but are different from a circular saw. Circular saws may also be loosely used for the blade itself.	
The Palm Sander A good palm sander is vital to any woodworker's power tool collection. The palm sander will use ¼ sheet of sanding paper, and is small enough to get into tight places. However, you should be careful not to sand patterns into your finished work with the palm sander. They usually move in a circular pattern, or back and forth. Either way, they can leave swirls and streaks in your wood that show up once it is stained, so be sure to keep it moving across the surface you are sanding so that you don't sand grooves into your wood.	

The Random Orbital Sander A random orbital sander is actually a step up from the “little brother” version – the palm sander. The random orbital sander uses hook and loop (Velcro) to fasten the sanding disks to the sanding pad. The random movement of the disk helps to avoid sanding patterns into your wood. Your main precaution with this tool is to make sure that your hardware supply store has discs in stock in every grit. Otherwise, you’ll have a sander that you can’t use because you can’t find sanding pads for it.	
A Band Saw Machine can be defined as a cutting machine with a long, sharp blade comprising a continuous band of toothed metal that stretches between two or more wheels to cut material. Band saws feature blades of different sizes and tooth pitch. Tooth pitch refers to the number of teeth per inch. A band saw can be used to cut curves, even in thick lumber, such as in creating cabriole legs, to rip lumber and to crosscut short pieces. The most common use for the band saw, however, is in cutting irregular shapes. The second most common use is in resawing or ripping lumber into thinner slabs. A band saw also makes the smoothest cuts in woodworks.	

Wood turning lathes are typically used to shape wood into cylindrical profiles. Objects made on a wood lathe include such items as furniture legs, lamp posts, baseball bats, bowls and other ornamental forms. Wood lathe tooling consists of fixturing and securing devices for the work piece, a moveable tool rest, and hand-held cutting tools in the form of long handled gouges, skews, scrapers, and parting tools. Specialty tooling is also available for internal shaping and surface development.	
A jointer or in some configurations, a jointer-planer (also known in the UK and Australia as a planer or surface planer, and sometimes also as a buzzer or flat top) is a woodworking machine used to produce a flat surface along a board's length. As a jointer, the machine operates on the narrow edge of boards, preparing them for use as butt joint or gluing into panels. A planer-jointer setup has the width that enables smoothing ('surface plaining') and leveling the faces (widths) of boards small enough to fit the tables. The jointer derives its name from its primary function of producing flat edges on boards prior to joining them edge-to-edge to produce wider boards.	

A thickness planer (also known in the UK and Australia as a thicknesser or in North America as a planer) is a woodworking machine to trim boards to a consistent thickness throughout their length and flat on both surfaces. A thickness planer planes one side of a board at a time, giving a board of consistent thickness and with smooth surfaces. The cutter head is guided by the opposite surface of the board. It is different from a surface planer, or jointer, where the cutter head is set into the bed surface. A surface planer has slight advantages for producing the first flat surface, and may be able to do so in a single pass. However the thicknesser has more important advantages in that it can produce a board with a consistent thickness, avoids producing a tapered board, and by making passes on each side	
Wood boring machines are mainly for industrial use (woodworking and furniture making), and are used in the second phase of wood processing, producing holes or slots in the solid timber. Indeed, they are used to make groups of multiple holes on the insides of wardrobes and cupboards. This type of machine is very useful in cases where precise drilling of the panel or of the solid wood is needed. This is especially so in the furniture industry that requires the creation of holes in the interiors or shelves of wardrobes and other items.	

Frequently Asked Questions

1. What is Competency Based Training (CBT) and how is it different from currently offered trainings in institutes?	Competency-based training (CBT) is an approach to vocational education and training that places emphasis on what a person can do in the workplace as a result of completing a program of training. Compared to conventional programs, the competency based training is not primarily content based; it rather focuses on the competence requirement of the envisaged job role. The whole qualification refers to certain industry standard criterion and is modularized in nature rather than being course oriented.
2. What is the passing criterion for CBT certificate?	You shall be required to be declared “Competent” in the summative assessment to attain the certificate.
3. What are the entry requirements for this course?	The entry requirement for this course is 8th Grade or equivalent.
4. How can I progress in my educational career after attaining this certificate?	You shall be eligible to take admission in the National Vocational Certificate Level-3 in Cabinet Maker. You shall be able to progress further to National Vocational Certificate Level-4 in Cabinet Maker Course; and take admission in a level-5, DAE or equivalent course (if applicable). In certain case, you may be required to attain an equivalence certificate from The Inter Board Committee of Chairmen (IBCC).
5. If I have the experience and skills mentioned in the competency standards, do I still need to attend the course to attain this certificate?	You can opt to take part in the Recognition of Prior Learning (RPL) program by contacting the relevant training institute and getting assessed by providing the required evidences.
6. What is the entry requirement for Recognition of Prior Learning program (RPL)?	There is no general entry requirement. The institute shall assess you, identify your competence gaps and offer you courses to cover the gaps; after which you can take up the final assessment.
7. Is there any age restriction for entry in this course or Recognition of Prior Learning program (RPL)?	There are no age restrictions to enter this course or take up the Recognition of Prior Learning program
8. What is the duration of this course?	The duration of the course work is 1,510 hrs. (11 months)
9. What are the class timings?	The classes are normally offered 25 days a month from 08:00am to 01:30pm. These may vary according to the practices of certain institutes.

10. What is equivalence of this certificate with other qualifications?	As per the national vocational qualifications framework, the level-4 certificate is equivalent to Matriculation. The equivalence certificate can be obtained from The Inter Board Committee of Chairmen (IBCC).
11. What is the importance of this certificate in National and International job market?	This certificate is based on the nationally standardized and notified competency standards by National Vocational and Technical Training Commission (NAVTTC). These standards are also recognized worldwide as all the standards are coded using international methodology and are accessible to the employers worldwide through NAVTTC website.
12. Which jobs can I get after attaining this certificate? Are there job for this certificate in public sector as well?	You shall be able to take up jobs in the local or overseas construction companies in heavy machinery operator job profile.
13. What are possible career progressions in industry after attaining this certificate?	You shall be able to progress up to the level of supervisor after attaining sufficient experience, knowledge and skills during the job. Attaining additional relevant qualifications may aid your career advancement to even higher levels.
14. Is this certificate recognized by any competent authority in Pakistan?	This certificate is based on the nationally standardized and notified competency standards by National Vocational and Technical Training Commission (NAVTTC). The official certificates shall be awarded by the relevant certificate awarding body.
15. Is on-the-job training mandatory for this certificate? If yes, what is the duration of on-the-job training?	On-the-job training is not a requirement for final / summative assessment of this certificate. However, taking up on-the-job training after or during the course work may add your chances to get a job afterwards.
16. How much salary can I get on job after attaining this certificate?	The minimum wages announced by the Government of Pakistan in 2019 are PKR 17,500. This may vary in subsequent years and different regions of the country. Progressive employers may pay more than the mentioned amount. The heavy Machinery Operator normally earns 20,000 to 25,000 in the start.
17. Are there any alternative certificates which I can take up?	There are some short courses offered by some training institutes on this subject. Some institutes may still be offering conventional certificate courses in the field.
18. What is the teaching language of this course?	The leaching language of this course is Urdu and English.
19. Is it possible to switch to other certificate programs during the course?	There are some short courses offered by some training institutes on this subject. Some institutes may still be offering conventional certificate courses in the field.

20. What is the examination / assessment system in this program?	Competency based assessments are organized by training institutes during the course which serve the purpose of assessing the progress and preparedness of each student. Final / summative assessments are organized by the relevant qualification awarding bodies at the end of the certificate program. You shall be required to be declared “Competent” in the summative assessment to attain the certificate.
21. Does this certificate enable me to work as freelancer?	You can start your small business by purchasing your own heavy construction machine and can start earning 50,000 per month. You may need additional skills on entrepreneurship to support your initiative.

National Vocational and Technical Training Commission (NAVTTC)

Plot 38, Kirthar Road, Sector H-9/4, Islamabad, Pakistan
+92 51 9044 322
+92 51 9044 322
info@navttc.org
www.navttc.org