**1. Introduction to Excel** -

**What is Excel?** - Overview of the software and its capabilities. - Common uses: data management, analysis, visualization, and reporting. - Excel Interface - Workbook, Worksheet, Cells, and Ranges - Ribbon: Tabs, Groups, and Commands - Formula Bar and Status Bar - Quick Access Toolbar and Customization - Keyboard Shortcuts Overview

**2. Basic Excel Skills**

* **2.1 Navigating Excel** - Opening and Saving Workbooks - Creating New Workbooks and Worksheets - Moving Around Cells, Rows, and Columns - Selecting Ranges and Adjusting Sizes
* **2.2 Data Entry -** Entering Text, Numbers, and Dates - AutoFill for Series and Patterns - Inserting and Deleting Rows/Columns - Copying, Cutting, and Pasting Data - Basic Data Formatting: Font Styles, Colors, Borders - Alignment and Merging Cells

**2.3 Basic Functions and Formulas -** SUM, AVERAGE, MIN, MAX, COUNT - COUNTIF and SUMIF - Relative vs. Absolute References (e.g., $A$1) - Introduction to Simple Formulas: Addition, Subtraction, Multiplication, Division - Using Parentheses for Order of Operations

**2.4 Simple Data Analysis -** Sorting Data (Ascending and Descending) - Basic Filtering Techniques - Simple Charts: Bar, Line, and Pie Charts

**3. Intermediate Excel Skills**

**3.1 Advanced Functions -** IF Statements: Basic Logic, Nested IFs - VLOOKUP & HLOOKUP: Vertical and Horizontal Lookups - MATCH and INDEX: Looking up Data Dynamically - CONCATENATE & TEXTJOIN: Combining Text - LEFT, RIGHT, MID, LEN: Text Extraction and Length - DATE and TIME Functions: NOW, TODAY, DATE, NETWORKDAYS - ROUND, ROUNDUP, ROUNDDOWN: Rounding Numbers

**3.2 Data Management -** Data Validation: Creating Drop-down Lists, Restricting Data Entry - Conditional Formatting: Highlighting Cells Based on Rules - Grouping and Ungrouping Data - Freeze Panes and Split Windows for Navigation - Split Data (Text-to-Columns) - Removing Duplicates and Cleaning Data

**3.3 Charts and Graphs -** Inserting and Customizing Different Types of Charts - Creating Combo Charts - Advanced Chart Formatting (Axis, Titles, Gridlines, Data Labels) - Trendlines and Sparklines for Visual Analysis

**3.4 Managing Multiple Sheets -** Linking Data Between Sheets - Grouping and Consolidating Data - 3D Formulas (referencing multiple sheets) - Protecting Sheets and Workbooks

**4. Advanced Excel Skills**

**4.1 Complex Formulas and Functions -** SUMIFS and COUNTIFS: Conditional Sums and Counts - INDEX & MATCH Combination: Powerful Lookups - ARRAY Formulas: Single Formula for Multiple Calculations - INDIRECT and OFFSET: Dynamic Referencing - Advanced Date Functions: WEEKNUM, EOMONTH, WORKDAY - Error Handling: IFERROR, ISERROR, ISBLANK

**4.2 Pivot Tables and Pivot Charts -** Creating Pivot Tables - Grouping Data in Pivot Tables - Using Multiple Fields in Row/Column Areas - Calculating Values within Pivot Tables - Slicers and Filtering in Pivot Tables - Pivot Charts for Visualizing Data

**4.3 Advanced Data Tools -** Power Query: Importing, Transforming, and Cleaning Data - Power Pivot: Data Modelling and Relationships - What-If Analysis: Goal Seek, Data Tables, Scenario Manager - Solver: Optimization Tool for Complex Problems

**4.4 Macros and VBA (Visual Basic for Applications) -** Recording Macros: Automating Repetitive Tasks - Basic VBA Programming: Writing Simple Scripts - Assigning Macros to Buttons - Creating User-Defined Functions (UDFs) - Debugging and Error Handling in VBA

**5. Excel Tips and Tricks**

**5.1 Keyboard Shortcuts -** Speeding up Your Workflow with Shortcuts - Essential Shortcuts for Formatting, Editing, and Navigation - Customizing Shortcuts

**5.2 Time-Saving Techniques -** Using Flash Fill for Auto-Correction and Pattern Recognition - Quick Access Toolbar: Adding Frequently Used Commands - Paste Special for Specific Data Transfer - Using Templates and Pre-built Solutions

**5.3 Advanced Charting -** Creating Dynamic Charts with Named Ranges - Customizing Chart Styles and Formatting - Creating Heatmaps and Advanced Visuals - Adding Secondary Axes and Custom Legends

**6. Case Studies and Practical Examples** **-** Example of Data Analysis: Sales Data, Budgeting, etc. - Step-by-Step Case Study: Using Pivot Tables for Reporting - Automating Reports with Macros - Using Advanced Formulas in Real-Life Scenarios