

Contents in Advanced Excel & VBA

Day 1 & 3 (12hrs.)

Introduction and Basic Brush-up of MS Excel and Excel Back-End Options:

- Start-up with MS Excel, Quick review on MS Excel Customize Ribbon, Quick Access Toolbar, Mini Toolbar.
- Introduction to Excel Worksheet, Row, Column, Range, Cells etc.
- Use of Basic Operators Like: + - / * ^ %
- Introduction to the Data and Data Formats
- Copy, Cut, Paste, Hide, Unhide, Link the Data in Rows, Columns and Sheet
- Inserting, Deleting, Moving, and linking the data in between the multiple sheets
- Introduction to the Paste Special all Option. (Formulas, Values, Formats, Comments, Validation, All using source themes, All except Borders, Column Widths, Formula and Number formats, Values and Number Formats, None, Add, Subtract, Multiply, Divide, Skip Blanks and Transpose)
- Format Cells, Rows, Columns and Sheets
- Protection of Cells, Rows, Columns and Sheets
- Password protection to the Worksheet, Sheets, Rows, Columns, and Cells
- Printer Properties and Page Setup (Page, Margin, Header/Footer and Sheet) for Printing
- Insert Logo to your worksheet while printing

Formulas: Working With Name Ranges:

- **Introduction to Name Manager:** Discussion on Name Ranges and Apply the Name Ranges on Cell and the combination of Cells.
- Use of Name Manager: Creating, Editing, and Deleting of Names
- Create Name Ranges Automatically
- **Text Functions:** Concatenate, Dollar, Left, Mid, Right, Lower, Upper, Proper, Replace, Rept, Find, Search, Substitute, Trim, Trunk, Convert
- **Combine multiple formulas**
- **Writing of the Complex formulas for improvement in formulas writing skills.**
- **Date and Time Functions:** Date, Datevalue, Day, Day360, Minutes, Hours, Now, Today, Month, Year, Time, Weekday, Workday, Network days

If Formulas:

- If, If with OR, If with AND, If with AND &OR, If with OR&AND
- Nested IF (For Multiple Conditions)
- Nested if with Multiple Text Functions in single formula

Lookup Formulas

- Discussion on Lookup Functions, Use of Lookup, Vlookup, Hlookup, Index, Indirect, Match, Offset, Choose
- Vlookup with Name Range, Vlookup with Match
- Hlookup with Name Range, Hlookup with Match
- Lookup from the Left side of Data. (Lookup, Index and Match)

Math & Trig Functions: ABS, Aggregate, Power, Product, Rand, Randbetween, Round, Rounddown, Roundup, Subtotal, Sum, Sumif, Sumifs, Sumproduct, Trunc.

Use of Sumproduct as lookup and in various activities

Statistical Functions: Average, Averageif, Averageifs, Count, CountA, Countblack, Countif, Countifs, MAX, MAXA, MIN, Small, Large

Use of Sumif, Sumifs, Count If, Countifs, Averageif, Averageifs with the Name Ranges

Informative AND Other Functions: Cell, Info, ISBLANK, ISERROR, ISEVEN, ISODD, DCOUNT, DSUM, DMAX, DMIN, DPRODUCT, Rank, Use of &.

Use of Tool Find & Select: Discussion on Excel's very important tool "Find & Select" (Go To Special) including all options: (Comments, Constants, Formulas, Blanks, Current region, Current array, Objects, Row differences, Column differences, Precedents, Dependents, Last cell, Visible cells only, Conditional formats, Data validation).

Conditional Formatting and Working with Charts:

- Conditional Formatting: Detailed discussion on conditional formatting.
- Conditional Formatting with multiple cell rules and Top/Bottom Rules
- Conditional Formatting with Data Bars. Color Scales and Icon Sets
- Conditional Formatting on Desired Output, Create New rules, Manage the rules
- Apply any formula to Conditional formatting
- Choose Formatting as Table and different Cell Style
- Working With Charts: Detailed discussion on graphically presentation of Data by using Charts.
- Presentation with different kind to charts like Column Charts, Line Charts, Pie Charts, Bar Charts, Scatter Charts
- Use of Data Validation in Charting
- Use of Sparkline to your Sheet, Interactive Sparkline's

Pivot Table and Handling of Errors In Excel:

- Start With Pivot Table, Do the Multiple Field Setting in Pivot Table.
- Pivot form the Multiple Source of Data
- Pivot from the Multiple Data Ranges
- Pivot from the Name Range.
- Do the Juggling of Data in Pivot Table and Work on layout of Pivot Table
- Creating Groups, Insert additional Calculated Field in Pivot Table
- Removing Duplicates
- Discussion of Errors and handling of multiple errors like #DIV/0! , #N/A, # REF, #NAME, #VALUE, # NULL, #NUM and #####Error
- What is Circular References error? How to rectify Circular Reference?

Day 4 & 5 (8hrs.)

Start With VBA Macro Programming:

- **Introduction of VBA:** Detailed Introduction of VBA Macro Programming. Discussion on need of VBA Macros. Where to apply the VBA Macro. Benefit and limitation of VBA Macro
- Type of VBA Macro
- Display of Developers Tab and VB Editor
- Macro Security
- How to record a VBA Macro
- Execution of recorded Macro
- Editing the recorded Macro
- Various Key Board Short Cuts related to VBA Macros
- Introduction to the writing of basic VBA codes

VBA Macro Programming: Programming Writing Concepts:

- Defining Variables to Macro
- Discussion on different Types of Variables
- Use of Local Window
- Working on Programming, Understanding on VBA Language
- Introduction of Message Box in Macro
- Introduction of Input Box In Macro
- Use of decision making statements in Macro by using: If and Else conditions, And /OR conditions

VBA Macro Programming: Working With Loops and Worksheet Ranges:

- Introduction of the Loops in Macro.
- Use of Different type of loops like, For & Next LOOP, For & Each Loop, Do & Until LOOP While and While and Wend Loop
- Working with Ranges: Selecting, Coping and Pasting the Ranges and extract the data on same Worksheet level
- Selecting, Coping and Pasting the Ranges and extract the data on different Worksheet level in the same Workbook
- Selecting, Coping and Pasting the Ranges and extract the data on different Workbook Level

VBA Macro Programming: Writing of Formula in VBA and Error Handling:

- Introduction of programming concepts for writing the Excel Formulas in to the Program
- Difference between the A1 and R1C1 style of writing formula in VBA
- Look at the style A1 and R1C1 and decide which is better
- Find out the better solution to write the formulas in VBA
- Writing of the basic formulas in to VBA
- Freezing of the formula in VBA
- Other useful formulas to be write in Class

- Error handling

VBA Macro Programming: Advanced VBA Functions:

- **User Define Function (UDF):** Detailed discussion on User Defined Function: What is User Defined Function, Use of User Defined Function and How to create any Function OR Formula which is not available in Excel and you want it to work for you by the help of Macro.
- **Working With VBA Events:** Discussion on VBA Events, What are Events, How and when to use the VBA Events.
- **VBA User Forms:** Discussion on VBA User Forms, What are User Forms, Why to create User Forms and How to create User Forms.