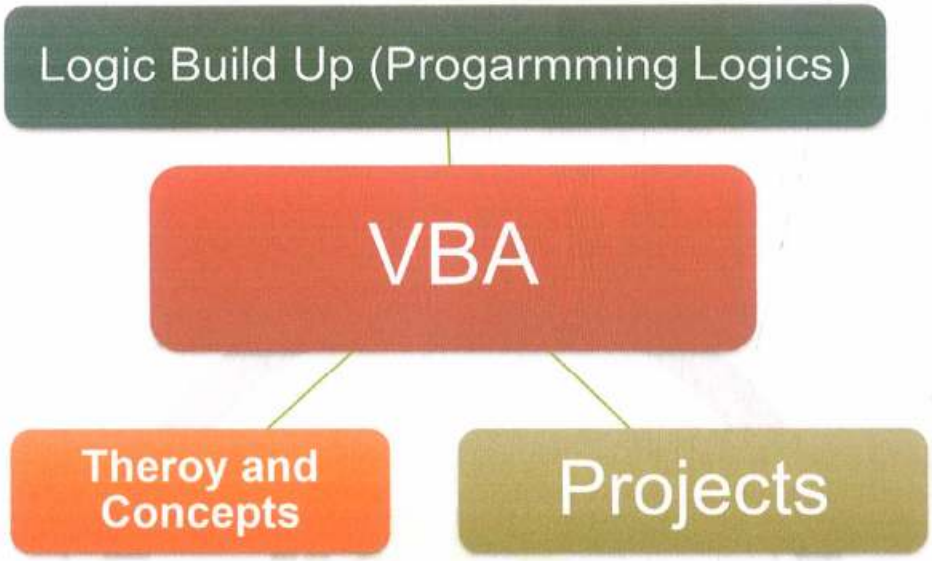
Institute For MIS and Analytics
M-8510040507
www.mistrainers.in
info@mistrainers.in

Excel VBA Syllabus - Basic to Advanced and Automations level



Module 1: Introduction to Excel VBA (Basic Level)

- What is VBA and why use it
- Difference between Macros and VBA
- VBA in Business Automation
- Excel Developer Tab Overview
- Enabling Macro Settings
- VBA Editor (VBE) Interface
- Understanding Objects, Properties, and Methods
- VBA Code Structure

Module 2: Recording & Editing Macros

- Recording a Macro
- Absolute vs Relative Macros
- Viewing Macro Code
- Editing Recorded Macros
- Assigning Macros to Buttons & Shapes
- Macro Security & Best Practices
- Storing Macros (This Workbook vs Personal Macro Workbook)

Module 3: VBA Variables, Data Types & Constants

- Declaring Variables
- Data Types:
  - Integer
  - Long
  - Double

  - String
  - Boolean
  - Date
- Constants
- Option Explicit
- Variable Scope:
  - Local
  - Module-Level
  - Public Variables

Module 4: Control Structures & Logical Statements

- IF...THEN...ELSE
- Nested IF Conditions
- SELECT CASE
- Logical Operators:
  - AND
  - OR
  - NOT
- Practical Decision-Making Examples

Module 5: Loops & Repetitive Tasks

- FOR...NEXT Loop
- FOR EACH Loop
- DO WHILE Loop
- DO UNTIL Loop
- EXIT Statement
- Loop Optimization Techniques
- Practical Loop-Based Automation

Module 6: Working with Excel Objects (Intermediate Level)

- Workbook Object
- Worksheet Object
- Range Object
- Cells vs Range
- Offset & Resize
- Selecting vs Referencing Objects
- Copy, Paste, and Clear Data Using VBA
- Dynamic Range Handling

Module 7: User Interaction & Input Handling

- Message Box (MsgBox)
- Input Box
- Using Yes/No Prompts
- Handling User Inputs Safely
- Error Messages and Alerts
- Application Settings:
  - ScreenUpdating
  - DisplayAlerts

Module 8: Functions & Procedures

- Sub Procedures
- Function Procedures
- Passing Arguments
- Using Excel Functions in VBA
- Custom User-Defined Functions (UDFs)
- Calling Procedures from Other Modules

Module 9: Error Handling & Debugging

- Types of VBA Errors
- On Error Resume Next
- On Error GoTo
- Error Handling Best Practices
- Debugging Tools:
  - Breakpoints
  - Step Into / Step Over
  - Immediate Window
- Writing Error-Free Code

Module 10: Advanced VBA Concepts

- With...End With Statement
- Arrays:
  - Single Dimensional
  - Multi-Dimensional
- Collections
- Dictionary Object
- Working with Dates and Text in VBA
- Using VBA with Excel Tables

Module 11: Automation Projects & Optimization

- Automating Reports
- Loop-Based Data Processing
- File Handling:
  - Open
  - Save
  - Close
- Working with Multiple Workbooks
- Performance Optimization Techniques
- Writing Clean & Maintainable VBA Code

Module 11: File & Report Automation

- Opening, Saving, and Closing Files Automatically
- Working with Multiple Workbooks
- Folder-Based File Automation
- Automated Report Generation
- Exporting Reports to PDF
- Scheduling-Ready Automation Design

Module 12: Real-World VBA Automation Projects

- Automated MIS Report Generation
- Data Cleaning & Formatting Automation

- Pivot Table Automation
- Dashboard Refresh Automation
- Finance, Sales & HR Automation Case Studies
- End-to-End Automation Project

Project Works & Assignments

- Approx. 50-60 programs for logic build up
- Theory Part for understanding of VBA
- VBA Projects
  - Data Splitter
  - Data Emailer
  - Combinations of Data
  - Consolidations of workbooks and worksheets
  - Form Designing
  - Automations of tasks
  - Merge of data
  - Connecting with outlook
  - Connecting with database

