



171

14 hours ZOOM & PHYSICAL Program

# X III DISCOVERING THE SECRETS OF MACRO AND VBA IN MICROSOFT EXCEL

### **INTRODUCTION**

Generally, Microsoft Excel is a spreadsheet application used to create lists, perform calculations, and analyse numbers. While the default features of Excel should be enough in most scenarios, in some cases you will want more complex functionality to perform advanced operations. To make this possible, Excel is accompanied by Microsoft Visual Basic, a programming environment



that allows you to use the Visual Basic Application (VBA) language to enhance the usefulness and functionality of a spreadsheet.

VBA allows you to write code that can automatically perform actions on a document and its content. Besides as an end user, now you are a 'programmer' to use Excel as a development tool to design an information system.

### **OBJECTIVES**

This course is designed for working adults for the following objectives:

- To improve current spreadsheet (Microsoft Excel) solution skills.
- To use Visual Basic Application (VBA) language to automate daily tasks.
- To prepare students in designing an userfriendly interface in Excel
- To prepare students to train others.

### **LEARNING OUTCOME**

At the end of the course, students should be able to:

- a. Understand and apply VBA language commands in Excel
- b. Use VBA to control the internal calculation or formulas or data flow in the reports.
- c. Design custom user interfaces in Excel.
- d. Simplify and speed up the tasks using VBA/ Macro

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#### Getting Started with Excel Macro & VBA

- What is Macro and VBA
- What can you do with Macro and VBA
- Type of Macros
- Recording to Macro
- Testing the Macro
- Examining the Macro
- Modifying the Macro
- Saving Workbooks that contain Macros
- Understanding Macro Security
- Relative or Absolute Recording

#### How VBA Works with Excel

- What is the Visual Basic Editor?
- Working with the Project Window
- Working with a Code Window
- Referring to Objects
- All about Properties and Methods

#### **VBA Sub and Function Procedures**

- Subs versus Functions
- Executing Sub Procedures
- Executing Function Procedures

#### **Programming Concepts**

- Using Comments
- Using Variables, Constants and Data Types
- Using Assignment Statements
- Working with Arrays
- Using Labels
- Referring to a Range

#### **Controlling Program Flow and Making Decisions**

- The GoTo Statement
- If\_Then\_Else Satement
- Using Select\_Case Statement
- Knocking your code for a Loop
- Using For Each\_Next Loops with Collection

### **COURSE CONTENT**

#### **Automatic Procedures and Events**

- Writing an Event-Handler Procedures
- Worksheet-Related Events
- Workbook-Related Events

#### **Communicating with Your Users**

- Simple Dialog Boxes
- UserForm Basics
- Using UserForm Controls
- UserForm Techniques and Tricks
- Accessing Your Macros through the User Interfaces

#### **Creating Excel Add-Ins**

- Why Create Add-Ins
- Working with Add-Ins
- Add-In Basics

## Practical Example of Using Macro/ VBA in your Reports

- Extracting data
- Worksheet linking
- Workbook linking
- Automating data manipulation
- Creating Excel Dashboard
- Sharing macro using Add-Ins