

# Microsoft Excel

## Visual Basic For Applications (2-day training program)

### Course overview

This course is designed for users who wish to learn how to use the inbuilt programming language in Excel to enhance their worksheets and automate processes. It is designed for users who are keen to extend their understanding and knowledge of the programming features available in Excel.

### Prerequisites

While no Visual Basic For Applications knowledge is assumed, the participant should have an intermediate or higher level of Microsoft Excel knowledge.

### Understanding Excel VBA

- Programming in Microsoft Excel
- VBA Terminology
- Displaying the DEVELOPER Tab
- The VBA Editor Screen
- Opening and Closing the Editor
- Understanding Objects
- Viewing the Excel Object Model
- Using the Immediate Window
- Working With Object Collections
- Setting Property Values
- Working With Worksheets
- Using the Object Browser
- Programming With the Object Browser
- Accessing Help

### Starting With Excel VBA

- Using the Project Explorer
- Working With the Properties Window
- Using the Work Area
- Viewing Other Panes
- Working With Toolbars
- Working With a Code Module
- Running Code From the Editor
- Setting Breakpoints in Code
- Stepping Through Code

### Procedures

- Understanding Procedures
- Where to Write Procedures
- Creating a New Sub Routine
- Using IntelliSense
- Using the Edit Toolbar
- Commenting Statements
- Indenting Code
- Bookmarking in Procedures

### Using Variables

- Understanding Variables
- Creating and Using Variables
- Explicit Declarations
- The Scope of Variables
- Procedure Level Scoping
- Module Level Scoping
- Understanding Passing Variables
- Passing Variables by Reference
- Passing Variables by Value

### Using Variables (cont.)

- Understanding Data Types for Variables
- Declaring Data Types
- Using Arrays

### Functions in VBA

- Understanding Functions
- Creating User-Defined Functions
- Using a User-Defined Function in a Worksheet
- Setting Function Data Types
- Using Multiple Arguments
- Modifying a User-Defined Function
- Creating a Function Library
- Referencing a Function Library
- Importing a VBA Module
- Using a Function in VBA Code

### Using Excel Objects

- The Application Object
- The Workbook Objects
- Program Testing With the Editor
- Using Workbook Objects
- The Worksheets Object
- Using the Worksheets Object
- The Range Object
- Using Range Objects
- Using Objects in a Procedure

### Programming Techniques

- The MsgBox Function
- Using MsgBox
- InputBox Techniques
- Using the InputBox Function
- Using the InputBox Method
- The IF Statement
- Using IF for Single Conditions
- Using IF for Multiple Conditions
- The Select Case Statement
- Using the Select Case Statement
- For Loops
- Looping With Specified Iterations
- The Do Loop Statement
- Looping With Unknown Iterations

### Creating Custom Forms

- Understanding VBA Forms
- Creating a Custom Form
- Adding Text Boxes to a Form
- Changing Text Box Control Properties
- Adding Label Controls to a Form
- Adding a Combo Box Control
- Adding Option Buttons
- Adding Command Buttons
- Running a Custom Form

### Programming UserForms

- Handling Form Events
- Initialising a Form
- Closing a Form
- Transferring Data From a Form
- Running Form Procedures
- Creating Error Checking Procedures
- Running a Form From a Procedure
- Running a Form From the Toolbar

### Automatic Startup

- Programming Automatic Procedures
- Running Automatic Procedures
- Automatically Starting a Workbook

### Error Handling

- Understanding Error Types
- The on Error Statement
- Simple Error Trapping
- Using the Resume Statement
- Using Decision Structures in Error-Handlers
- Working With Err Object
- Error Handling in Forms
- Coding Error Handling in Forms
- Defining Custom Errors