

# Visual Basic for Applications



Duration: **2 Days** Course Code: **WPV-554**

***This course is designed for proficient Excel users who wish to learn how to automate standard features and to develop programs in VBA***

## Learning Outcomes

By the end of this course students will be able to create recorded macros and use the macro recorder to create a variety of macros, create and work with user-defined functions, work with the main components of the VBA Editor window, understand the Excel object model and use the Immediate window, create command procedures, create and use variables, write code to manipulate Excel objects, use a range of common programming techniques, create a custom form complete with controls and event procedures, create code to drive a custom form, customise the menu system, create procedures that start automatically

## Prerequisites

A proficient knowledge of Excel and Office Applications.

## Recorded Macros

- Setting Macro Security Levels
- Recording/Running A Simple Macro
- Relative Cell References
- Running A Macro With Relative Cell References
- Viewing A Macro Module
- Modifying A Recorded Macro
- Recorded Macros Quick Reference

## Recorder Workshop

- Preparing Data For An Application
- Recording A Summation Macro
- Recording Consolidations
- Recording Divisional Macros
- Testing Macros
- Creating Objects To Run Macros
- Assigning A Macro To An Object
- Recorder Workshop Quick Reference

## User-Defined Functions

- User-Defined Functions Theory
- Creating Simple User-Defined Functions
- Using User-Defined Functions
- Using Multiple Arguments
- Modifying A Function
- Creating A Function Library
- User-Defined Functions Quick Reference

## Using The VBA Editor

- Opening And Closing The Editor

- Working With The Project Explorer
- Working With The Properties Window
- Working With The Work Area
- Working With A Code Module
- Running Procedures From The Editor
- Setting Breakpoints In The Editor
- Stepping Through A Procedure
- Using The VBA Editor Quick Reference

## Understanding VBA

- VBA Terminology
- Accessing 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
- Understanding VBA Quick Reference

## Procedures

- Creating A Command Procedure
- Making Sense Of IntelliSense
- Using The Edit Toolbar
- Commenting Statements
- Indenting Code
- Bookmarking In Procedures
- Procedures Quick Reference

## Using Variables

- Creating And Using Variables
- Implicit & Explicit Declarations
- The Scope Of Variables
- Procedure Level Scoping
- Module Level Scoping
- Passing Variables By Reference
- Passing Variables By Value
- Data Types
- Declaring Data Types
- Using Arrays
- Using Variables Quick Reference

## Using Excel Objects

- Application Methods And Properties
- Workbook Methods And Properties
- Viewing Excel And The Editor Together
- Using Workbook Objects
- Worksheet Methods And Properties
- Using Worksheet Objects
- Range Methods And Properties
- Using Range Objects
- Project – Using Objects In Procedures

- Using Excel Objects Quick Reference

## Programming Techniques

- The MsgBox Function
- Sending Messages To The User
- InputBox Techniques
- Using The InputBox Function
- Using The InputBox Method
- The IF Statement
- Using IF For Single Conditions
- Using IF For Multiple Conditions
- The FOR NEXT Statement
- Looping With Known Or Specified Iterations
- The DO LOOP Statement
- Looping With Unknown Iterations
- Programming Techniques Quick Reference

## Creating Custom 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
- Creating Custom Forms Quick Reference

## Programming Custom Forms

- Initialising A Form
- Closing A Form
- Project – Transferring Data From A Form
- Running Form Procedures
- Creating Error Checking Procedures
- Running A Form From A Procedure
- Programming Custom Forms Quick Reference

## Custom Menus

- Creating A New Menu
- Creating A Cascade Menu
- Adding Menu Commands
- Assigning Macros To Menu Commands
- Removing A menu
- Custom Menus Quick Reference

## Automatic Startup

- Programming Automatic Procedures
- Running Automatic Procedures
- Automatically Starting A Workbook
- Quick Reference