

Excel VBA

Course duration: 2 days

Pre-requisites

This course is designed for proficient Excel users who wish to learn how to automate standard features and to develop programs in VBA. Delegates should have extensive experience in designing and creating workbooks and a good working knowledge of formulas, ranges, functions and multiple workbooks.

Course objectives

At the completion of the course delegates should be able to:

- + 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

Course Outline

Recorded Macros

- + Recording a Simple Macro
- + Running a Recorded Macro
- + Absolute/Relative Cell References
- + Viewing a Macro Module
- + Modifying a Recorded Macro

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

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

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

Procedures

- + Creating a Command Procedure
- + Using the Edit Toolbar
- + Commenting Statements
- + Indenting Code
- + Bookmarking in Procedures

Using Variables

- + Creating & Using Variables
- + Implicit and Explicit Declarations
- + The Scope of Variables
- + Procedure Level Scoping
- + Module Level Scoping
- + Passing Variables by Reference and by Value
- + Data Types
- + Declaring Data Types
- + Using Arrays

Using Excel Objects

- + Application Methods & Properties
- + Workbook Methods & Properties
- + Viewing Excel & the Editor Together
- + Using Workbook Objects
- + Worksheet Methods & Properties
- + Range Methods & Properties

Programming Techniques

- + The MsgBox Function
- + Sending Messages to the User

Using the InputBox Function

- + 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

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 Button
- + Running a Custom Form

Programming Custom Forms

- + Initialising a Form
- + Closing a Form
- + Transferring Data from a Form
- + Running Form Procedures
- + Running a Form from a Procedure

Error Handling

- + Checking for Errors
- + Error Handling Procedures

Custom Menus

- + Creating a New Menu
- + Creating a Cascade Menu
- + Adding Menu Commands
- + Assigning Macros to Menu Commands
- + Removing a Menu

Automatic Startup

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