



Microsoft Excel 2016

Programming in Visual Basic for Applications

Two Day Workshop

You will work in a small group. You will have your own individual PC and will work through a specifically prepared coursebook, under the direction of a highly experienced, technically qualified trainer.

General Description:

The skills and knowledge acquired in this course are sufficient to be able to create real life working **Visual Basic for Applications** programs within **Excel**. The learner will be able to work with **VBA** within the **Excel** environment to program and automate worksheet operations.

What You Will Learn:

- understand the *Excel* object model and *VBA* concepts
- work effectively with the main features of the *VBA Editor* window
- create procedures in *VBA*
- create and use variables
- create and work with user-defined functions in *VBA*
- write code to manipulate *Excel* objects
- use a range of common programming techniques
- create a custom form complete with an assortment of controls
- create code to drive a user form
- create procedures that start automatically
- write a variety of error handling routines

How You Will Benefit:

This course is designed for users who wish to learn how to use the inbuilt **VBA** programming language in **Excel** to enhance their worksheets and automate processes.

Course Content

The course covers:

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 Code Glossary

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
- Code Glossary

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



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Code Glossary

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
Code Glossary

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
Code Glossary

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
Code Glossary

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
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What You Take Away:

At the completion of the course, you get to take away the extensive coursebook for future reference.

What You Need To Know:

This course assumes the learner has a good knowledge of working with *Excel*. The learner should at least be able to create and edit workbooks, enter formulas, copy, paste, and format data. The learner must also have a general understanding of personal computers and the Windows operating system environment and be able to use Windows Explorer to locate and copy files. (Any participant who does not have this knowledge may be asked to leave the course).

Measure of Success:

A questionnaire or workshop exercise at the end of each course enables participants to evaluate the success of the course and determine the extent of their enhanced productivity.

Certificate:

Upon successful completion of the workshop, you will be issued with an official course certificate

Which Course Next?:

This is the most advanced Excel course.

Dates & Times:

Please refer to separate workshop schedule.

Course Policies Warranty:

There are no warranties expressed or implied relating to the content or results of attending a Screen Smart course