



## Microsoft Excel 2010

### 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:

- create recorded macros in **Excel**
- use the macro recorder to create a variety of macros
- 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:

##### Recorded Macros

- Understanding Excel Macros
- Setting Macro Security
- Saving A Document As Macro Enabled
- Recording A Simple Macro
- Running A Recorded Macro
- Relative Cell References
- Running A Macro With Relative References
- Viewing A Macro
- Editing A Macro
- Assigning A Macro To The Toolbar

- Running A Macro From The Toolbar
- Assigning A Macro To The Ribbon
- Assigning A Keyboard Shortcut To A Macro
- Deleting A Macro
- Copying A Macro

##### 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

##### Understanding Excel VBA

- Programming In Microsoft Excel
- VBA Terminology
- Understanding Objects
- Viewing The Excel 2010 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
- The Best VBA Help Available



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#### The VBA Editor

- The VBA Editor Screen
- Opening And Closing The Editor
- 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 Procedures Live
- Creating A New Sub Routine
- Making Sense Of 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
- Passing Variables
- Passing Variables By Reference
- Passing Variables By Value
- Data Types For Variables
- Declaring Data Types
- Using Arrays

#### Functions In VBA

- Understanding Functions

- Creating VBA Functions
- Using A VBA Function In A Worksheet
- Setting Function Data Types
- Using Multiple Arguments
- Modifying A VBA 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



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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