Excel VBA Macro Training

Module 1 - Introducing Visual Basic for Applications

- What is VBA?

- What is a Macro?

- What can Macros do?

- To use or Not to use Macros?

- Macro – The 5 Tenets

- What is the Excel Object Model?

- Your Personal.XLSB file

- Need to check your security options

- How do I access VBA?

- Macro Security Settings

- Displaying and reviewing the Developer Tab in the Ribbon

Module 2 - VBA Editor & Recording Macros

- Opening a Macro-Enabled Workbook

- Opening and Using VBA Editor

- Opening and Closing VBA Editor

- Explanation of the VBA Screen Layout / Elements

- Using the Project Explorer - Ctrl + R

- Working with the Properties Window - F4

- Using the Editor Work Pane

- Introducing the Immediate Pane - Ctrl + G

- VBA Help - F1

- Explanation of a Module

- Running Code - F5

- Stepping through code - F8

- Setting Breakpoints in Code - F9 (toggle on / off)

- Editing, Copying and Deleting a Macro

- Notation of code – why important and how to annotate

- Structuring your code to be readable

- Indent and Outdent

- How to review a Macro and its code

- Practical - Opening a "Real Life Example" File / reviewing it

- Why record a macro?

- How to name and record a macro?

- How to review / test / run a recorded macro?

- Commenting the code?

- What are the limitations of recording a macro?

- Can I record code to get code?

- Practical - Recording a Macro and all that this involves

- Saving a Macro-Enabled Workbook (.xlsm)

Module 3 - Modules and Procedures

- Program design and concepts

- A Good Spreadsheet Application

- Code Format / Layout

- To Dim or Not to Dim? In other words Why Dim?

- How to Declare a Variable / Dim / Private / Public

- Understanding Constants and how to Declare them

- Run Timing Test Macro

- Modules – Understanding how to Create, Name, Edit, Copy and Remove

- Practical on Modules

- Procedure aka Subroutine aka Sub

- Sub Naming conventions

- Creating and Calling other Sub(s)

Module 4 - Understanding Objects, Properties, Methods and Events

- Understanding Objects

- Understanding Object hierarchy

- Referring to Objects

- Application Objects – Practical in file review

- Objects, Properties, Methods, Events

- Working with Properties

- Working with Methods

- Working with Events

- Reference to Opening Workbook Events

Module 5 - Using Expressions and Variables

- Using Expressions / Statements

- What is a Variable and how to assign one?

- Working with Variables

- Variable Naming

- Creating and using Variables

- Understanding and using Data Types

- Practical - Using Locals Window to find Variable Data Types

Module 6 - Manipulating Data

- Working with the ranges and selections

- How to use the cells property to select a range

- How to reference Range(s) and a Range Name

- How to select a range in Excel

- How to use the offset property to refer to a range relative to a starting position

- How to use the Activecell Property

- How to use the CurrentRegion and Address Properties

- Using the columns and rows properties to specify a range

- Determining the extent of data – last cell / last row

- Copying and pasting cells / data

- Improving Performance with ScreenUpdating and DisplayAlerts

Module 7 - Formatting Cells and Working with Strings

- Formatting Cells

- How to change the

- Background colour of a cell

- Cell alignment

- Column width

- Formatting borders

- Font – Style, Size, Colour, Bold, Italic, Underline

- Using With … End, With Statement

- Working with Strings (prior knowledge of related Excel formulas is required)

- Changing case - Upper, Lower and Proper

- Trim and Spaces

- Len, Replace, Instr

- Left, Right, Mid

- This module contains two practicals for delegates to try post course to reinforce their learning

Module 8 - Workbooks and Worksheets

- Working with Workbooks

- Creating, Saving, Switching and Closing

- Working with Worksheets

- Adding Worksheets in VBA code

- Naming and renaming Worksheets

- Deleting Worksheets

- Copying and moving Worksheets

- This module also contains reference on how to create your own VBA Objects

Module 9 - Controlling Program Execution / Decision Structures

- Understanding Control-of-Flow Structures (If…Then… End If and Loops)

- Using the following:

- If Statement, If...End If, Single / Multiple Condition, If Else Statement,

- If...Else … End If, Conditions, If Elseif Statement, If...Elseif … End If, Conditions, Nested Ifs

- Select Case...End Select Statement

- Do...Loop, Do...Until, Do…While Statements

- For...To...Next Statement, For Each...Next Statement

Module 10 - Using Message Boxes, Input Boxes and Running Macros

- Creating and Using Message Boxes – MsgBox and Input Boxes – InputBox

- Running a Macro from within Excel

- Assigning a Keyboard Shortcut to a Macro

- Assigning and launching a Macro from a TextBox, a Toolbar Icon

Practical Application

- A number of practicals will be undertaken throughout the course and of note at start of Day Two a Practical Exercise task is to be completed by the attendees to reinforce and put into practice what they have learnt on Day One.