

Course Outline | Excel VBA Essentials

2 day(s)

Course Overview

This two day course leads you through Excel Visual Basic for Applications (VBA) from recording macros to advanced form design. As you progress you will learn how to write object-oriented programs, how to create program control structures and handle errors effectively.

Course Objective

You will learn how to harness the power of the Visual Basic language to control and automate Excel worksheets and applications.

Target Student

This course is suitable for advanced users of Microsoft Excel. They may be responsible for large amounts of data handling which needs automating or they may be part of a team and need to learn how to program features and functions to improve data access and usability.

Prerequisites

A thorough knowledge of Excel is required. We recommend completion of Microsoft Office Excel 2010 Level 3 Advanced or equivalent knowledge.

Course Outline

Getting started with Macros

- Recording and Modifying Macros
- Assigning Macros to Toolbar, Buttons, Shortcut key

Visual Basic for Applications Environment

- Visual Basic Editor and its options
- Component Management
- Shortcuts

Introduction to Procedural Programming

- Procedures: Functions and Sub-routines

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- Data Types

Excel Model Object

- Application Object
- Workbook Object and Workbooks Collection
- Worksheet Object and Worksheets Collection
- ThisWorkbook, ActiveWorkbook, ActiveCell,
- Selection Object
- Range Collection
- Cells Collection
- Using Status Bar
- Screen Updating and Optimizing
- Timer and Time Measuring
- Events Handling in VBA

Control Flow

- If ...Then....Elseif....Else....Endif
- Case
- Do...Loop , While
- For... Next
- Exit
- VBA and Sheet Data Exchange (Cells, Range Methods)
- Getting and Printing Data from Users (InputBox, MsgBox)

Variable Declaration

- Scope and LifeTime of Variables and Objects
- Operators and Their Priorities
- Modules Options
- Creating Worksheet Functions
- Objects, Classes, Methods and Properties
- Locking Project for Viewing

Procedures, parameters, variables

- Passing parameters by reference and by value (ByRef or ByVal)
- Optional and default parameters
- Passing an array of arguments to a procedure

Debugging

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- Run Time, Design Time, and Break Mode
- Breaks and Watches
- Local Window
- Immediate Window

Error Handling

- Errors Types
- On Error GoTo
- On Error Resume Next

VBA Forms

- Creating and Using Forms
- Invoking Forms in VBA Code
- Using VBA Forms in Worksheet

Arrays * (Any items marked with * will be covered if time allows.)

- Dynamic arrays
- Arrays optimization
- Multidimensional arrays
- Arrays and objects

Collections *

- Creating and using collections
- Adding and remove elements
- Using index and key

Dealing with files

- Reading text files
- Using CSV files