

Technical Training Solutions



MICROSOFT EXCEL: FORMS, MACROS, & VBA (3 Day Course)

Technical
Course
Outline

Course Summary

Students will become familiar with what a macro is and how to create them. From there, students will use macros to automate routine Excel tasks. Students will learn to customize the Excel environment by altering the toolbars, menus and keyboard shortcuts to suit their needs. Students will get a thorough introduction to the VBA development environment that is based on Visual Basic. The class covers the most essential code topics including: message boxes, input boxes, conditional statements, looping, and object control.

Intended Audience:

This class is intended for advanced spreadsheet users who want to automate tasks through macros, design custom dialogs and get an introductory understanding of programming in the Visual Basic for Applications (VBA) language. This class is aimed at students looking for an introduction to Visual Basic programming with Excel and building applications with Excel. After this class, Introduction to Visual Basic is recommended.

Prerequisites:

To ensure the best learning experience for all participants, the following pre-requisites **must be met** in order to participate in this course:

- Strong skills and comfort at the **Advanced Excel** level.
- Experience & **high comfort level** using the following:
 - Built-in Excel functions such as IF and HLOOKUP/VLOOKUP.
 - User-designed formulas to calculate results.
 - Multiple workbooks & worksheets simultaneously.

Course Contents:

The Macro Environment

- What Are Macros?
- The Macro Recorder
- Absolute vs. Relative References
- Global vs. Local Macros
- Running Macros
- Accelerator Keys
- Modifying Command Bars
- Modifying Menus

Controls

- Form Controls & The Forms Toolbar
- Visual Basic Controls & The Control Toolbox
 - The Properties Window
 - Design & Run Modes

Introduction To Visual Basic

- Object Oriented Programming
 - Objects & Collections
 - Properties & Methods
 - The Excel Object Model

The Visual Basic Editor (VBE)

- Working With Dockable Windows
- IntelliSense & Auto-syntax
- VBE Options
 - Option Explicit

Extras

- Automatically Executing Macros
- Protecting Your Code

Visual Basic For Applications

- Modules & Procedures
- Scope: Public vs. Private
- Variables & Data Types
- Naming Conventions & Best Practices
- Event Handling Code
- Reserved Visual Basic Keywords

Debugging Applications

- Accessing The Debugging Features
- Setting Breakpoints & Stepping Through Code
- Immediate & Locals Windows
- Watches

Flow Control & Coding Techniques

- Conditional Coding
- Looping Constructs
- Calling Other Procedures

Visual Basic Forms

- Creating UserForms
- Loading & Unloading Forms
- Form & Worksheet Interactions

Procedures

- Functions vs. Subroutines
- Built-In Visual Basic Functions
- User-Defined Functions

Controlling Excel

- The Application Object
- The Worksheet Object
- The Range & Cell Objects

Database Connectivity (time permitting)

- ODBC vs. OLE DB Providers
- ActiveX Data Objects (ADO)
 - The Connection Object
 - The Command Object
 - The Recordset Object
 - The Fields Collection