



REAL WORLD
TECHNOLOGY TRAINING & SOLUTIONS
"Training You Can Really Use"

Microsoft® Office Excel®: Programming with VBA

Duration: 3 Days

Method: Instructor-Led Training (ILT) | Live Online Training

Course Description

This course is designed to give experienced Excel users proficiency in using Visual Basic for Applications (VBA). Participants will learn how to create procedures that run in response to specific events, work with control structures, develop user forms to accept or display data, validate the data entry in user forms, and debug and handle errors in code whether in Microsoft Office Excel 2010, 2013, 2016 or 2019.

Target Audience

This course is intended for:

- Business Professionals who would like to automate tasks with Excel VBA.

Prerequisites

To attend this course, candidates must have:

- Proficient knowledge of Microsoft Excel, which can be obtained by completing all the following courses:
 - *Microsoft Office Excel: Part 1*
 - *Microsoft Office Excel: Part 2*
 - *Microsoft Office Excel: Part 3*
- Knowledge of PivotTables is helpful but not required.

Course Objectives

Upon successful completion of this course, attendees will be able to:

- Understand Visual Basic for Applications (VBA) is.
- Record macros & write VBA code.
- Automate repetitive & boring tasks.
- Save and share their macros.
- Debug and step into their VBA code.



Course Objectives *Continued*

- Create simple solutions to complex problems by leveraging Excel functionality with macros.
- Use VBA when they reach a limitation with formulas or Excel functionality.

Course Topics

Module 1: Getting Started

- Introducing Visual Basic for Applications
- Displaying the Developer Tab in the Ribbon
- Recording a Macro
- Saving a Macro-Enabled Workbook
- Running a Macro
- Editing a Macro in the Visual Basic Editor
- Understanding the Development Environment
- Using Visual Basic Help
- Closing the Visual Basic Editor
- Understanding Macro Security

Module 2: Working with Procedures and Functions

- Understanding Modules
- Creating a Standard Module
- Understanding Procedures
- Creating a Sub Procedure
- Calling Procedures
- Using the Immediate Window to Call Procedures
- Creating a Function Procedure
- Naming Procedures
- Working with the Code Editor

Module 3: Understanding Objects

- Understanding Objects
- Navigating the Excel® Object Hierarchy
- Understanding Collections
- Using the Object Browser
- Working with Properties
- Using the With Statement
- Working with Methods
- Creating an Event Procedure

Module 4: Using Expressions, Variables, and Intrinsic Functions

- Understanding Expressions and Statements
- Declaring Variables
- Understanding Data Types
- Working with Variable Scope
- Using Intrinsic Functions
- Understanding Constants
- Using Intrinsic Constants
- Using Message Boxes
- Using Input Boxes
- Declaring and Using Object Variables

Module 5: Controlling Program Execution

- Understanding Control-of-Flow Structures
- Working with Boolean Expressions
- Using the If...End If Decision Structures
- Using the Select Case...End Select Structure
- Using the Do...Loop Structure
- Using the For...To...Next Structure
- Using the For Each...Next Structure
- Guidelines for use of Control-of-Flow Structures





Course Topics *Continued*

Module 6: Working with Forms and Controls

- Understanding User Forms
- Using the Toolbox
- Working with User Form Properties, Events, and Methods
- Understanding Controls
- Setting Control Properties in the Properties Window
- Working with the Label Control
- Working with the Text Box Control
- Working with the Command Button Control
- Working with the Combo Box Control
- Working with the Frame Control
- Working with Option Button Controls
- Working with Control Appearance
- Setting the Tab Order
- Populating a Control
- Adding Code to Controls
- Launching a Form from Code

Module 7: Working with the PivotTable Object

- Understanding PivotTables
- Creating a PivotTable Using Worksheet Data
- Working with the PivotTable Objects
- Working with the Pivot Fields Collection
- Assigning a Macro to the Quick Access Toolbar

Module 8: Debugging Code

- Understanding Errors
- Using Debugging Tools
- Setting Breakpoints
- Stepping through Code
- Using Break Mode during Run mode
- Determining the Value of Expressions

Module 9: Handling Errors

- Understanding Error Handling
- Understanding VBA's Error Trapping Options
- Trapping Errors with the On-Error Statement
- Understanding the Err Object
- Writing an Error-Handling Routine
- Working with Inline Error Handling

ACTIVITIES INCLUDED