

## ExecuTrain Course Outline

# Excel Macros: The Programming Way

2 Days

## Description

This class is designed to help students describe the concepts in and uses of Visual Basic for Applications, record and edit procedures, debug visual basic code, assign procedures to menus, objects, and keyboard shortcuts, use function procedures, and objects properties, and methods. In addition, students will learn to use interactive procedures, control procedures, automate procedures, customize menus and command bars, and create user forms.

## Objectives

- ✓ Describe the concepts in and uses of Visual Basic for Applications.
- ✓ Record and edit basic procedures.
- ✓ Debug Visual Basic code.
- ✓ Assign procedures to menus, objects, and keyboard shortcuts.
- ✓ Use function procedures.
- ✓ Use objects, properties, and methods.
- ✓ Use interactive procedures.
- ✓ Control procedures.
- ✓ Automate procedures.
- ✓ Customize menus and command bars.
- ✓ Create user forms.

## Outline

### Introduction to Visual Basic for Applications

Introduction to Visual Basic for Applications  
Running a Procedure  
Running a Procedure Using the Visual Basic Toolbar  
Running a Procedure Using the Tools Menu  
Running a Procedure Using a Keyboard Shortcut

### Recording and Editing Basic Procedures

Recording a Procedure  
Understanding Visual Basic Modules  
The Project Explorer  
Understanding Syntax  
How Excel Displays Code  
How This Manual Displays Syntax  
Editing a Procedure  
Calling a Procedure  
Understanding Variables  
Using Parameters in a Procedure  
Using Multiple Parameters  
Passing by Reference or Passing by Value  
Adding Steps into a Procedure  
Selecting the Recording Mode  
Absolute and Relative References  
Selecting the Recording Mode

### Debugging Visual Basic Code

Stepping Through a Procedure  
Responding to the Microsoft Visual Basic Error Dialog Box  
Using the Break Mode and Watch Expressions  
Entering Break Mode Manually  
Using Breakpoints to Enter Break Mode  
Watch Expressions

### Assigning Procedures to Menus, Objects, and Keyboard Shortcuts

Assigning a Procedure to a Keyboard Shortcut  
Assigning a Procedure to an Excel Menu  
Assigning a Procedure to a Toolbar  
Assigning a Procedure to a Graphic

### Using Function Procedures

Function Procedure Syntax  
Creating and Calling a Function Procedure  
Creating a Function Procedure  
Calling a Function Procedure  
Inserting a User-defined Function  
Using the Paste Function Button  
Typing a User-defined Function

## **Using Objects, Properties, and Methods**

- Using Objects, Properties, and Methods
- Understanding Objects, Properties, and Methods
- Looking at Recorded Procedures
- Using Visual Basic Help
- Using the Object Browser
- Setting an Object's Property
- Property Value Syntax
- Using the With Statement
- Manipulating Ranges and Cells
- The Range Object
- The Cells Property
- The Offset Method
- Using the Formula Property
- Using the Select and Activate Methods
- The Select Method
- The Activate Method
- Using the Close Method

## **Using Interactive Procedures**

- Displaying Excel's Built-In Dialog Boxes
- Displaying a Customized Dialog Box
- Using the StatusBar Property
- Using the Beep Statement
- Creating a Message Box

## **Controlling Procedures**

- Using the If...Then Statement
- Using the Elself Statement
- Using the If...Then...Else Statement
- Using the Do...Loop Statement
- The Do While...Loop Statement
- The Do Until...Loop Statement
- Using the For...Next Statement

## **Automating Procedures**

- Using Automatic Procedures
- Recording an Automatic Procedure
- Writing an Automatic Procedure
- Working with Add-in Applications
- Creating an Add-in Application
- Loading an Add-in Application
- Using the Personal Macro Workbook
- Recording a Procedure into the Personal Macro Workbook
- Saving a Workbook as the Personal Macro Workbook

## **Customizing Menus and Command Bars**

- Creating a Custom Menu
- Creating Command Bars
- Creating a Command Bar
- Adding Buttons to a Command Bar
- Adding Menus to a Command Bar

- Deleting a Command Bar

## **Creating User Forms**

- Creating a User Form
- Inserting a User Form
- Adding Controls to the User Form
- Adding Controls to the User Form
- Modifying User Form Controls
- Control Properties
- Assigning a Procedure to a Control
- Event Procedures
- Assigning an Existing Procedure to a Control
- Using Control Methods and Properties in Code
- Assigning a New Procedure to a Control
- The Unload and End Methods
- Displaying a User Form
- Defining Initial User Form Settings