

Excel VBA Macro Programming

12-hour course

Upon completion of this course, students will be able to:

- Use the macro recorder to create a simple Excel macro
- Implement a 5-step process for building complex macros
- Use the Visual Basic editor to read, write, and modify code
- Troubleshoot macros by using the built-in debugging tools
- Create variables, loops, and conditional logic to create dynamic programs that adapt to changing circumstances
- Build interactive macros that ask users questions like "Do you want to continue?" or "Which file did you want to process?"

The course is divided into the following sections:

Introduction to Excel Macros

- Define "Excel Macro"
- Change Excel's Macro security settings
- Run an Excel macro

VBA terms and syntax

- Recognize and use VBA objects, properties, methods, and arguments
- Use valid syntax when writing a VBA code
- Document code with comments
- Recognize VBA keywords
- Explain the application of various colors in the VBA text editor
- Use whitespace to make code easier to read

Creating and recording macros

- Identify the five steps for creating a macro
- Display the Developer tab on the ribbon
- Record a macro
- Modify macro code
- Record a macro with relative references

Variables and constants

- Declare variables
- Declare constants
- Change the scope of a variable or constant

Interacting with the user

- Display a message to the user
- Ask the user a Yes or No question
- Prompt the user to answer a fill in the blank question
- Allow the user to choose a filename

Complex code

- Create macros that run related macros
- Write code that works with an indefinite number of rows or columns
- Write code that interacts with multiple workbooks

Decision and loop structures

- Write code that responds to various conditions with an If...Then statement
- Write code that responds to one of many options with a Select Case statement
- Write code that repeats multiple times using a For...Next loop
- Write code that repeats while a condition is met with a Do...While loop
- Write code that repeats until a condition is met with a Do...Until loop
- Write code that repeats with a While...Wend loop
- Write code that acts on multiple objects with a For Each...Next loop