



Microsoft Excel VBA

Course EXL-VBA 3 Days Instructor-Led, Hands on

Introduction

This course is intended for advanced Microsoft Excel users that need to automate Excel spreadsheet tasks using Visual Basic for Applications (VBA). Learn how manual tasks in Excel can be programmed with VBA for greater speed, efficiency, and accuracy.

Understand how to leverage VBA to improve your Excel programming skills can enhance the quality of deliverables that you produce—and can help you take your career to the next level.

Leverage templates and worksheets that put your new knowledge in action, and reinforce the skills introduced in the text.

Improve your capabilities regarding Excel programming with VBA, unlocking more of your potential in the office.

The course covers Excel Version 2019.

At Course Completion

Upon successful completion of this course, students will learn the following skills:

- Essentials of Spreadsheet Application Development
- Introducing Visual Basic for Applications
- VBA Programming Fundamentals
- Working with VBA Sub Procedures
- Creating Function Procedures
- Understanding Excel's Events
- VBA Programming Examples and Techniques
- Working with Pivot Tables
- Working with Charts
- Leveraging Custom Dialog Boxes
- Introducing UserForms
- Looking at UserForm Examples
- Implementing Advanced UserForm Techniques

Prerequisites

To ensure your success, you should know the basics of Excel, including how to create, edit, format, and print worksheets that include charts and sorted and filtered data.

Students are recommended to first take the following courses or have equivalent knowledge:

Contact ISInc for more information at 916.920.1700 or by visiting our website at <http://www.isinc.com>



- Microsoft Excel Level 1
- Microsoft Excel Level 2
- Microsoft Excel Level 3
- Microsoft Excel Level 4

Course Outline

Module 1: Essentials of Spreadsheet Application Development

- What Is a Spreadsheet Application?
- Steps for Application Development
- Determining User Needs
- Planning an Application That Meets User Needs
- Determining the Most Appropriate User Interface
- Concerning Yourself with the End User
- Other Development Issues

Module 2: Introducing Visual Basic for Applications

- Getting a Head Start with the Macro Recorder
- Working with the Visual Basic Editor
- VBA Fundamentals
- Deep Dive: Working with Range Objects
- Essential Concepts to Remember
- Don't Panic—You Are Not Alone

Module 3: VBA Programming Fundamentals

- VBA Language Elements: An Overview
- Comments
- Variables, Data Types, and Constants
- Assignment Statements
- Arrays
- Declaring Arrays
- Object Variable
- User-Defined Data Types
- Built-in Functions
- Manipulating Objects and Collections
- Controlling Code Execution

Module 4: Working with VBA Sub Procedures

- About Procedures
- Executing Sub Procedures
- Passing Arguments to Procedures

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- Error-Handling Techniques
- A Realistic Example That Uses Sub Procedures
- Utility Availability
- Evaluating the Project

Module 5: Creating Function Procedures

- Sub Procedures vs. Function Procedures
- Why Create Custom Functions?
- An Introductory Function Example
- Function Procedures
- Function Arguments
- Function Examples
- Emulating Excel's SUM Function
- Extended Date Functions
- Debugging Functions
- Dealing with the Insert Function Dialog Box
- Using Add-Ins to Store Custom Functions
- Using the Windows API

Module 6: Understanding Excel's Events

- What You Should Know About Events
- Getting Acquainted with Workbook-Level Events
- Examining Worksheet Events
- Monitoring with Application Events

Module 7: VBA Programming Examples and Techniques

- Learning by Example
- Working with Ranges
- Working with Workbooks and Sheets
- VBA Techniques
- Some Useful Functions for Use in Your Code
- Some Useful Worksheet Functions
- Windows API Calls

Module 8: Working with Pivot Tables

- An Introductory Pivot Table Example
- Creating a More Complex Pivot Table
- Creating Multiple Pivot Tables
- Creating a Reverse Pivot Table

Module 9: Working with Charts

- Getting the Inside Scoop on Charts

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- Creating an Embedded Chart
- Creating a Chart on a Chart Sheet
- Modifying Charts
- Using VBA to Activate a Chart
- Moving a Chart
- Using VBA to Deactivate a Chart
- Determining Whether a Chart Is Activated
- Deleting from the ChartObjects or Charts Collection
- Looping Through All Charts
- Sizing and Aligning ChartObjects
- Creating Lots of Charts
- Exporting a Chart
- Changing the Data Used in a Chart
- Using VBA to Display Custom Data Labels on a Chart
- Displaying a Chart in a UserForm
- Understanding Chart Events
- Discovering VBA Charting Tricks
- Working with Sparkline Charts

Module 10: Leveraging Custom Dialog Boxes

- Alternatives to UserForms
- Using an Input Box
- Using the VBA MsgBox Function
- Using the Excel GetOpenFilename Method
- Using the Excel GetSaveAsFilename Method
- Prompting for a Folder
- Displaying Excel's Built-in Dialog Boxes
- Displaying a Data Form

Module 11: Introducing UserForms

- How Excel Handles Custom Dialog Boxes
- Inserting a New UserForm
- Adding Controls to a UserForm
- Toolbox Controls
- Adjusting UserForm Controls
- Adjusting a Control's Properties
- Displaying a UserForm
- Closing a UserForm
- Creating a UserForm: An Example
- Referencing UserForm Controls
- Customizing the Toolbox
- Creating UserForm Templates
- A UserForm Checklist

Module 12: Looking at UserForm Examples

- Creating a UserForm “Menu”
- Selecting Ranges from a UserForm
- Creating a Splash Screen
- Disabling a UserForm’s Close Button
- Changing a UserForm’s Size
- Zooming and Scrolling a Sheet from a UserForm
- Exploring ListBox Techniques
- Using the MultiPage Control in a UserForm
- Using an External Control
- Animating a Label

Module 13: Implementing Advanced UserForm Techniques

- A Modeless Dialog Box
- Displaying a Progress Indicator
- Creating Wizards
- Emulating the MsgBox Function
- A UserForm with Movable Controls
- A UserForm with No Title Bar
- Simulating a Toolbar with a UserForm
- Emulating a Task Pane with a UserForm
- A Resizable UserForm
- Handling Multiple UserForm Controls with One Event Handler
- Selecting a Color in a UserForm
- Displaying a Chart in a UserForm
- Making a UserForm Semitransparent
- A Puzzle on a UserForm
- Video Poker on a UserForm