

Advanced Excel VBA

Description: This course is designed to take students' Excel VBA skills to the next level. Students will learn advanced programming concepts and techniques to create complex macros and automate tasks in Excel. The course will cover advanced topics such as interacting with other Microsoft Office applications, creating custom add-ins, and programming with external data sources.

Course Duration: 10 Hours

Prerequisites:

- Basic knowledge of Microsoft Excel and familiarity with Excel formulas and functions
- Knowledge of Basic VBA Topics/Methods

Session 1: Advanced Programming Concepts

- Advanced data types (variant, user-defined types)
- Collections and dictionaries
- Error handling and debugging techniques
- Advanced string manipulation

Session 2: Advanced Control Structures

- The select case statement
- The for each...next loop
- The do while...loop and do until...loop
- The for loop

Session 3: Advanced Excel Object Model

- The worksheet object
- The chart object
- The pivot table object
- The slicer object

Session 4: Interacting with Other Microsoft Office Applications

- Creating Excel automation code in other applications
- Automating Word documents and Outlook emails
- Automating PowerPoint presentations
- Creating a custom add-in for Excel

Session 5: Creating User-Defined Functions

- Defining and calling user-defined functions
- Passing arguments to functions

- Understanding function scope and lifetime
- Using functions in formulas and cells

Session 6: Working with External Data Sources

- Understanding ADO and SQL
- Connecting to external databases
- Retrieving data from external data sources
- Creating a dynamic data source

Session 7: Advanced File and Folder Handling

- File and folder management techniques
- Creating and deleting files and folders
- Copying, moving, and renaming files and folders
- Creating a custom file explorer in Excel

Session 8: Creating Custom User Interfaces

- Creating custom ribbons and toolbars
- Creating custom context menus
- Creating custom dialog boxes and forms
- Advanced user interface design principles

Session 9: Creating Custom Classes

- Understanding classes and objects
- Creating custom classes
- Using classes to create reusable code
- Advanced object-oriented programming concepts

Session 10: Advanced Topics

- Advanced error handling and debugging
- Understanding the Windows API
- Interacting with the internet
- Creating custom reports with Excel VBA