

# Using VBA with HMI/SCADA iFIX

## Instructor-led

### Topics

- Understand how VBA functions inside of iFIX.
- Create VBA procedures (functions and sub-procedures).
- Understand and create (declare) variables of various data types (including arrays) and use them to make expressions.
- Use simple VBA code structures including decisions, loops, and collections.
- Use the VBA MsgBox and InputBox commands and create VBA Forms.
- Access iFIX data and use iFIX Subroutines and Methods
- Create and use Error Handlers in VBA and use VBA debugging tools.
- Access Relational Databases using ADO (ActiveX Data Object).
- Use VBA Automation to make References to other applications

### Course description

The Using *VBA with iFIX* course is designed for those who wish to acquire a basic knowledge of Visual Basic for Applications (VBA) within iFIX. This knowledge will allow the student to generate VBA based solutions for their special system requirements. The course begins with an introduction to VBA and why VBA is so important in today's applications. Lectures, coding examples, and labs are included in this course on the important aspects of VBA, as well as reference to Visual Basic syntax. This course will demonstrate how to enhance runtime operation to solve special problems.

### Who should attend?

This course is principally designed for process, automation, or instrumentation engineers and system integrators who will be developing, configuring, and using applications created with iFIX.

### Are there any pre-requisites?

Completion of iFIX Fundamentals course (GFS-154) is a must! Participants should have a working knowledge of Windows operating systems. Familiarity with some programming language would be helpful, but is not required.

### Duration

32 hours

### Delivery

Instructor-led, classroom, virtual or onsite

### Part #

44A728312-354

### Suggested class size

10 Students

### Course Schedule

Click [here](#) for the latest details and schedule.





## Session 1

### VBA Overview

VBA terminology and an introduction to the VBE (Visual Basic Editor).

### VBA and iFIX

Details on how VBA functions within iFIX and how to use VBA Help.

## Session 2

### Procedures and Code Locations

Create procedures and use procedure arguments.

### iFIX subroutines and methods

Using iFIX subroutines and methods and invoking code in iFIX applications.

## Session 3

### Variables

Understand and create (declare) variables of various data types.

### VBA Debugging Tools

Using VBA tools, like Watch Window and Locals Window, to debug code.

### Decision Code

Use If Then Else and other decision code.

## Session 4

### Expressions

Use functions and variable to make complex expressions .

### Functions

Use pre-built functions (Message Box and Input Box) and create new functions.

## Session 5

### Forms

Create and use Forms, including unloading and hiding Forms.

### VBA & iFIX

Accessing the iFIX Process Database.

## Session 6

### Looping Code & Arrays

Use For loops and Do loops. Create and populate array variables.

### Error Handlers

Use error handlers to create better code.

## Session 7

### Accessing Relational Databases

Access Relational Databases via ActiveX Data Objects.

### Collection Objects

Create and use collections to enhance an application .

### ActiveX

Using VBA with ActiveX.

## Session 8

### VBA Automation

Use VBA Automation to make References to other applications.

### Win32 API

Using the Windows Applications Programming Interface from iFIX VBA iFIX with Terminal Services .

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