



# Proficiency HMI/SCADA iFIX Fundamentals

## Course Description

The *Proficiency iFIX Fundamentals* course is designed to provide a good working knowledge of iFIX. All major features are covered, from project configuration to data acquisition and visualization. Valuable hands-on lab exercises are provided to guide students through the building and modification of an HMI/SCADA application from top to bottom.



## Who Should Attend?

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

## Are There Any Prerequisites?

Participants should have a working knowledge of Windows operating systems.

## What Tasks Will Be Taught in This Class?

Upon completion of this Course, the student will be able to:

- Understand communication between iFIX SCADA Servers and iFIX iClient nodes.
- Configure iFIX nodes using the System Configuration Utility.
- Configure I/O Drivers to communicate with iFIX.
- Create and modify standard Process Database tags.
- Create graphic screens (pictures) using a wide variety of object types and animations.
- Design and build a picture navigation strategy.
- Create basic scripts using Visual Basic for Applications (VBA).
- Configure alarming and create screens to monitor and acknowledge alarms.
- Use trending to monitor both real-time and historical data.
- Design and build a system-wide security strategy.
- Use a variety of iFIX Utilities and Operating System administrative options to troubleshoot project or system process faults.

**Course Length:** 4 days

**Suggested Class Size:** 8 students

**Course Hours:** 9:00 am – 5:00 pm



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**Course Agenda** *(Schedule and content may vary.)*

## Day 1

### Morning:

#### Introduction to iFIX

Study the basic features and architecture of iFIX software.

#### System Configuration Utility

Configure an iFIX node, including networking, tasks, and alarm services.

### Afternoon:

#### I/O Drivers

Install, configure, and monitor I/O Drivers, especially v7 OPC Servers.

#### Introduction to Database Manager

Use the Database Manager to rapidly build a Process Database.

## Day 2

### Morning:

#### Digital Database Tags

Use the Database Manager to create Digital Input and Digital Output tags.

#### Analog Database Tags

Use the Database Manager to create Analog Input and Analog Output tags.

### Afternoon:

#### Introduction To the Workspace

Begin with orientation to the iFIX Workspace, picture documents and development tools.

#### Graphic Objects

Begin building displays using links, shapes, dynamos and other graphic tools.

## Day 3

### Morning:

#### Data-Entry and Control

Create user interactive controls in displays.

#### Globals

Create global variables and tables.

#### Animations

Create visual cues and enrich information delivery by linking objects to real-time data.

### Afternoon:

#### Scripting with VBA

Using Visual Basic for Applications to extend picture functionality.

#### Archiving Data

Archive process data using an Historian.

#### Picture Navigation

Create a picture navigation strategy.

## Day 4

### Morning:

#### Trending

Create pictures to monitor real-time and historical data.

#### Tag Groups

Using Tag groups for optimized development.

#### Alarming

Build displays to monitor alarm information.

### Afternoon:

#### Troubleshooting

Use iFIX and Operating System utilities to troubleshoot application elements.

#### Security

Design and implement a security strategy.