

## 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. Control system exposure and experience is recommended.

### 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

10 students

### Class Hours

8:00 am - 5:00 pm, daily



## 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.

