

## Proficiency Process Systems Fundamentals

### Course Description

The **Proficiency Process Systems Fundamentals** course is designed to provide a good working knowledge of Proficiency Process Systems. This course explores the solution architecture, features and configuration tools from the controller, through Data Acquisition and Management to Visualization. Valuable hands-on lab exercises are provided to guide students through the building and modification of the system and its constituent components.



### 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 a fully integrated Proficiency Process System.

### Are There Any Prerequisites?

Participants should have a working knowledge of Windows operating systems. Control Systems experience and knowledge is an asset.

### What Tasks Will Be Taught in This Class?

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

- Introduce the Proficiency Process Systems solutions.
- Use the Engineering Workstation to configure Controllers & IO.
- Use the EWS to create a PPS project.
- Configure PPS Control Hardware.
- Program with EWS-Logic Developer.
- Work with PPS Function Blocks.
- Understand Ethernet Global Data (EGD) and the Global Namespace.
- Configure EWS-CIMPLICITY and/or EWS iFIX project essentials.
- Develop EWS-CIMPLICITY and/or EWS-iFIX visualization.
- Design PPS Controller and IO networks.
- Build Controller-based alarming.
- Develop Alarm displays for CIMPLICITY and iFIX.
- Work with EWS utilities.
- Build reusable code (User-defined function blocks - UDFBs).
- Collect and review archived data with Proficiency Historian.
- Access system and configuration files with Proficiency Change Management.
- Load and explore a sample project.

### 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 Proficy Process Systems.**

An overview of the Proficy Process Systems and its solutions.

##### **Eng. Workstation: Controllers & IO**

Use the EWS to prepare a PPS controller.

##### **Creating a Project**

Configure fundamental project settings to prepare for development.

#### Afternoon:

##### **Hardware Configuration.**

Configure the controllers.

##### **Programming with Logic Developer**

Provide an orientation to the control programming environment.

##### **PPS Function Blocks**

Use PPS Function Blocks to build controller logic.

### Day 2

#### Morning:

##### **Ethernet Global Data (EGD)**

See how the Global Namespace is constructed and driven by EGD.

##### **EWS- CIMPLICITY Project Essentials**

Prepare CIMPLICITY for PPS visualization.

##### **EWS- iFIX Project Essentials**

Prepare iFIX for PPS visualization.

#### Afternoon:

##### **EWS- CIMPLICITY visualization**

Use CIMPLICITY to build displays using PPS faceplates and the Global Namespace.

##### **EWS iFIX visualization**

Use iFIX to build displays using PPS faceplates and the Global Namespace.

### Day 3

#### Morning:

##### **Hardware and IO Networks**

Receive an overview of PPS Hardware and IO design principles.

##### **Controller-Based Alarming**

Set Alarming in the Controllers.

##### **Building Alarm Displays – CIMPLICITY**

Use EWS-CIMPLICITY to view alarms.

#### Afternoon:

##### **Building Alarm Displays – iFIX**

Use EWS- iFIX tools to build Alarm Displays

##### **EWS utilities**

Explore useful EWS utilities for development, troubleshooting and maintenance

### Day 4

#### Morning:

##### **Build Reusable Code**

Discover the power of User Defined Function Blocks (UDFBs)

##### **Historian**

Archive important system data values.

#### Afternoon:

##### **Change Management**

Control access and changes to system files. Provide version control of critical configuration files.

##### **Explore a Sample Project**

Work inside a fully functioning sample system.

