



#### **COURSE LENGTH**

2 days  
8:00am - 4:30pm

#### **FEE**

\$495 per person  
Lunch provided

#### **PREREQUISITES**

Participants should be comfortable operating an MS Windows environment and have a basic understanding of electrical/control fundamentals.

#### **TRAINERS**

##### **Terry Busch**

Business Development  
Manager

##### **Rocco Fusco**

Business Development  
Manager

##### **Andrew Jagger**

Automation Specialist

## **GE Proficy Logic Developer Machine Edition Training**

### **The Proficy Logic Developer**

Machine Edition course familiarizes the student with the control logic development tool suite used to program the entire family of GE Intelligent Platforms industrial control hardware. Emphasis is given to understanding and operating in the development environment, understanding the available logic development options, generating programs using the ladder logic language and communicating with control targets (90/30, 90/70, VersaMax, RX7i and RX3i controllers).

### **Who should attend?**

This course provides the opportunity for individuals who are or who will be involved in programming, operating and troubleshooting control systems using Proficy Logic Developer PLC. The course is designed for electrical technicians, electricians, and programmers beginning to work with Proficy Logic Developer PLC or those tasked with developing, modifying and maintaining controller programs.

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

- Describe Basic Systems & Components (Series 90-30 or 90-70 or VersaMax, RX7i or RX3i)
- Discuss the Proficy Machine Edition environment
- Discuss the menu options, toolchest, windowed tools, & application settings
- Create a project and configure the Rx3i
- Establish and utilize communications to the controller
- Develop a small sequence application
- Create variables, assign reference addresses
- Create and debug relay ladder logic program
- Create a view target and link the variable to the ladder logic
- Work with objects and object based programs
- Develop and implement objects in Proficy Machine Edition.
- Work with ladder logic, structured text, function block programming
- Work with user defined function blocks

### **COURSE AGENDA**

#### **MORNING - DAY 1**

**Control System Architecture and Operational Fundamentals:** Introduction to basic components of Controllers and what roles Controllers play in automation. Controller operating concepts – scan, logic solution and communication.

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**PLC Controller Operation and Components:** cont'd Operating Proficy Machine Edition: Orientation to the Machine Edition Programming environment and purpose of the tools. Define a project and what it contains and create a project and open existing projects.

**Creating a Project:** Create a new project. Add project and target documentation. Navigate through the project.

**Controller Communications:** Establish communication to a PLC over Ethernet connections. Validate and download ladder program. Upload a program. Verify PLC equality; flash memory; monitor/change references; force boolean variables; use the controller diagnostic capabilities; view controller status information.

#### **AFTERNOON – DAY 1: HANDS ON LABS**

Lab 1: Creating a project and configuring the Rx3i

Lab 2: Creating Basic Ladder Logic Manual Mode

Lab 3: Creating Basic Ladder Logic Automatic Mode

Lab 4: Timers and Counters

#### **MORNING - DAY 2**

Enhanced Productivity through Object Programming

Discuss programming paradigms and object based programming. Create logic and graphical objects and store the objects in the toolchest. Discuss user defined function blocks and how to use them in the Proficy Machine Edition Environment.

#### **AFTERNOON - DAY 2: HANDS ON LABS**

Lab 1: Working with objects and graphics

Lab 2: Creating program blocks

Lab 3: Create logic to simulate the machines inputs

Lab 4: Create ladder logic, structured text, function block diagram, and a user defined function block to convert celsius to fahrenheit

Lab 5: Create a user defined function block using ladder logic to calculate a continuous rolling average

Lab 6: Create ladder logic to control and simulate a PID instruction

*Certification provided upon completion of this course.*

#### **MORE INFO:**

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