

Unity Level 2 PLCUTY2E

Intermediate IEC Programming in Unity

Course Abstract:

This course has been specifically designed to meet the needs of the controls designer whose task is to build an application program using some of the more advanced features of the Unity Pro programming tool.

This is **not** a system maintenance class. Discussions will include tools helpful in the debugging and commissioning process. However PAC hardware and system troubleshooting is not covered. That topic is much better served in a system maintenance class where these techniques are the exclusive focus.

Audience:

This course is designed for Engineering personnel who need to integrate and design control systems with Unity Pro Software and who need to program Schneider Electric Unity Pro capable PACs using advanced programming functions and techniques.

Prerequisites

In order to be successful in this course the learner must meet the following prerequisites:

- Familiarity with the Windows Interface
- An understanding of Industrial processes requiring automation.
- Have completed a Unity Pro level 1 training session or have equivalent experience in basic programming techniques and usage of Unity Pro software..

Objectives:

After completion of this course the learner will be able to:

- Use Unity Pro software to Program a Schneider Electric Quantum, Premium, M340 or Atrium PAC.
- Program, at the intermediate level, a Schneider Electric Quantum, Premium, M340 or Atrium PAC to control an application using any of the IEC programming editors as found in Unity Pro Software.
- Create and Implement complex Derived Functions blocks.
- Create and incorporate derived data types in a Unity Pro program.
- Implement Analog signals and PID control in a Unity Pro program.
- Implement and program communications functions in a Unity Pro Program
- Implement Quantum Hot-Standby control using Unity Pro.

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Topical Outline:

This course consists of the following lessons:

- Introduction and review of basic Concepts
- Application Design Considerations
- Creating and Applying Advanced Derived Function Blocks
- Analog Scaling
- Creating and Applying Complex Derived Datatypes
- Implementing PID Control
- Implementing Quantum Hot Standby
- Structured Text for Advanced Machine Control
- Programming for Communications in Unity Pro
- Sequential Function Chart for Application Control

Course Length:

3 Days

Course Code:

PLCUTY2E

Course Tuition:

\$2100.00

Maximum Class Size:

6 Students

Course Agenda:

Day 1:

- Introduction
- Review of Basic Concepts
- Design Considerations
- Analog Handling
- Implementing Derived Data Types

Day 2:

- Implementing complex Derived Function Blocks
- Closed Loop Control
- Implementing Hot-Standby in Quantum Systems

Day 3:

- Communication Processes in Unity Pro
- Structured Text
- Sequential Function Chart
- Evaluations