

**TR1020****PLC Software Diagnostics and Troubleshooting****3 Days**

- Variables
  - Variable Types
  - Declarations
  - Variable Scope
  - Initial Values
  - Constants
  - Retained Data
  - Persistent Data
- Connecting PLC Variables to Hardware
  - Creating the \*.tpy file
  - Appending the PLC project to the System Manager
  - Linking the PLC variables to Hardware
- Languages of the PLC
  - IL – Instruction List
  - LD – Ladder Diagram
  - FBD – Function Block Diagram
  - ST – Structured Text
  - CFC – Continuous Function Chart
- Loading and Running the PLC
- Functions
  - Declaration
  - Coding
  - Use
- Function Blocks
  - Declaration
  - Coding
  - Use
- Libraries
- Code Sequencing and POU Calls
- Break Points
- Flow Control
- Global Search
- Cross Reference

## PLC Software Diagnostics and Troubleshooting

- Boot Project
- Source Code Download
- Scope View
- Applying New PLC Code
- Project Compare
- Structures
- Enumerations
- Arrays