PLC WORKSHOP SUITE FOR 505 TRAINING

505 LADDER & SPECIAL FUNCTIONS PROGRAMMING SYLLABUS

Writing and troubleshooting PLC programs demands a working knowledge of the 505 PLC programming language. FasTrak's 505 Ladder and Special Function Programming course complements the PLC WorkShop Suite to enhance the 505 programming experience. The 505 Programming course thoroughly explains the instructions in the 505 programming language. Hands-on sessions allow participants to experiment with the instructions and observe how they operate in running PLC programs. This course benefits anyone who writes or troubleshoots 505 PLC programs for Simatic 505 or CTI 2500 Series processors. Topics and instructions covered in this course include:

- Addresses (Types, Interactions, Limitations, Notations)
- Normally Open and Closed Contacts
- Normally Open and Closed Coils
- Immediate Contacts and Coils
- Horizontal Branches and Vertical Shorts
- Real and Integer Math
- Absolute Value
- Square Root
- Set, Pick, and Clear Bits
- Compare (Greater Than, Less Than, or Equal)
- Equal, Not Equal
- Less Than, Less Than or Equal
- Greater Than, Greater Than or Equal
- Index and Compare Scan Matrix
- Load Data Constant
- Date Set and Compare
- Time Set and Compare

- Move Words, Image Registers, and Tables
- Set and Reset Coils
- Timers (1/10 and 1/1000 of a Second Timer)
- Counters (Up Only and Up / Down)
- Time and Event Driven Drums
- Discrete and Word Maskable Event Drums
- Scan Matrix Compare
- Shift and Rotate Bits and Words
- Text
- Master Control Relays
- Jump and End
- Go To Ladder Subroutines
- Special Function Calls
- Conditional Execution Controls (IF, ELSE, ENDIF, nested IF conditions)
- Scale and Unscale Analog I/O
- Convert between BCD and Binary Values

- Correlated Data Table
- Discrete and Motor Control Alarm Timers
- Lead / Lag
- FOR / NEXT Loops
- WHILE Loops
- SWITCH Blocks
- Return from Subroutine
- Pet Scan Watchdog
- Mega Time / Event Driven Drum (MegaEDRUM)
- On Delay Coil
- Off Delay Coil
- Floating Point Compare

Additional 505 ladder and / or special function instructions can be incorporated into this course on request.

FasTrak SoftWorks, Inc.