

[Siemens S7 200 PLC Level 1](#)

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Software	MicroWin V4.0
Duration	4 Days
PLC-Type	Siemens S7 200 PLC
Pre-Requisites	No prerequisites this is a beginners course
Maximum Delegates	6

Brief Description

- * Be able to recognise S7 200 hardware and be able to replace modules when a fault occurs.
- * Be able to operate the Step 7 200 software to make it perform certain tasks.
- * Understand basic S7 200 instruction set and be able to make minor modifications to software.
- * Be able to backup and restore a PLC program when required.
- * Be able to perform basic system diagnostics when a problem occurs.

Course Documentation

- * Training Log
- * Pre Course Exercises
- * Course Exercises
- * Post Course Exercises
- * Filofax Pocket Reference Guides

Course Content

To fault find a system you need to know EXACTLY how it works HOW EXACTLY DOES A PLC WORK?

- * Am I getting the input to the PLC?
- * The Led on the output card means i am getting voltage out right? does it?
- * What exactly happens in between? ,theres more than just a program in the CPU
- * How exactly does it scan the program?
- * What is this Watchdog Timer? Is it that important?
- * Can I use the same output twice? That's bad programming isn't it?
- * A PLC is a logic controller, so use a logical approach to fault find it.
- * What are the 8 simple test points to check?
- * The PLC is in RUN, that means theres a program right? does it?
- * FORCING a bit and toggling a bit is pretty much the same yeah? depends on which PLC

Then you need to Know the specifics HOW DO I DO THE FOLLOWING? (some straight forward some not so)

- * S7 Family hardware (Basic Specifications)
- * Basic Hardware Troubleshooting
- * Theory of Operation
- * I/O Addressing

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- * Understanding program notation I, Q, T, C, V, L, etc
- * Step 7 User Interface
- * Setting Up a Project
- * Hardware Configuration
- * Program Representation (LAD, FBD, STL)
- * Program Structure & Logic Block Types
- * Basic Instruction Set (Timers, Counters, Flip Flop's)
- * Local and Global variables
- * Data Types and Parameter types
- * Data Blocks
- * Establishing Online Connections
- * Upload and Download Projects
- * Diagnostic functions (Module Information / Diagnose Hardware)
- * Program Monitoring
- * Using Cross Reference function to aid fault finding
- * Searching for specific operands and instructions
- * Monitor and Modify Variables
- * Rewire Function
- * Program Documentation (Symbols, Comments)
- * Printing Cross Reference / Program Listings etc.

Equipment

- * S7 200 PLC
- * PC or Laptop
- * Simulator

Solutions, Not Courses.