

PLC PROGRAMMING

4 DAYS

Modern PLC-based control and automation systems often have improvements and modifications made, resulting in changes needing to be made to the PLC program. This course provides the skills necessary to understand how typical modern industrial PLC programs work, how to make changes to existing programs and how to create small programs from scratch.

PARTICIPANTS

The course is designed for those who have an electrical background (for example maintenance electricians) who have successfully completed course 520 (Maintenance of PLC systems). Candidates who subsequently attend more advanced manufacturer-specific programming courses will find that their progress is enhanced by this foundation in PLC programming.

COURSE PRESENTATION

The course is presented using a wide range of industrial PLCs so that candidates learn how different manufacturers employ the programming languages involved. Allen Bradley, Siemens, Mitsubishi and Modicon PLCs are used to control a complex training rig incorporating conveyors, solenoids, motors and industrial sensors as a 'target' system to gain the necessary programming skills. Comprehensive course notes are provided.

COURSE OBJECTIVES

On completion of the course, participants will be able to

- Identify the dangers involved in modifying, existing or creating new PLC programs
- Make changes to existing programs and update 'back-up' systems
- Demonstrate an understanding of how a complex PLC program works
- Use subroutines to structure programs
- Use labels and comments to ensure that programs are easily read by others
- Employ logical commands (AND, OR etc) using inputs, outputs and flags
- Recognise the different counters and timers available and select appropriate types
- Program a range of timers and counters
- Program mathematical operations (greater than, equal to etc)
- Employ shift registers and other advanced commands.