

## S7 Programming Course - Part 3 (ST-7PRO3)

### Short Description

ST-7PRO3 - S7 Programming Part 3 (Siemens Certified Programmer)

### Objectives

The third part of the SIMATIC S7 programming training is based on the knowledge of the SIMATIC Manager gained in the SIMATIC S7 programming courses 1 and 2, including STEP 7, SIMATIC S7, HMI, connection of drives, and PROFINET IO. You will expand your knowledge regarding the reusability of STEP 7 blocks and their storage in user libraries. You will get to know more complex functions of Structured Control Language (SCL) und S7-GGRAPH. You will create user-specific blocks for reporting, handling and analyzing program errors. To save the machine data, you will learn how to manage recipes in SIMATIC HMI (operator control and monitoring system). You will set up communication between SIMATIC CPUs based on Industrial Ethernet.

The comprehensive knowledge that is imparted to you will allow you to shorten configuration times and to react flexibly to the need to optimize your plant.

### Target Group

Programmers  
Commissioning engineers  
Engineering personnel

### Content

PLC (programmable logic controller) technology  
"Configuring and parametrizing a SIMATIC S7-300 PLC  
"Implementation of a control program taking into account the following:  
"Structuring a program by using a structogram  
"Understanding the principle of object-oriented programming  
"Object-oriented programming of reusable STEP 7 blocks based on IEC 61131-3.  
"Application-oriented use of the SCL and S7-Graph programming languages  
"Being familiar with functions, function blocks, and multi-instances  
"Using complex data structures and their addressing  
"Programming alarms  
Industrial communication  
"Configuring and parametrizing the distributed I/Os  
"Configuring CPU-CPU communication via Industrial Ethernet  
Human Machine Interface  
"Configuring an HMI device  
"Configuring data management with SIMATIC HMI recipes  
Motion control  
"Configuring and parametrizing a drive  
Functional safety  
"Identifying the principles and components of safety-related control technology  
Hands-on environment  
"SIMATIC S7-300, SIMATIC STEP 7 V5.x  
"Touch Panel, SIMATIC WinCC flexible  
"Micromaster drive

### Prerequisites

SIMATIC S7 knowledge corresponding to ST7-PRO2 and practical experience in using the knowledge.

### Type

Face-to-face training

### Duration

5 days

### Language

en

### Fee

33,582 ZAR