

## SIMATIC S7 Programming 2 (ST-PRO2)

---

### Short Description

---

You will reinforce your theoretical knowledge with numerous practical exercises on a TIA plant model. This consists of an S7-300 programmable controller, ET200S distributed I/O, TP 177B Touch Panel, Micromaster 420 drive and a conveyor model.

### Objectives

---

This course is aimed at users with engineering tasks who want to become familiar with the expanded programming facilities of SIMATIC S7. You get an overview of human machine interfacing, PROFIBUS DP and the integration of drives. What you learn about Totally Integrated Automation (TIA) will teach you to take a holistic view of your plant and help you to understand the relationship between the individual components. We will teach you how to structure and create extensive S7 programs. This enables you on completion of the course to work efficiently with STEP 7, shorten the engineering phase and minimize fault sources through optimal configuration of your plant. The comprehensive understanding you gain will give you new impetus and ideas for production optimization.

### Target Group

---

Programmers  
Commissioning engineers  
Engineering personnel

### Content

---

Aids for program creation (e.g. structure program)  
Functions, function blocks and multi-instances (using the example of the IEC timers/counters)  
Jump commands and accumulator operations  
Indirect addressing  
Integration of a drive (MM420) via PROFIBUS DP  
Monitoring and controlling the drive with the "Starter" software  
Error handling with error organization blocks  
Evaluating diagnostics data  
Troubleshooting and messages with an HMI device (TP 177B)  
Analog value processing  
Deeper understanding of contents through practical exercises on the SIMATIC S7-300 system model

### Prerequisites

---

SIMATIC S7 knowledge according to ST-PRO1 and practical experience in using the knowledge  
You can use the online tests to find out whether you have sufficient prior knowledge to participate effectively in the course you wish to attend.  
This blended-learning course combines Web-based training (WBT) on the Internet with a 5-day attendance course. For an optimized post processing of the attendance course you get the WBT "PROFIBUS". By using these learning media, you increase your personal learning success in the attendance course.

### Note

---

In this course you will work with the SIMATIC STEP 7 V5.x software.  
This is the second of three courses which will lead you to the exam for the "Siemens Certified Programmer (CP-FAP)". The exam is a module of the "SITRAIN Certification Program".

### Type

---

Face-to-face training

### Duration

---

5 days

### Language

---

en