

TIA Portal Programming Part 3 — Siemens Certified Programmer (TIA-PRO3)

OEM: Siemens • Duration: 5 Days (40 hrs) • Code: CPT-FAP

COURSE MODULES & TOPICS

Module 1: Advanced Programming Concepts

- Functions, function blocks, and multi-instances
- Creation and application of complex data structures
- Indirect addressing of complex data structures and parameters
- Library functions for integrated error handling through fault masking
- Expanding knowledge on reusability of STEP 7 blocks and storage in user libraries
- Creating user-specific blocks for reporting, handling, and analyzing program errors

Module 2: Industrial Communication

- CPU-to-CPU communication via Industrial Ethernet
- Commissioning of the TIA system model with distributed I/O on PROFINET IO
- PROFINET IO diagnostics

Module 3: Programming Languages

- Introduction to programming language Statement List (STL)
- Introduction to Structured Control Language (SCL)
- Introduction to S7-GRAPH
- Overview of the engineering tools for all aspects of the TIA Portal

Module 4: HMI and Data Management

- Administration of a recipe database in the HMI
- Managing recipes in SIMATIC HMI
- Connecting HMI to real-time process communication

Module 5: Siemens Certified Programmer Examination (CPT-FAP)

- Theoretical written examination covering all TIA-PRO1/2/3 content
- Practical exercises on SIMATIC S7-1500 system model
- Certification: Siemens Certified Programmer in TIA Portal (CPT-FAP)