

## Totally Integrated Automation in the Digital Enterprise - Automatic execution of engineering tasks (DI-AUTOEN)

### Objectives

Digital Enterprise, your path to Industry 4.0 - discover your possibilities. Today's technologies are so complex that, in order to keep up to date, it is almost essential for the training to be performed on the software and the associated training devices.

The target group of these course is comprised of configuration engineers, project planners and programmers working for medium-size and large-scale industrial companies, who deal with the automatic execution of engineering tasks. This includes the generation of PLC programs and HMI visualizations.

This course gives you an overview of Totally Integrated Automation in the Digital Enterprise as your way towards Industry 4.0 and an overview about the interaction of the various software packages, so that you will be able to assess them after completing the course.

The objective of the course is to achieve higher efficiency in the creation of PLC code and HMI visualizations for modular machines. This is achieved by:

- The automatic execution of repetitive processes for identical functions
- A code that can be generated more quickly and more reliably for the same processes
- Reducing the engineering effort demanded by user interfaces, while standardizing the visualization across the plant
- Automatically generating and creating the visualizations, based on the program code of the controller and of corresponding visualization objects within the framework of system-wide library concepts

### Target Group

Configuration engineers  
Project planners  
Programmers  
Planners

### Content

Digitalization - Industry 4.0

Automatic execution of engineering tasks

Standardization as the basis for digitalization

Modularization of a machine

Standardization and storage with the aid of the TIA Portal library

Practical insight into standardized programming

Standards in automation

TIA Portal Openness and types of automated code generation

Hardware and software generators and data exchange with ECAD

Adaptation of a project generator

The need for program tests

Program block test based on PLCSIM Advanced

Principles of the automated generation of visualizations

Steps for generating visualizations with SiVArc

Introduction to TIA Portal Openness

- Importing hardware from another engineering platform in the TIA Portal
- Executing functions automatically via Openness in TIA Portal Introduction to SIMATIC Visualization - SiVArc
- Demands on the PLC project in terms of standardization and structuring
- Planning of automatic visualization
- Automatic screen generation

### Prerequisites

Good knowledge of automation engineering

Knowledge of SIMATIC S7 appropriate to TIA-PRO2 or TIA-SYSUP, and practical experience of the application of this knowledge

### Type

Face-to-face training

### Duration

5 days

### Language

en