

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

### Short Description

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.

### Objectives

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 - SiVArcDemands 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