

## SIMATIC PCS 7 Process Safety (ST-PCS7SAF)

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### Short Description

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In this course you learn how to generate a PCS 7 conform and failsafe application with CFC and Safety Matrix.

[Also available as online-training](#)

### Objectives

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The theoretical parts of the training are backed up with practical exercises. These exercises are done with failsafe CPU 410-5H with failsafe signal modules connected via PROFIBUS and PROFIsafe. After the course you will be able to engineer safety functions and adjust safety relevant times.

### Target Group

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Sales employees  
Project managers, project staff  
Programmer  
Commissioning engineers, configuration engineers

### Content

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Functional safety Basics from IEC 61508 and IEC 61511,  
LOPA (Layer of Protection Analysis) and Risk graph by means of a safety instrumented function  
System architecture and diagnostics in safety components (Hardware, Software, Communication)  
Overview about F-Hardware  
Parameter in HW-Configuration (safety mode, sensor evaluation, addressing, monitoring time, H-parameter, Wiring and Voting)  
Safety program (Acknowledgement, voting blocks, block types, Secure Write Command++, communication)  
Safety mechanisms (F-Shutdown, Partial Shutdown Groups, passivation, reintegration, block type)  
Safety Matrix  
Calculate and adjust F-times using S7ftime.xlsx (reaction-, monitoring times)

### Prerequisites

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Attendance of training course ST-PCS7SYS. General basic knowledge of process automation. Basic knowledge of PCS 7 OS. Good experience in AS configuration within SIMATIC PCS 7.

### Note

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none

### Type

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Face-to-face training

### Duration

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4 days

### Language

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