

## Virtual Commissioning for Machines

OEM: Siemens • Code: DI-VIRTCOM

### COURSE DESCRIPTION

Digital Enterprise, Your Way to Industry 4.0 - discover the possibilities. Today's technologies are so complex that training on the software and the appropriate training equipment is almost indispensable to keep up to date.

Target group of this course are project engineers, project planners and programmers of mid-level and big industries, who deal with the design and virtual commissioning of machines.

### AUDIENCE PROFILE

- Configuration engineers
- Project planners
- Programmers
- Planners

### PREREQUISITES

- Good knowledge of automation technology
- SIMATIC S7 knowledge relevant for TIA-PRO2 or TIA-SYUP and practical experience in the application of this knowledge.
- [Technical requirements](#)

#### Note

- Included in the course price: Free access to the digital learning platform [SITRAIN access](#) – starting one week before the start of the course until two weeks after the end of the course.
- With the Learning Membership, you can deepen or repeat the content of this Learning Event as well as continue your education on other interesting topics.

### COURSE OBJECTIVES

**By the end of this course, participants will be able to:**

- This course provides you with an overview of the interaction among the various software packages such as NX, MCD, TIA Portal, PLCSIM Advanced and SIMIT.
- The objective of the course is to achieve greater efficiency in the design, automation and commissioning of machines. Through an overview of the tool landscape, you will learn to better understand and evaluate the resulting possibilities and types of simulation.
- This is achieved by:

- New possibilities for the interaction of design and automation, from serial processes to parallel work. Automation can already begin and be tested during the design phase. The interaction of design and automation allows initial tests and virtual commissioning in the office without the need for a real machine or PLC.

## COURSE OUTLINE

### Module 1: Content

- Introduction of concepts for virtual commissioning
- Complete software-in-the-loop approach
- Working with PLCSIM Advanced and TIA Portal
- Introduction to Siemens PLM Software NX and MCD
- Creating drawings in the NX CAD system
- Creating and positioning machine elements in the NX CAD system
- Preliminary planning of the program flow in NX MCD
- Connection of NX / MCD models to PLCSIM Advanced (with TIA Portal)
- Automating using the virtual machine model
- Virtual commissioning of custom machines
- Expansion and modification of the virtual machine
- Introduction of process simulation with SIMIT