

Siemens Automation Cooperates with Education (SCE) | 02/2026

# SCE Course Contents

## Machining Step Programming with GRAPH in the TIA Portal

TIA Portal course

2 days

### Prerequisites

- Basic knowledge of Windows PC
- Basic course SIMATIC S7 with TIA Portal

### SCE Learn-/Training Documents

- GRAPH and SIMATIC S7 module: 052-100

### Contents

- Possible representations of sequencers; GRAFCET
- GRAPH programming software as a component of TIA Portal
- Creating a project with hardware configuration and symbol table in STEP 7
- Elements of a sequencer in GRAPH (step / transition / branch / jump / etc.)
- Creating and compiling a sequencer with GRAPH
- Downloading a machining step program to PLC and testing it
- Monitoring the sequencer in GRAPH and other diagnostic functions

- Sequence control with GRAPH
- Synchronizing the sequencer with the process
- Machining step programming with constraints
- Input/output parameters of the GRAPH function blocks
- Interlock functions in GRAPH (Interlock)
- Supervision functions in GRAPH (Supervision)

*Note: This training course can only be conducted with SIMATIC S7-300 or S7-1500*

**Note:**

These Learn-/Training Documents are available in the SCE Internet: [siemens.com/sce/module](https://www.siemens.com/sce/module)

This program serves as the reference and guideline for the course, in which we place great value on practical exercises and application examples.

We will of course be pleased to cover any individual suggestions, requests and questions from participants during the event.

Additional SCE courses are available in the SCE Internet: [siemens.com/sce/courses](https://www.siemens.com/sce/courses)

***Increase your automation technology expertise and inspire your students.***

