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# Advanced automation and digitalization



## What you will learn

Get an overview of all the control units and the electric installation. Learn how to use your plant automation and your control system efficiently - applying and improving the automation knowledge for higher availability and reduction of down-time in your production plant.

One part will be theoretical training. In the other part you will spend time at our fully operational school mill, where you will learn in practical situations, to operate the plant control and experience fault finding situations. You also have access to the latest milling machines and automation systems for a close-up look at how they work.

## Required skill level

Basic knowledge of electrical installation, PC and PLC, basic process technology knowledge.

## Price

CHF 2'200.00 per person / 1 week

## What is included

- Invitation letter for visa application
- Hands-on access to some of the latest milling machines and automation systems
- Practical experience at our fully operational school mill with its variety of all different control units
- Printed training documents
- One social event with dinner and knowledge transfer
- Unlimited access to Wi-Fi and Internet

# Advanced automation and digitalization

## Detailed program



### New ways of learning

Following this new trends there are also new ways of learning. Therefore, we provide the traditional paper documentation for our course participants but also the digital version of the training documents. For the use of this digital course documentation, the participants should bring their own device (BYO) for the training at the Milling Academy. We recommend to bring your personal type of laptop (Windows, Mac) or tablet (IOS, Android) with WLAN accessibility to be used during the training. Bring our own equipment and experience the new way of learning.

#### Monday

##### Welcome at the Milling Academy

- Formalities and administrative matters
- Bühler factory visit, including research centers

##### Control units and systems

- Standard control units, scales, moisture control systems
- Overview on measuring and control systems in the milling process

##### Automation overview, decentral IO's, installation technology

- Overview of Bühler automation (systems and installations)
- Decentral peripheries (WAGO IO-system)
- Installation technologies (ASi – Bus system)

#### Tuesday

##### Service and maintenance

- Products and options in service and maintenance

##### PLC systems

- System overview and concepts with S7 – 400 and TIA – 1500
- Hardware configuration with decentral bus systems (Profibus, ProfiNet, ASi, etc.), Scales

##### Social event in the evening

#### Wednesday

##### PLC systems

- System components, handling, functions
- Troubleshooting in hardware and plc software

##### WinCos

- Plant control system overview, concepts and solutions
- Plant operating, production planning
- Options and additional functionality on control systems
- System installation and maintenance
- Backup strategy, remote support/operating
- Energy saving in modern milling plants

#### Thursday

##### WinCos / Mercury plant control systems

- Event logger, alarm management, troubleshoot Intro
- Test and analysis functions

##### Troubleshooting in school mill

- Documentation
- Troubleshooting practicals in a real milling plant
- Tricks and traps in fault finding

##### Visit to a flour mill

#### Friday

##### New digital solutions in the process industry

- Bühler Insights (IoT platform) for digital services, IT security
- Introduction into Mercury MES
- TVM (temperature and vibration management) and other digital services
- Journey to SmartMill
- Smart platform for maintenance and spare parts
- Automation services

##### Maintenance overview

### Working hours

08.00 – 09.30 / 10.00 – 12.00  
13.15 – 15.00 / 15.15 – 17.00

We reserve the right to adjust the schedule for organizational reasons.

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