

# Training Classes with Hands-on Experience

## Process Automation Wastewater treatment

### The Application Training Center

Your competent partner for application training in process automation.

The ATC provides

- Training with extensive hands-on experience
- Training under real process conditions
- Learning in small groups
- A didactical proven concept

Our training under real process conditions guarantees sustainable training success.

### Location

The Application Training Center is located in Reinach, Switzerland.

Profit from a 'hands on experience' with training courses from the Application Training Center.



Hands on lessons under real process conditions are the base for the best learning result

Automation and instrumentation concepts to optimize municipal wastewater treatment.

**Course content** Wastewater treatment has historically focused on cleaning performance, i.e. the elimination of the so-called nutrition parameters (N, P). However, today topics such as energy efficiency, amount of additives used and process stability have gained importance. Only by use of state-of-the-art measurement and control techniques can all the different aspects be optimized at the same time. For this Endress+Hauser has developed a training package (hardware and teachware) that allows to analyze the efficiency of a wastewater treatment plant (WWTP) under different operating conditions and with different automation strategies.

**Key benefits** Participants will run two fully functional micro wastewater treatment plants. While simulating different real operating conditions, they will learn which adapted automation concepts are appropriate. At the end of the course participants will understand the set-up and function of the different steps in a municipal WWTP. They will be able to select the correct field instruments and know how to mount and use them to achieve optimal operating conditions.

**Focus topics** Introduction into the different modules of a WWTP with discussion about the measuring points. Optimization of process conditions under certain aspects like high hydraulic load or high carbon load and the related energy consumption for aeration.



On two training rigs process conditions like high carbon load and high hydraulic load can be investigated

**Target groups** Plant operators and builders who want to achieve a comprehensive understanding of instrumentation and advanced control loop design in municipal wastewater treatment.

**Working methods** A combination of presentations and workshops, hands-on training in small groups (max. 4)

Minimum participants for a course: 4

**Language** English

**Time and location**

1. Day from 09:00am to 05:30pm
2. Day from 08:30am to 05:00pm
3. Day from 08:30am to 01:00pm

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