



# Grain processing for ethanol industry

## What you will learn

You will learn how to make a starch mill efficient - about basic milling processes, machine design and plant operation, and learn about ethanol equipment and process technology.

You will also become aware of how the principles of milling are applied in the ethanol industry and come to understand finished products and how they are used. But this isn't just theoretical training. You will spend an entire day at our fully operational school mill to learn cleaning, conditioning and milling techniques. You also have access to some of the latest milling machines for a close-up look at how they work.

## Required skill level

Moderate milling experience. This course is well-suited for machine operators, technicians and maintenance personnel.



## Next course dates and more information

Scan the QR code or go to [buhlergroup.com/academy](https://buhlergroup.com/academy)

## Price

CHF 1'900.00 per person / 1 week

→ [Courses and costs 2021](#)

## What is included

- Invitation letter for visa application
- Hands-on access to some of the latest milling machines
- One day of practical experience at our fully operational school mill
- Printed training documents
- One social event with dinner
- Unlimited access to Wi-Fi and Internet

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## Detailed program



### Monday

#### Welcome at the Milling Academy

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

#### S1: Cereal varieties

- Composition and quality grading of grain and grain trading

#### S2: Categories of grain processing plants

- Flour mill/starch mill/corn mill/feed mill

### Tuesday

#### S3: Preparation and cleaning of grain for milling

- Removal of contamination. Function of cleaning machines

#### P1: Practicals: cleaning / conditioning of wheat for milling

#### S4: Hammer mill and roller mill technology

- Horizontal and vertical constructed hammer mills
- Granulation spectrum analysis of roller mill and hammer mill

#### S5: Milling machines I

- Design and function roller mill

#### Social event in the evening

### Wednesday

#### S6: Milling machines II

- Design and function of plansifter and bran finisher

#### P2: Practicals: Flour mill operation

- Running of the school mill – granulation evaluation

#### S7: Milling concepts for the ethanol industry

- Selective milling, corn fractionation, hybrid plants (1st & 2nd generation)

### Thursday

#### S8: DDGS-processing

- Pellet presses
- Cooling and handling
- Storage and outload

#### Visit: Swissmill in Zurich

### Friday

#### S9: Value added products

- LEURON® (extracted Aleurone cells from bran)

#### S10: Second generation

- Biomass pre-treatment
- Hybrid plants

#### Q&A session and certification

#### 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.

