

# Milling for executives at KSU, USA



# What you will learn

You will learn how to make a mill efficient. Understand the underlying principles of the flour milling process, machine design and plant operation. But this isn't just theoretical training. You will spend two days in the fully operational Hal Ross Flour Mill at the university's Department of Grain Science and Industry. There you will learn cleaning, conditioning and milling techniques. You have access to some of the latest milling machines for a close-up look at how they work. You will also learn to judge whether a milling operation is running well, covering everything from intake to the finished product.

# Required skill level

No working experience in a flour mill. This course is well-suited for mill managers and mill owners who are new to milling.

# Price

IAOM members USD 1,900 / 1 week Non-members USD 2,100 / 1 week

# What is included

- Invitation letter for visa application
- Hands-on access to some of the latest milling machines
- Two days of practical experience at the fully operational Hal Ross Flour Mill of Kansas State University's Department of Grain Science and Industry
- Printed training documents
- One social event with dinner each course week
- Unlimited access to Wi-Fi and internet

# Milling for executives at KSU, USA Detailed program, part 1



#### Monday

Tuesday

# Reception at IGP Executive Conference Center

- Explanation of administrative matters, formalities
- Introductions
- Short introduction of Buhler group

# Cereal varieties and their application for food (Info only)

#### Wheat

- Composition of the wheat kernel and its structure
- Details about wheat classes
- Quality control
- · Storage conditions of wheat

#### Silo/storage

- · Function of traditional pre-cleaning machines & conveying elements
- New developments

#### Cleaning section

Design and function of cleaning section machines

#### Practical: Hal Ross Mill

- Mill tour
- Combi-cleaner
- Indented cylinder
- Sortex

#### Mycotoxin reduction

- Eminent danger and solutions to mycotoxin content in wheat
- Sortex, peeling

#### Conditioning

- Tempering of wheat with ideal moistures and tempering times
- Tempering philosophies

#### Milling machines I

- Design and function of roller mills
- Design and function of sifters
- Design and function of purifier, bran finisher, detachers

# Dinner with the group

#### Wednesday

#### Practical in the Hal Ross mill:

- · Demo of roller mills, sifters, purifier, detacher and bran finisher
- Cleaning and conditioning of wheat for Thursday's milling

#### Basic mill flow sheet technology

- Basic principles for understanding a mill flow sheet
- · Granulation and quality
- Design of hard wheat vs. soft wheat flow sheets
- Application of double-high roller mill in flow sheets

#### Food safety

- Most important aspects in food safety today and tomorrow
- · The role of the consumer
- The role and the responsibilities of the industry

### Optimal sanitation in flour mills

# 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.

# Milling for executives at KSU, USA Detailed program, part 2



# Thursday

# Practical: Milling

- · Adjustments of break rolls with break release
- Adjustment of purifier P1
- Adjustment of reduction rolls
- Collecting and evaluating samples

#### Performance evaluation of a flour mill

- KPI of a flour mill
- Various mill yields
- Mill performance from a financial perspective
- A different view of through put

#### Investment decision

- Most important factors to consider for taking informed decisions
- Design to minimize power consumption

#### Dinner with the group

#### Friday

### Finished product handling

#### Flour quality

Most important quality parameters of flour

Lunch at IGP

# Working hours

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