



2024 Brewing & Malting Science Course

Course Director: Rob McCaig

All times are in US central time

Virtual Learning

September 5 – October 24

Live discussion sessions on Thursdays

Thursday, September 5

Course Kickoff & Student Orientation (13:00 – 14:00 US Central Time)

Week 1 (September 6- 12)

Life Sciences for Brewers

Jon Roll, University of Wisconsin, Department of Bacteriology

Malting Barley: Origins, Production, and Quality

Ashley McFarland, American Malting Barley Association

Workplace Health and Safety

Gary Nicholas, Nicholas Brewing Projects

September 12: Live Thursday (US Central Time)

13:00 -16:00

Small Group Discussion with Subject Matter Experts

16:00 – 17:00

HAPPY HOUR

Week 2 (September 13-19)

Brewing Microbiology

Bill Maca, HWM Yeast Solutions LLC

Brewery Water and Adjustment

Joe Walts, Karbon4 Brewing

Plant automation Principles and automation for Craft

Dominik Schneider, ProLeit Corp

September 19: Live Thursday (US Central Time)

13:00 -16:00

Small Group Discussion with Subject Matter Experts

16:00 – 17:00

HAPPY HOUR

Week 3 (September 20 - 26)

Principles of Brewery Cleaning, Sanitizing, and CIP

Dirk Loeffler, SEKA Chemicals, LLC

Design and Operations Considerations for CIP

Dirk Loeffler, SEKA Chemicals, LLC

CO2 Recovery and Use

Travis Audet, Slant Six Consulting



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September 26: Live Thursday (US Central Time)

12:30-13:00 Intro to Group Projects
13:00 -16:00 Small Group Discussion with Subject Matter Experts
16:00 – 17:00 HAPPY HOUR

Break week (Sept 27 – Oct 3)

Week 4 (October 4 – 10)

Barrel Ageing of Beer

Troy Casey, Casey Brewing

Specialty Beers Design

Andy Farrell, Bell's Brewery

QC/QA

Frances Tietje-Wang, Fermly

October 10: Live Thursday (US Central Time)

12:30-13:00 Group Projects Work Time
13:00 -16:00 Small Group Discussion with Subject Matter Experts
16:00 – 17:00 HAPPY HOUR

Week 5 (October 11- 17)

Brewery Effluent Management

Jeff VanVoorhis, MeadHunt

Cellar Operations and Beer Filtration

Tom Eplett, JT Eplett Brewing Technology LLC

Sour Beer Production

Marcio Buffolo, Mountain West Hard Cider

October 17: Live Thursday (US Central Time)

12:30-13:00 Group Projects Work Time
13:00 -16:00 Small Group Discussion with Subject Matter Experts
16:00 – 17:00 HAPPY HOUR



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Week 6 (October 18- 24)

Physical and Flavor Stability of Beer

Tom Eplett, JT Eplett Brewing Technology LLC

Nature of Brewing Yeast

Matt Linske, Creature Comforts Brewing

Hop Production

Ryan Gregory, Hopsteiner

October 24: Live Thursday (US Central Time)

12:30-13:00 Group Projects Work Time

13:00 -16:00 Small Group Discussion with Subject Matter Experts

16:00 – 17:00 HAPPY HOUR

Break Week (Oct 25 - Nov 1)

Project work time, catch-up on missing work

In-Person Learning

University of St. Thomas, Minneapolis, MN

November 4 Visit to Rahr Malthouse

Malting

Malt Analysis

Malthouse/Technical Centre Tour

November 5 **Brewing Part 1** – *Steve Presley*

Wort Aeration, Yeast Pitching, and Fermentation - *Jeff Biegert, New Belgium*

November 6 **Brewing Part 2** – *Steve Presley*

Speciality Malt – *Dan Bies, Briess*

Sensory – *Janelle Harmon*

November 7 **Brewing Adjuncts**- *Scott Helstad, Cargill*

Trends in Brewing & Non-Beer products– *Frances Tietje-Wang, Fermly*

Tour: Surly Brewing

November 8 **Hops, Hop Products Dry Hopping** – *Mike Sutton, Hopsteiner*

Group Project Presentations