

Brewing and Malting Science Course

Master Brewers Association of the Americas

November 2–November 13, 2014

Sunday, November 2, 2014

Lowell Center

Registration Desk

6:15 p.m.

7:00 p.m.

After Dinner

Students Check In and Pick Up Badges and Information (All Day)

Welcome Reception – **Room 118**

Dinner – **Lowell Center Dining Hall**

Course Introduction and Lowell Center Information

Lynn Fleming, Lowell Center Assistant Manager

Jon T. Roll, University of Wisconsin, Department of Bacteriology

Monday, November 3, 2014

Pyle Center Room 235

8:00 – 8:30 a.m.

8:30 – 10:00 a.m.

10:15 a.m. – 12:00 p.m.

12:00 – 1:00 p.m.

1:00 – 3:00 p.m.

3:15 – 5:00 p.m.

Team Assignments, Case Studies, and Student Introductions

MBAA Technical Director

Life Sciences for Brewers

Jon Roll, University of Wisconsin, Department of Bacteriology

Malting Barley: Origins, Production, and Quality

Scott Heisel, American Malting Barley Association

Lunch – **Pyle Center Dining Hall**

Malting and Malt Plant Operations

Joseph Hertrich, Anheuser-Busch (retired)

Malt Analysis and Specifications

Joseph Hertrich, Anheuser-Busch (retired)

Tuesday, November 4, 2014

Pyle Center Room 235

8:00 – 9:15 a.m.

9:30 – 10:45 a.m.

10:50 a.m. – 12:00 p.m.

12:00 – 1:00 p.m.

1:00 – 1:15 p.m.

1:15 – 1:50 p.m.

2:00 – 3:30 p.m.

3:30 – 4:15 p.m.

4:30 – 5:15 p.m.

Brewing Adjuncts

Scott Helstad, Cargill Sweeteners North America

Enzymes in Brewing

David Maradyn, Novozymes

Specialty Malts—Manufacturing and Use

David Kuske, Briess Malt & Ingredients

Lunch – **Pyle Center Dining Hall**

Load onto Bus at Pyle Center

Bus Trip to Waterloo, WI for Malthouse Tour

Tour of Briess Waterloo Malthouse

Q&A and Refreshments at the Briess Malthouse

Board Bus and Return to Lowell Center

Wednesday, November 5, 2014

Pyle Center Room 235

8:00 a.m. – 12:00 p.m.

12:00 – 1:00 p.m.

1:00 – 2:30 p.m.

2:45 – 4:15 p.m.

4:15 – 5:00 p.m.

Hop Production: Harvest, Processing, and Pelleting

Val Peacock, Hop Solutions Inc.

Lunch – **Pyle Center Dining Hall**

Modified Hop Products and Downstream Uses

Tim Kostelecky, John I. Hass

Dry Hop Practices

Jim Mellem, Sierra Nevada Brewing Company

Hop Discussion Panel

Thursday, November 6, 2014

Pyle Center Room 235

8:00 – 10:30 a.m.

10:45 a.m. – 12:00 p.m.

12:00 – 1:00 p.m.

1:00 p.m. – 5:00 p.m.

Brewery Water and Adjustment

Jim Mellem, Sierra Nevada Brewing Company

Brewery Effluent Management

Jeff Van Voorhis, Symbiont

Lunch – **Pyle Center Dining Hall**

Plant Engineering, Utilities, and Process Control

John Mallett, Bell's Brewery

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Friday, November 7, 2014

Pyle Center Room 235

8:00 – 10:15 a.m. Brewing Grain: Transport, Receiving, Storage, and Pest Control
Steve Presley, Anheuser-Busch (Retired)

10:30 a.m. – 12:00 p.m. From Grain to Wort: Milling
Steve Presley, Anheuser-Busch (Retired)

12:00 – 1:00 p.m. Lunch – **Pyle Center Dining Hall**

1:00 – 2:45 p.m. From Grain to Wort: Mashing
Steve Presley, Anheuser-Busch (Retired)

3:00 – 5:00 p.m. From Grain to Wort: Separation
Matthias Weinzierl, Kronen, AG

Saturday, November 8, 2014

Pyle Center Room 235

9:30 a.m. – 12:00 p.m. From Grain to Wort: Wort Boiling, Whirlpool, and Cooling/Aeration
Matthias Weinzierl, Kronen, AG

2:00 p.m. Optional: Tour of the UW-Madison Brewing Laboratory
Meet at Lowell Center Lobby at 1:30 p.m.

Sunday, November 9, 2014

Free Day

All Day No Classes Scheduled

Monday, November 10, 2014

Pyle Center Room 235

8:00 – 10:00 a.m. Brewing Microbiology
Michael Barney, Miller Brewing Co. (Retired)

10:15 a.m. – 12:00 p.m. Nature of Brewing Yeasts
Michael Barney, Miller Brewing Co. (Retired)

12:00 – 1:00 p.m. Lunch – **Pyle Center Dining Hall**

1:00 – 5:00 p.m. Principles of Brewery Cleaning, Sanitizing, and CIP
Joe Dirksen, Ecolab

Tuesday, November 11, 2014

Pyle Center Room 235

8:00 – 10:00 a.m. Wort Aeration, Yeast Pitching, and Fermentation
Jeff Biegert, New Belgium Brewing Company

10:15 a.m. – 12:00 p.m. Cellar Operations and Beer Filtration
Shannon Ambrosio, MillerCoors

12:00 – 1:00 p.m. Lunch – **Pyle Center Dining Hall**

1:00 – 2:30 p.m. Alternative Fermentations and Barrel Aging
Steven Pauwels, Boulevard Brewing Company

2:30 – 2:45 p.m. Load onto Bus at Pyle Center

2:45 – 3:45 p.m. Bus Trip to New Glarus, WI

4:00 – 5:30 p.m. Tour of New Glarus Brewing Company

5:45 – 6:45 p.m. Dinner at the New Glarus Hotel (tentative)

7:00 – 8:00 p.m. Board Bus and Return to the Lowell Center

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Wednesday, November 12, 2014 Pyle Center Room 235

8:00 – 10:00 a.m. Brewery Calculations
Jim Helmke, Yuengling Brewery

10:15 a.m. – 12:00 p.m. Formulating Specialty Beers
Randy Thiel, New Glarus Brewing Company

12:00 – 1:00 p.m. Lunch – **Pyle Center Dining Hall** – CLASS PHOTO!

1:00 – 2:45 p.m. Physical and Flavor Stability of Beer
Alastair Pringle, Pringle-Scott Consulting

3:00 – 5:00 p.m. Beer Quality: Process Control and Quality Management
Jim Helmke, Yuengling Brewery

Thursday, November 13, 2014 Pyle Center Room 235

8:00 a.m. – 12:00 p.m. Student Team Presentations
Team 1, Team 2, Team 3, Team 4, Team 5, and Team 6
Case Study Review Panel
Jim Helmke, TBD

12:00 – 1:00 p.m. Lunch – **Pyle Center Dining Hall**

1:00 – 2:15 p.m. Basic Sensory Evaluation
Instructor TBD

2:15 – 2:45 p.m. Break – **UPS Service at Pyle Center**

2:45– 5:00 p.m. Beer Flavor Training
Instructor TBD

6:30 – 7:00 p.m. Reception and Dinner – **Pyle Center Alumni Lounge**

7:00 p.m. Closing Remarks and Awarding of Certificates
Jon T. Roll, University of Wisconsin

After Dinner

Friday, November 14, 2014

6:30 – 9:00 a.m. Breakfast – Check Out Before 11:00 a.m.

9:00 – 11:00 a.m. IBD General Certificate (Brewing) Examination – **Pyle Center
Computer Room TBA**
Examination Room Invigilator

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