

World Brewing Academy
**Programs and
Courses**

**2021
2022**



Doemens 



World Brewing Academy: Focus and History

In 2001, the Siebel Institute of Technology, Chicago, U.S.A., in cooperation with Doemens Academy of Munich, Germany, created the World Brewing Academy (WBA). This strategic alliance was designed to meet the growing demands of the international brewing community and provide a unique international educational experience for students.

The core of the WBA approach is an intensive combination of theory and practice. Starting at the Siebel Institute of Technology campus in Chicago, U.S.A., students obtain the necessary theoretical base knowledge which will allow them to better understand the brewing process. Students in the International Diploma in Brewing Technology or the Master Brewer then travel to the Doemens campus in Munich, where they deepen their knowledge through practical "hands-on" applications. This unique approach, supported by experienced brewmasters on both campuses, allows students the opportunity to experience different brewing cultures on two continents.

WBA education is also offered in a combination of online and on campus delivery, which we call the 'blended learning' approach. Following this approach, the theoretical - and first portion - of a program is conducted online (web-based), while the second and final portion is the campus-based phase taking place at Doemens Academy in Munich, Germany. This blended approach combines the best of both worlds; the flexibility to study at your own pace from your home, along with the hands-on/real-life educational experience that only a bricks and mortar campus setting can provide. For more information please visit our website www.worldbrewingacademy.com

Siebel Institute of Technology

Throughout the last 146 years, the Siebel Institute has attracted an extensive global following. Our alumni span more than 60 countries, and graduates are found in nearly every major brewery around the world. Our classes include a mix of participants from breweries of all sizes from here and abroad. This vast and diverse base of participants enhances the learning opportunity of each student by exposing them to differences in culture, equipment, methodology and beer styles. In our formal lectures and demonstrations though, we focus their attention on one common theme: beer.

Siebel continues to focus on one basic theme, as was published by Dr. J. E. Siebel in a Western Brewer ad from 1893. He stated, "The object of the institute is to promote the progress of the industries based on fermentation, which is done by instruction, investigation, analysis and otherwise."

Dr. John Ewald Siebel founded the Zymotechnic Institute in 1868, and opened John E. Siebel's Chemical Laboratory which soon developed into a research station and school for the brewing sciences. In 1872, as the company moved into new facilities on Belden Avenue on Chicago's North side, the name was changed to the Siebel Institute of Technology. During the next two decades, Dr. Siebel conducted extensive brewing research and wrote more than 200 scientific articles and books. He was also the editor of a number of technical publications, including the scientific section of The Western Brewer.

Beginning in 2000, a number of changes occurred. After many years of ownership, the Siebel family sold their name-sake business to Montréal, Canada-based Lallemand, Inc., a company specializing in the development, production, and marketing of yeast and bacteria.

In 2020, the Siebel Institute of Technology moved to its current location at 900 N. North Branch Street. The institute incorporated many of the previous locations elements, including the Bier Stube bar and furnishings. The Stube remains a favorite spot where students and instructors socialize after a full day of study.

Doemens Academy

In 1895, Dr. Albert Doemens wrote in the register of the newly founded First Munich Brewing Academy: "An understanding should be ingrained in the students that practical knowledge, observation and a sharpening of the senses form the essential foundation for a successful career as a brewer." With this vision, Dr. Albert Doemens laid the groundwork for what Doemens has become, a leading light of the international brewing, beverage and food industries.

Milestones in Recent Decades

- 1965 Establishment of the Doemens School non-profit organization
- 1980 Commissioning of the 5 hl pilot brewery and packaging plant for education and research
- 1982 The first training program for Beverage Industry Process Managers
- 1989 The first training program for Food Industry Process Managers
- 1992 Federal accreditation as a technical academy
- 1993 The first training program for Beverage Industry Commercial Managers
- 2000 Founding of the World Brewing Academy in cooperation with the Siebel Institute of Chicago, U.S.A.
- 2003 Start of the Internet distance learning program (web-based training in brewing technology)
- 2004 The first Beer Sommelier training program
- 2009 Commissioning of the pilot equipment for filling PET bottles and dispensing beverages
- 2012 Founding of the Food and Beverage Development Center

Since 1965, more than 2000 graduates have received an education from Doemens and are now employed in positions of responsibility in the brewing and beverage industry in more than 80 countries around the world.

General Information

For information regarding educational offerings, please email John Hannafan, Vice President and Director of Education, Siebel Institute of Technology, and WBA Director of Education, at jhannafan@siebelinstitute.com , or Michael Zepf, Managing Director WBA, Doemens Academy, at zepf@doemens.org.

For any other issues (i.e. enrollment, payments and tuition, course availability, school visits and student visas) please contact Lupe Zepeda, Office Manager and Registrar, Siebel Institute of Technology, at lzepeda@siebelinstitute.com

Siebel Institute of Technology Office Hours:

Monday-Friday

9:00 AM- 5:00 PM Central Standard Time (CST)

Siebel Institute of Technology Classroom Hours:

Monday-Friday

8:30 AM- 4:30 PM Central Standard Time (CST)

Doemens Academy Office Hours:

Monday-Friday

8:00 AM to 4:00 PM Central European Time (CET)

Doemens Academy Classroom Hours:

Monday-Friday

7:30 AM to 4:15 PM Central European Time (CET)

Advanced Level Studies

Campus

World Brewing Academy

Advanced Brewing Theory Program

Program Length: [6-weeks \(30-days\)](#)

Clock Hours: 210

Campus: [Chicago, U.S.A.](#)

Graded: [Yes](#)

Document(s) [Certificate of Completion and Transcript of Grades](#)

Course Number: [W11](#)

Objectives

The WBA Advanced Brewing Theory Program (ABT) gives students a complete understanding of the technical issues in professional brewing, whether craft or industrial. Our course materials address critical topics in brewing technology, giving students the knowledge, they need to improve their products, processes and profits.

Description

The WBA ABT Program consists of 3 modules. Students may take any of these 2-week campus version modules as a separate unit, electing to complete the program at a later date.

WBA Raw Materials and Wort Production Module (Module 1)

WBA Raw Materials and Wort Production Module provides training in the technology and science of wort creation. Each critical factor in wort production, from barley growth to wort boiling and cooling, is explained in detail. Students will complete this 2-week module with a complete understanding of the effects of products and processes on this area of the brewing cycle.

WBA Beer Production and Quality Control Module (Module 2)

WBA Beer Production and Quality Control Module provides the technical theory from the completion of wort cooling and boiling to the evaluation of packaged beer. This module offers in-depth instruction in fermentation and maturation, including all aspects of yeast handling and performance. This module also includes instruction in the process of quality control and assurance, ensuring that students understand the critical role that QA/QC plays in retaining the consistency and longevity of beer and other malt-based fermented products.

WBA Packaging and Process Technology Module (Module 3)

Our WBA Packaging and Process Technology Module deals with processing and packaging of finished beer, as well as important engineering and "physical properties" issues. The packaging information includes the most recent developments in alternative materials (such as plastic bottles) and super-high-speed bottling systems. Engineering and process instruction includes topics such as properties of metals and other materials, fluid and pump dynamics, and other areas critical to improving brewery performance.

Admission Requirements

All students applying for a program, module or course must be at least twenty-one (21) years of age. The WBA ABT program requires students to have a specific knowledge of brewing technologies and/or related sciences in order to be approved to enroll. This can be satisfied by:

- (a) Successfully passing the WBA Concise Course in Brewing Technology OR
- (b) Successfully passing the online Assessment

Tuition Fees and Charges

Application Processing Fee (non-refundable): \$1,000.00

Regular Tuition: \$9,700.00

Total: \$10,700.00

The tuition applies only to the 6-week continuous program.

Module-by-Module over time option: Those wishing to take the WBA ABT Program on a module-by-module basis over 1+ years are required to pay the individual tuition rates for each module. For assistance in calculating tuition costs, please contact the Registrar.

Individual module tuition fee and charges

Application Processing Fee (non-refundable): \$550.00

Regular Tuition: \$3,252.00

Total: \$3,875.00

Other expenses

Living Expenses: \$115.00 (hotel per day average)

Meals, City transportation, misc.: \$50.00 (per day average)

How to apply

Visit siebelinstitute.com

World Brewing Academy

Raw Materials and Wort Production Module (Module 1)

Module Length: [2-weeks \(10-days\)](#)

Clock Hours: 70

Campus: [Chicago, U.S.A.](#)

Graded: [Yes](#)

Document: [Transcript of Grades](#)

Course Number: [W21](#)

Module Objectives

Raw Materials and Wort Production provides training in the technology and science of wort creation. Each critical factor in wort production, from barley growth to wort boiling and cooling, is explained in detail. Students will complete this two-week module with a complete understanding of the effects of products and processes on this area of the brewing cycle.

Topics include

- Barley Structure and Morphology
- Barley Biochemical Changes
- Evaluation for Malting
- Malting Processes
- Barley Specifications
- Specialty Malts
- Adjuncts and Cereal Cookers
- Hops History, Varieties, Aroma Evaluation
- Hops: Botany, Cultivation, Types and Forms
- Hops: Chemistry and Analysis, Storage and Stability
- Hops: Character and Advanced Products
- Hops: Craft Brewers Perspective
- Brewing Water Composition
- Water Adjustments
- Malt Handling and Milling
- Mashing
- Enzymes
- Techniques and Wort Composition
- Wort Separation (Lauter Tun and Mash Filters)
- Boiling
- Hop Addition "Hot Side"
- Clarification
- Cooling
- Aeration
- Brewing Calculations and Mixing Formula
- Lab Analysis
- Cleaning and Sanitizing
- Effluents

Admission Requirements

All students applying for a campus-based program, module or course must be at least twenty-one (21) years of age. The WBA Raw Materials and Wort Production Module requires students to have a specific knowledge of brewing technologies and/or related sciences in order to be approved to enroll. This can be satisfied by

- (a) Successfully passing the WBA Concise Course in Brewing Technology OR
 (b) Successfully passing the online Assessment

Individual module tuition fee and charges

Application Processing Fee (non-refundable): \$550.00

Regular Tuition: \$3,252.00

Total: \$3,875.00

Other expenses

Living Expenses: \$115.00 (hotel per day average)

Meals, City transportation, misc.: \$50.00 (per day average)

How to apply

Visit siebelinstitute.com

World Brewing Academy

Beer Production and Quality Control

Module (Module 2)

Module Length: 2-weeks (10-days)

Clock Hours: 70

Campus: Chicago, U.S.A.

Graded: Yes

Document: [Transcript of Grades](#)

Course Number: W22

Module Objectives

WBA Beer Production and Quality Control provides training in technologies from the completion of wort cooling and boiling to the evaluation of packaged beer. This module offers in-depth instruction in fermentation and maturation, including all aspects of yeast handling and performance. This module also includes instruction in the process of quality control and assurance, ensuring that students understand the critical role that QA/QC plays in retaining the consistency and longevity of beer and other malt-based fermented products.

Topics Include

- Yeast Morphology
- Yeast Characteristics for Brewing
- Yeast Nutrition
- Yeast Metabolism
- Yeast Culture and Propagation
- Yeast Physical Behavior
- Dry Yeast Production
- Fermentation Operations
- Alternative Fermentation Techniques
- Flavor Compounds
- Quality Measurement
- Management (handling practices)
- Hop Addition "cold side"
- Maturation and Storage Principles
- Alternative Aging and Storage Techniques
- Centrifuges
- Processing Aids
- Filtration – Theory and Mechanisms
- Filtration- Filters and Operations
- Sterile Filtration
- Carbonation
- Introduction to Brewing Microbiology
- Beer Spoilage Potential and Brewery Contaminants
- Detection and Identification of Contaminants
- Application of Genetic Tests in Breweries
- Oxygen Control
- Colloidal Stability
- Flavor Stability
- Color
- Foam

- Gushing
- Comprehensive QA/QC Program
- Interpretation of Beer Analysis
- Brewery CIP
- Sensory Evaluation
- Types of Taste Panels

Admission Requirements

All students applying for a campus-based program, module or course must be at least twenty-one (21) years of age. The WBA Beer Production and Quality Control Module requires students to have a specific knowledge of brewing technologies and/or related sciences in order to be approved to enroll. This can be satisfied by

- (a) Successfully passing the WBA Concise Course in Brewing Technology OR
- (b) Successfully passing the online Assessment

Individual module tuition fee and charges

Application Processing Fee (non-refundable): \$550.00

Regular Tuition: \$3,252.00

Total: \$3,875.00

Other expenses

Living Expenses: \$115.00 (hotel per day average)

Meals, City transportation, misc.: \$50.00 (per day average)

How to apply

Visit siebelinstitute.com

World Brewing Academy Packaging and Process Technology Module (Module 3)

Module Length: 2-weeks (10-days)

Clock Hours: 70

Campus: [Chicago, U.S.A.](#)

Graded: [Yes](#)

Document: [Transcript of Grades](#)

Course Number: [W23](#)

Module Objectives

Our WBA Packaging and Process Technology Module deals with processing and packaging of finished beer, as well as important engineering and "physical properties" issues. The packaging information includes the most recent developments in alternative materials (such as plastic bottles) and super-high-speed bottling systems. Engineering and process instruction includes topics such as properties of metals and other materials, fluid and pump dynamics, and other areas critical to improving brewery performance.

Topics include

- Packaging Overview
- Packaging Materials
- Packaging Line Design and Flow
- Glass Bottles and PET Technology
- Bottle Washing
- Bottle Filling/Crowning
- Principles of Canning/Seaming
- Pasteurization
- Kegging Technology (single valve keg)
- Labelling Technology
- Bottle Conditioning
- Principles of Maintenance Effectiveness
- Brewery Design
- Fluid Flow Fundamentals
- Gases in the Brewery
- Valves in the Brewery
- Pumps in a Brewery (and Troubleshooting)
- Steam Fundamentals
- Principles of Heat Transfer
- Glycol Fundamentals
- Principles of Refrigeration
- Materials of Construction
- Basic Energy Calculations
- Process Control and Automation
- CO₂ Collection Systems
- Compressed Air Systems
- Statistics
- Process Troubleshooting
- Hygienic Design
- Introduction to PID
- Liquid Processing

Admission Requirements

All students applying for a campus-based program, module or course must be at least twenty-one (21) years of age. The WBA Packaging and Process Control Module requires students to have a specific knowledge of brewing technologies and/or related sciences in order to be approved to enroll. This can be satisfied by

- (a) Successfully passing the WBA Concise Course in Brewing Technology OR
- (b) Successfully passing the online Assessment

Individual module tuition fee and charges

Application Processing Fee (non-refundable): \$550.00

Regular Tuition: \$3,252.00

Total: \$3,875.00

Other expenses

Living Expenses: \$115.00 (hotel per day average)

Meals, City transportation, misc.: \$50.00 (per day average)

How to apply

Visit siebelinstitute.com

World Brewing Academy Business of Brewing and Technical Case Studies Module (Module 4)

Module Length: 1-week (5-days)

Clock Hours: 35

Campus: [Munich, GR 2021](#) | [Chicago, U.S.A. 2022](#)

Graded: [Pass/Fail](#)

Document: [Transcript of Grades](#)

Course Number: [W24](#)

Module Objectives

The primary purpose of this 1-week module is to expose students to the challenges of running breweries similar in scale to that of their respective employers. Students will learn the importance of planning and budgeting, both areas where they may currently or soon will contribute. They will also learn the importance of anticipating competitive, regulatory and supply challenges, and their impact on the planning and budgeting processes as well as the overall health of the brewery.

The Technical Case Studies portion is designed to emulate the dynamics found in commercial breweries. Students become part of small work groups where they are assigned case studies based on actual problematic situations. On the final day, each group will give a presentation resolving the given case study to both a panel of professionals and to their fellow classmates.

Admission Requirements

All students applying for a campus-based program, module or course must be at least twenty-one (21) years of age. The WBA Business of Brewing and Technical Case Studies Module requires students to have completed modules 1-3 previously.

Individual module tuition fee and charges

Application Processing Fee (non-refundable): \$550.00

Regular Tuition: \$3,252.00

Total: \$3,875.00

Other expenses

Living Expenses: \$115.00 (hotel per day average)

Meals, City transportation, misc.: \$50.00 (per day average)

How to apply

Visit siebelinstitute.com

World Brewing Academy Applied Brewing Techniques Module (Module 5)

Module Length: 3-weeks (15-days)

Clock Hours: 105

Campus: [Munich, GR](#).

Graded: [Yes](#)

Document: [Transcript of Grades](#)

Course Number: [W25](#)

Module Objectives

The 3-week Applied Brewing Techniques module allows students to experience hands-on commercial brewing techniques in the brewing facilities of Doemens Academy in Munich. In this information-packed module, students will perform practical operations in brewing, maturation, packaging, and laboratory environments. Extensive instruction in brewing microbiology is included in this module. Students will also be trained in both traditional and current brewing techniques, giving them a truly international perspective of beer production.

Admission Requirements

All students applying for a campus-based program, module or course must be at least twenty-one (21) years of age. The WBA Applied Brewing Techniques Module requires students to have a specific knowledge of brewing technologies and/or related sciences in order to be approved to enroll. This can be satisfied by

- (a) Successfully passing the WBA Concise Course in Brewing Technology OR
- (b) Successfully passing the online Assessment

Individual module tuition fee and charges

Application Processing Fee (non-refundable): \$1,000.00

Regular Tuition: \$5,350.00

Total: \$6,350.00

Other expenses

Living Expenses: \$115.00 (hotel per day average)

Meals, City transportation, misc.: \$50.00 (per day average)

How to apply

Visit siebelinstitute.com

World Brewing Academy European Brewing Study Tour Module (Module 6)

Module Length: 2-weeks (10-days)

Clock Hours: 70

Campus: Munich, GR.

Graded: Pass/Fail

Document: [Transcript of Grades](#)

Course Number: W26

Module Objectives

Over the span of two weeks, students will travel throughout Europe to get behind-the-scenes tours of breweries, equipment manufacturers, and product suppliers. English-language instructional sessions will be conducted throughout this program by our World Brewing Academy instructional team, preparing students to get the most out of their visits. .

Admission Requirements

All students applying for a campus-based program, module or course must be at least twenty-one (21) years of age. The WBA European Brewing Study Tour requires students to have a specific knowledge of brewing technologies and/or related sciences in order to be approved to enroll. This can be satisfied by

- (a) Successfully passing the WBA Concise Course in Brewing Technology OR
- (b) Successfully passing the online Assessment

Individual module tuition fee and charges

Application Processing Fee (non-refundable): \$550.00

Regular Tuition: \$3,325.00

Total: \$3,875.00

Other expenses

Hotel Costs will be provided to students minimally 4-weeks before the tour begins, and to be paid 3-weeks before the start of the tour.

Meals, City transportation, misc.: \$50.00 (per day average)

How to apply

Visit siebelinstitute.com

World Brewing Academy Advanced Applied Brewing Techniques Module (Module 7)

Module Length: 8-weeks (40-days)

Clock Hours: 280

Campus: Munich, GR.

Graded: Yes

Document: [Transcript of Grades](#)

Course Number: W45

Module Objectives

The WBA Advanced Applied Brewing Techniques module is designed to give students advanced level practical skills in every key area of commercial brewing operations. Created by the faculty of Doemens Academy and Siebel Institute, this module takes students through over 300 hours of hands-on activities in the production and lab facilities of Doemens Academy in Munich. This module will give students the practical skills they need to work effectively in breweries of practically any size or configuration, and it will provide complete understanding of the activities involved in each department of the typical commercial brewery.

Admission Requirements

All students applying for a campus-based program, module or course must be at least twenty-one (21) years of age. The WBA Advanced Applied Brewing Techniques Module requires students to have previously completed and passed modules 1-6.

Individual module tuition fee and charges

Application Processing Fee (non-refundable): \$2,500.00

Regular Tuition: \$12,870.00

Total: \$15,370.00

Other expenses

Living Expenses: \$115.00 (hotel per day average)

Meals, City transportation, misc.: \$50.00 (per day average)

How to apply

Visit siebelinstitute.com

World Brewing Academy International Diploma in Brewing Technology Program

Program Length: 12-weeks (60-days)

Clock Hours: 420

Campus: Chicago, U.S.A. and Munich, GR

Graded: Yes

Documents: Certificate of Completion and Transcript of Grades

Course Number: W10

Program Objectives

The twin-campus WBA International Diploma in Brewing Technology program will prepare graduates to advance their careers through practical application of brewing. This 12-week program is comprised of segments, divided into 1-to-3-week modules, with each module specializing in a particular area of brewing technology. The content will address issues in brewing from an international perspective, providing a depth of unique to Siebel.

Program Description

The WBA International Diploma in Brewing Technology Program consists of six modules. Students may take any of these modules as a separate unit, electing to complete the program at a later date.

WBA Raw Materials and Wort Production Module (Module 1) (Siebel Campus, Chicago, U.S.A.)

WBA Raw Materials and Wort Production Module provides training in the technology and science of wort creation. Each critical factor in wort production, from barley growth to wort boiling and cooling, is explained in detail. Students will complete this 2-week module with a complete understanding of the effects of products and processes on this area of the brewing cycle.

WBA Beer Production and Quality Control Module (Module 2) (Siebel Campus, Chicago, U.S.A.)

WBA Beer Production and Quality Control Module provides the technical theory from the completion of wort cooling and boiling to the evaluation of packaged beer. This module offers in-depth instruction in fermentation and maturation, including all aspects of yeast handling and performance. This module also includes instruction in the process of quality control and assurance, ensuring that students understand the critical role that QA/QC plays in retaining the consistency and longevity of beer and other malt-based fermented products.

WBA Packaging and Process Technology Module (Module 3) (Siebel Campus, Chicago, U.S.A.)

Our WBA Packaging and Process Technology Module deals with processing and packaging of finished beer, as well as important engineering and "physical properties" issues. The packaging information includes the most recent developments in alternative materials (such as plastic bottles) and super-high-speed bottling systems. Engineering and process instruction includes topics such as properties of metals and other materials, fluid and pump dynamics, and other areas critical to improving brewery performance.

WBA Business of Brewing and Technical Case Studies Module (Module 4) (Doemens Campus, Munich in 2021, Siebel Campus, Chicago in 2022)

The primary purpose of this 1-week module is to expose students to the challenges of running packaging breweries. Students will learn the importance of planning and budgeting, both areas where they may currently, or soon, contribute. They will also learn the importance of anticipating competitive, regulatory and supply challenges, and their impact on the planning and budgeting processes, as well as the overall health of the brewery.

The Technical Case Studies portion is designed to emulate the dynamics found in commercial breweries. Students become part of small work groups and assigned case studies based on actual problematic situations. On the final day, each group will give a presentation resolving the given case study to both a panel of professionals and to their fellow classmates.

WBA Applied Brewing Techniques Module (Module 5) (Doemens Campus, Munich, GR)

The 3-week WBA Applied Brewing Techniques Module allows students to experience hands-on commercial brewing techniques in the brewing facilities of Doemens Academy in Munich. In this information-packed module, students will perform practical operations in brewing, maturation, packaging, and laboratory environments. Extensive instruction in brewing microbiology is included in this module. Students will also be trained in both traditional and state-of-the-art brewing techniques, giving them a truly international perspective of beer production.

WBA European Brewing Study Tour Module (Module 6) (Doemens Campus, Munich, GR)

Over the span of two weeks, students will travel throughout Europe to get behind-the-scenes tours of breweries, equipment manufacturers, and product suppliers. English-language instructional sessions will be conducted throughout this program by our World Brewing Academy instructional team, preparing students to get the most out of their visits.

Admission Requirements

All students applying for a program, module or course must be at least twenty-one (21) years of age. The WBA International Diploma in Brewing Technology program requires students to have a specific knowledge of brewing technologies and/or related sciences in order to be approved to enroll. This can be satisfied by:

- (a) Successfully passing the WBA Concise Course in Brewing Technology OR
- (b) Successfully passing the online Assessment

Tuition Fees and Charges

Application Processing Fee (non-refundable): \$2,500.00

Regular Tuition: \$15,500.00

Total: \$18,000.00

The tuition applies only to the 12-week continuous program.

Blended-learning option: Those wishing to take the WBA International Diploma in Brewing Technology Program as “blended-learning,” taking Modules 1-3 online (the WBA Advanced Brewing Theory program), then 4-6 in Munich, Germany, should contact the Registrar for assistance on the registration steps.

Module-by-module over time option: Those wishing to take the International Diploma in Brewing Technology Program on a module-by-module basis over 1+ years are required to pay the individual tuition rates for each module. Please see our website at <http://www.siebelinstitute.com> for individual module tuition fees and charges. For assistance in calculating tuition costs, please contact the Registrar.

Students taking the full, continuous 12-week program receive round-trip airfare (Chicago O’Hare International Airport, Chicago, U.S.A., to Munich Franz Joseph Strauss International Airport and back to Chicago) within the cost of tuition. Room and board is the responsibility of the students in both Chicago and Munich.

Other expenses

Living Expenses: \$115.00 (hotel per day average)

Meals, City transportation, misc.: \$ 50.00 (per day average)

How to apply

Visit siebelinstitute.com

World Brewing Academy Master Brewer Program

Level: [Advanced](#)

Program Length: [20-weeks \(100-days\)](#)

Clock Hours: [700](#)

Campus: [Chicago, U.S.A. and Munich, Germany](#)

Documents: [Certificate of Completion and Transcript of Grades](#)

Course Number: [W40](#)

Program Objectives

The twin-campus WBA Master Brewer program will prepare graduates to advance their careers through practical application of brewing. Advanced theory and an extensive advanced practical applications module will provide graduates with the knowledge and experience to be capable of qualifying for employment in the position as a head brewer. This 20-week program is comprised of segments, divided into modules, with each module specializing in a particular area of brewing technology. The content will address issues in brewing from an international perspective, providing students with education and experience not offered by any other brewing school.

Program Description

The WBA Master Brewer Program consists of seven modules. Students may take any of these modules as a separate unit, electing to complete the program at a later date.

WBA Raw Materials and Wort Production Module (Module 1) (*Siebel Campus, Chicago, U.S.A.*)

WBA Raw Materials and Wort Production Module provides training in the technology and science of wort creation. Each critical factor in wort production, from barley growth to wort boiling and cooling, is explained in detail. Students will complete this 2-week module with a complete understanding of the effects of products and processes on this area of the brewing cycle.

WBA Beer Production and Quality Control Module (Module 2) (*Siebel Campus, Chicago, U.S.A.*)

WBA Beer Production and Quality Control Module provides the technical theory from the completion of wort cooling and boiling to the evaluation of packaged beer. This module offers in-depth instruction in fermentation and maturation, including all aspects of yeast handling and performance. This module also includes instruction in the process of quality control and assurance, ensuring that students understand the critical role that QA/QC plays in retaining the consistency and longevity of beer and other malt-based fermented products.

WBA Packaging and Process Technology Module (Module 3) (*Siebel Campus, Chicago, U.S.A.*)

Our WBA Packaging and Process Technology Module deals with processing and packaging of finished beer, as well as important engineering and “physical properties” issues. The packaging information includes the most re-cent developments in alternative materials (such as plastic bottles) and super-high-speed bottling systems. Engineering and process instruction includes topics such as properties of metals and other materials, fluid and pump dynamics, and other areas critical to improving brewery performance.

WBA Business of Brewing and Technical Case Studies Module (Module 4) (*Doemens Campus, Munich in 2021, Siebel Campus, Chicago in 2022*)

The primary purpose of this 1-week module is to expose students to the challenges of running breweries similar in scale to that of their respective employers. Students will learn the importance of planning and budgeting, both areas where they may currently, or soon, contribute. They will also learn the importance of anticipating competitive, regulatory and supply challenges, and their impact on the planning and budgeting processes as well as the overall health of the brewery.

The Technical Case Studies portion is designed to emulate the dynamics found in commercial breweries. Students become part of small work groups where they are assigned case studies based on actual problematic situations. On the final day, each group will give a presentation resolving the given case study to both a panel of professionals and to their fellow classmates.

WBA Applied Brewing Techniques Module (Module 5) (*Doemens Campus, Munich, GR*)

The 3-week WBA Applied Brewing Techniques Module allows students to experience hands-on commercial brewing techniques in the brewing facilities of Doemens Academy in Munich. In this information-packed module, students will perform practical

operations in brewing, maturation, packaging, and laboratory environments. Extensive instruction in brewing microbiology is included in this module. Students will also be trained in both traditional and current brewing techniques, giving them a truly international perspective of beer production.

WBA European Brewing Study Tour Module (Module 6)

(Doemens Campus, Munich, GR)

Over the span of two weeks, students will travel throughout Europe to get behind-the-scenes tours of breweries, equipment manufacturers, and product suppliers. English-language instructional sessions will be conducted throughout this program by our World Brewing Academy instructional team, preparing students to get the most out of their visits.

WBA Advanced Applied Brewing Techniques Module (Module 7)

(Doemens Campus, Munich, GR)

The WBA Advanced Applied Brewing Techniques Module is designed to give students advanced level practical skills in every key area of commercial brewing operations. Created by the faculty of Doemens Academy and Siebel Institute, this module takes students through over 300 hours of hands-on activities in the production and lab facilities of Doemens Academy in Munich. This module will give students the practical skills they need to work effectively in breweries of practically any size or configuration, and it will provide complete understanding of the activities involved in each department of the typical commercial brewery.

Admission Requirements

All students applying for a campus-based program, module or course must be at least twenty-one (21) years of age. The WBA Master Brewer Program requires students to have a specific knowledge of brewing technologies and/or related sciences in order to be approved to enroll. This can be satisfied by

- (a) Successfully passing the WBA Concise Course in Brewing Technology OR
- (b) Successfully passing the online Assessment

Tuition Fees and Charges

Application Processing Fee (non-refundable): \$2,500.00

Regular Tuition: \$25,480.00

Total: \$27,980.00

The tuition applies only to the 20-week continuous program.

Blended-learning option: Those wishing to take the WBA Master Brewer Program as "blended-learning," taking Modules 1-3 online (the WBA Advanced Brewing Theory program), then 4-7 in Munich, Germany, should contact the Registrar for assistance on the registration steps.

Module-by-Module over time option: Those wishing to take the WBA Master Brewer Program on a module-by-module basis over 1+ years are required to pay the individual tuition rates for each module. Please see our website at <http://www.siebelinstitute.com> for individual module tuition fees and charges. For assistance in calculating tuition costs, please contact the Registrar.

Students taking the full, continuous 20-week program receive round-trip airfare (Chicago O'Hare International Airport, Chicago, U.S.A., to Munich Franz Joseph Strauss International Airport and back to Chicago) within the cost of tuition. Room and board is the responsibility of the students in both Chicago and Munich.

Other expenses

Living Expenses: \$115.00 (hotel per day average)

Meals, City transportation, misc.: \$50.00 (per day average)

How to apply

Visit siebelinstitute.com

Intermediate Level Studies Campus

World Brewing Academy

Concise Course in Brewing Technology

Course Length: 2-weeks (10-days)

Clock Hours: 70

Campus: [Chicago, U.S.A.](#)

Graded: [Yes](#)

Documents: [Certificate of Completion and Transcript of Grades](#)

Course Number: [W30](#)

Course Objectives

The 2-week WBA Concise Course in Brewing Technology will provide students with comprehensive knowledge of the brewing process, the dynamics of brewery operations, and issues affecting the industry. Within the short time span of this course, students will gain a level of industry knowledge that will benefit them in any area of responsibility in the brewery, covering every topic critical to successful brewery operations, no matter of what size.

Course Description

The WBA Concise Course in Brewing Technology covers a similar range of topics to those presented in our advanced-level programs but at a depth that allows those with only moderate understanding of brewing science and technology to participate in the course. This is an ideal course for those considering entry into the brewing industry, as well as those pursuing wider knowledge of the business in order to improve their skills and advance in their brewing careers. The course also offers the best way to prepare for our advanced-level programs should you decide to take them at a later date.

Topics include

- Brewing Process Overview
- Basic Brewing Chemistry
- Brewing Water Basics

- Brewing Water Adjustments
- Introduction to Hops
- Introduction to Sensory
- Barley and Malting
- Malt Analysis
- Specialty Malts
- Adjuncts
- Milling
- Mashing
- Wort Separation
- Wort Boiling
- Wort Clarification/Cooling and Aeration
- Recipe Formulation
- Brewing Calculations/Mixing Formula
- Nature of Yeast
- Yeast Growth and Propagation
- Yeast Management
- Fermentation, Maturation, and High Gravity Brewing
- Fermentation Flavors
- Principals of Beer Filtration (Introduction to Centrifugation)
- Kegging and Dispense
- Keg Cleaning and Filling
- Brewery Hazards
- Introduction to Sensory Evaluation
- Brewery Contaminants
- Cleaning and Sanitizing
- Beer Stability (Colloidal, Foam and Flavor)
- Valve Applications
- Introduction to Pumps
- Packaging Processes

Admission Requirements

All students applying for a program, module or course must be at least twenty-one (21) years of age.

Prior knowledge of brewing process basics through either home brewing (1-year) OR having previously completed the WBA Executive Overview of the Brewing Process is required.

Tuition Fees and Charges

Application Processing Fee (non-refundable): \$550.00

Regular Tuition: \$3,325.00

Total: \$3,875.00

Other expenses

Living Expenses: \$115.00 (hotel per day average)

Meals, City transportation, misc.: \$50.00 (per day average)

How to apply

Visit siebelinstitute.com

Intermediate Level Studies Online

Our Online Web-based Training (WBT) system uses internet-based technologies to create an effective learning platform that works to ensure maximum student comprehension of educational content.

With standard distance learning programs, a student's progress is intermittently monitored by support staff. Our web-based program allows student online activity to be actively monitored by tutors, allowing them to directly consult with the student as required. If a student is having difficulty understanding a brewing concept, tutors work with the student to help them gain full comprehension of the topic. It is called a "learner-centered approach" as it focuses on each learner developing a full understanding of the educational materials.

Great Content and Support for More Than 18 years!

Our WBA web-based content was created by the instructional staff of Siebel Institute in Chicago, U.S.A., and Doemens Academy in Munich, Germany.

Our web-based training utilizes a mix of textual instructions, streaming video presentations narrated by some of the best instructors in brewing, and synchronous chat sessions between students and mentors. Navigation is easy and intuitive, allowing you to track the lessons you have completed and move readily backwards and forwards through reference materials. We offer complete technical support for our learning platform to make sure your web-based experience runs problem-free. Technical requirements are simple: a basic computer with internet access featuring a current web browser such as Explorer or Firefox.

Bringing the Education to You

Our web-based training saves you the cost and time of travel away from home while bringing you the same quality of education offered in our campus-based programs and courses. Students participating in our web-based programs and courses should expect to spend several hours per week both in study and in round-table sessions with fellow students and instructors

New Offering!

World Brewing Academy Fundamentals of Brewing Technology Course

Course Length: 5-weeks [Online Access](#) (beginning immediately upon payment)

Clock Hours: 29

Graded: No

Document(s): [Certificate of Accomplishment](#)

Course Number: [WT3](#)

Course Objectives

The online WBA Fundamentals of Brewing Technology Course will provide students with the primary foundations of the brewing process at an intermediate level. Within a very short timeframe, students will gain a level of brewing knowledge that will benefit them immediately.

Course Description

The online WBA Fundamentals of Brewing Technology course is a newly created offering, targeting only the core topics from our more thorough WBA Concise Course in Brewing Technology. The subject matter was carefully selected based on what is considered to be essential brewing knowledge, important to both professional and experienced homebrewers alike. The concept was born out of an increasing demand for a shorter intermediate-level educational offering for those with very limited time and finances. Also of importance is if in the future a student would like to take the full WBA Concise Course in Brewing Technology, the tuition paid for the WBA Fundamentals of Brewing Technology will be applied towards a tuition reduction for the WBA Concise Course in Brewing Technology, taken either online or campus.

Topics include

- Brewing Process Overview
- Basic Brewing Chemistry
- Brewing Water
- Introduction to Hops
- Barley - Malting
- Specialty Malts
- Milling
- Mashing
- Wort Separation
- Wort Boiling
- Wort Clarification/Cooling and Aeration
- Nature of Yeast
- Yeast Growth and Propagation
- Yeast Management
- Fermentation, Maturation, and High Gravity Brewing
- Fermentation Flavors
- Filtration and Centrifugation
- Beer Stability
- Brewery Contaminants

Admission Requirements

All students applying for this web-based course must be of legal drinking age in the country residing in. Prior knowledge of brewing process basics through either home brewing (1-year) OR having previously completed the WBA Executive Overview of the Brewing Process is recommended.

Tuition Fees and Charges

Regular Tuition: \$1,496.00

Total: \$1496.00

How to apply

Visit siebelinstitute.com

World Brewing Academy Concise Course in Brewing Technology

Course Length: 3-months [Online Access](#)

Clock Hours: 70

Graded: Yes

Document(s) [Certificate of Completion and Transcript of Grades](#)

Course Number: [WT1](#)

Course Objectives

The Web-based WBA Concise Course in Brewing Technology will provide students with comprehensive knowledge of the brewing process, the dynamics of brewery operations, and issues affecting the industry. Within the span of this course, students will gain a level of industry knowledge that will benefit them in any area of responsibility in the brewery, covering every topic critical to successful brewery operations, no matter of what size.

Course Description

Extensive use of electronic media and instructor-mediated discussion allows students to understand the most advanced topics, no matter their level of previous technical experience. The Web-based WBA Concise Course in Brewing Technology covers a similar range of topics to those presented in our advanced-level programs but at a depth that allows those with only moderate understanding of brewing science and technology to participate in the course. This is an ideal course for those considering entry into the brewing industry, as well as those pursuing wider knowledge of the business in order to improve their skills and advance in their brewing careers, and also offers the best way to pre-prepare for our advanced-level programs should you decide to take them at a later date.

Throughout the duration of this course, students are supervised by the instructional staff of the World Brewing Academy, and actively monitored throughout the program. Students can also access instructors via email and chat sessions throughout the duration of the module. The average time spent studying is normally 7-10 hours per week but depends on the individual as well.

Topics include

- Brewing Process Overview
- Basic Brewing Chemistry
- Brewing Water Basics
- Brewing Water Adjustments
- Introduction to Hops
- Introduction to Sensory
- Barley and Malting
- Malt Analysis
- Specialty Malts
- Adjuncts
- Milling
- Mashing
- Wort Separation
- Wort Boiling
- Wort Clarification/Cooling and Aeration
- Recipe Formulation
- Brewing Calculations/Mixing Formula
- Nature of Yeast
- Yeast Growth and Propagation
- Yeast Management
- Fermentation, Maturation, and High Gravity Brewing
- Fermentation Flavors
- Principals of Beer Filtration (Introduction to Centrifugation)
- Kegging and Dispense
- Keg Cleaning and Filling
- Brewery Hazards
- Introduction to Sensory Evaluation
- Brewery Contaminants
- Cleaning and Sanitizing
- Beer Stability (Colloidal, Foam and Flavor)
- Valve Applications
- Introduction to Pumps
- Packaging Processes

Admission Requirements

All students applying for an online program, module or course must have proof to be of legal drinking age in their country of residence in order to be approved and admitted by submitting a copy of their passport, residence permit or driver's license.

Prior knowledge of brewing process basics through either home brewing (1 year) OR having previously earned a Certificate of Attendance for the WBA Executive Overview of the Brewing Process (online) is required. Student performance for the latter is subject to review.

Tuition Fees and Charges

Application Processing Fee (non-refundable): \$550.00

Regular Tuition: \$3,252.00

Total: \$3,875.00

How to apply

Visit siebelinstitute.com

Advanced Level Studies Online

World Brewing Academy Advanced Brewing Theory Program

Program Length: [9-months online access](#)

Clock Hours: 210

Graded: [Yes](#)

Documents: [Certificate of Completion and Transcript of Grades](#)

Course Number: [WT2](#)

Program Objectives

To give students a complete understanding of the technical issues in professional brewing, whether craft or industrial, without having to travel. Our course materials address critical topics in brewing technology, giving students the knowledge needed to improve their products, processes and profits.

Program Description

The Web-based WBA Advanced Brewing Theory (ABT) Program consists of 3 modules. Students may take any of these 3-month modules as a separate unit, electing to complete the program at a later date.

Throughout the duration of this intensive program, students are supervised by the instructional staff of the World Brewing Academy, drawing on the talents of some of the most knowledgeable scientists, technologists and brewmasters in the industry. Student progress is actively monitored throughout the program, and students can access instructors via email and chat sessions throughout the duration of the module. The average time spent studying is normally 7-10 hours per week but depends on the individual as well.

WBA Raw Materials and Wort Production Module (Module 1)

(3 months of online access)

Raw Materials and Wort Production provides training in the technology and science of wort creation. Each critical factor in wort production, from barley growth to wort boiling and cooling, is explained in detail. Students will complete this two-week module with a complete understanding of the effects of products and processes on this area of the brewing cycle.

WBA Beer Production and Quality Control Module (Module 2)

(3 months of online access)

Beer Production and Quality Control picks up from the Raw Materials and Wort Production module to provide training in technologies from the completion of wort cooling and boiling to the evaluation of packaged beer. This module offers in-depth instruction in fermentation and maturation, including all aspects of yeast handling and performance. This module also includes instruction in the process of quality control and assurance, ensuring that students understand the critical role that QA/QC plays in retaining the

consistency and longevity of beer and other malt-based fermented products.

WBA Packaging and Process Technology Module (Module 3)
(3 months of online access)

The Packaging and Process Technology module deals with processing and packaging of finished beer, as well as important engineering and “physical properties” issues. The packaging information includes the most re-cent developments in alternative materials (such as plastic bottles) and super-high-speed bottling systems. Engineering and process instruction includes topics such as properties of metals and other materials, fluid and pump dynamics, and other areas critical to improving brewery performance.

Admission Requirements

All students applying for an online program, module or course must have proof to be of legal drinking age in their country of residence in order to be approved and admitted by submitting a copy of their passport, residence permit or drivers license.

The Web-based WBA ABT program and modules requires students to have a specific knowledge of brewing technologies and/or related sciences in order to be approved to enroll. This can be satisfied by:

- (a) Successfully passing the WBA Concise Course in Brewing Technology OR
- (b) Successfully passing the online assessment

Tuition Fees and Charges

Application Processing Fee (non-refundable): \$1,000.00

Regular Tuition: \$9,700.00

Total: \$10,700.00

For assistance in calculating tuition costs, please contact the registrar.

How to apply

Visit siebelinstitute.com

World Brewing Academy

Raw Materials and Wort Production Module (Module 1)

Module Length: 3-months online access

Clock Hours: 70

Graded: Yes

Document: [Transcript of Grades](#)

Course Number: WT5

Module Objectives

WBA Raw Materials and Wort Production Module provides training in the technology and science of wort creation. Each critical factor in wort production, from barley growth to wort boiling and cooling, is explained in detail. Students will complete this two-week module with a complete under-standing of the effects of products and processes on this area of the brewing cycle.

Topics include

- Barley Structure and Morphology
- Barley Biochemical Changes
- Evaluation for Malting
- Malting Processes
- Barley Specifications
- Specialty Malts
- Adjuncts and Cereal Cookers
- Hops History, Varieties, Aroma Evaluation
- Hops: Botany, Cultivation, Types and Forms
- Hops: Chemistry and Analysis, Storage and Stability
- Hops: Character and Advanced Products
- Hops: Craft Brewers Perspective
- Brewing Water Composition
- Water Adjustments
- Malt Handling and Milling
- Mashing
- Enzymes
- Techniques and Wort Composition
- Wort Separation (Lauter Tun and Mash Filters)
- Boiling
- Hop Addition “Hot Side”
- Clarification
- Cooling
- Aeration
- Brewing Calculations and Mixing Formula
- Lab Analysis
- Cleaning and Sanitizing
- Effluents
- Sensory Introduction

Admission Requirements

All students applying for an online program, module or course must have proof to be of legal drinking age in their country of residence in

order to be approved and admitted by submitting a copy of their passport, residence permit or drivers license.

The Web-based WBA ABT program and modules require students to have a specific knowledge of brewing technologies and/or related sciences in order to be approved to enroll. This can be satisfied by:

- (a) Successfully passing the WBA Concise Course in Brewing Technology OR
- (b) Successfully passing the online assessment

Individual module tuition fee and charges

Application Processing Fee (non-refundable): \$550.00

Regular Tuition: \$3,252.00

Total: \$3,875.00

Other expenses

Living Expenses: \$115.00 (hotel per day average)

Meals, City transportation, misc.: \$50.00 (per day average)

How to apply

Visit siebelinstitute.com

World Brewing Academy Beer Production and Quality Control Module (Module 2)

Module Length: 3-months online access

Clock Hours: 70

Graded: Yes

Document: [Transcript of Grades](#)

Course Number: WT6

Module Objectives

WBA Beer Production and Quality Control Module provides the technical theory from the completion of wort cooling and boiling to the evaluation of packaged beer. This module offers in-depth instruction in fermentation and maturation, including all aspects of yeast handling and performance. This module also includes instruction in the process of quality control and assurance, ensuring that students understand the critical role that QA/QC plays in retaining the consistency and longevity of beer and other malt-based fermented products.

Topics Include

- Yeast Morphology
- Yeast Characteristics for Brewing
- Yeast Nutrition
- Yeast Metabolism
- Yeast Culture and Propagation
- Yeast Physical Behavior
- Dry Yeast Production
- Fermentation Operations

- Alternative Fermentation Techniques
- Flavor Compounds
- Quality Measurement
- Management (handling practices)
- Hop Addition "cold side"
- Maturation and Storage Principles
- Alternative Aging and Storage Techniques
- Centrifuges
- Processing Aids
- Filtration – Theory and Mechanisms
- Filtration- Filters and Operations
- Sterile Filtration
- Carbonation
- Introduction to Brewing Microbiology
- Beer Spoilage Potential and Brewery Contaminants
- Detection and Identification of Contaminants
- Application of Genetic Tests in Breweries
- Oxygen Control
- Colloidal Stability
- Flavor Stability
- Color
- Foam
- Gushing
- Comprehensive QA/QC Program
- Interpretation of Beer Analysis
- Brewery CIP
- Sensory Evaluation
- Types of Taste Panels

Admission Requirements

All students applying for an online program, module or course must have proof to be of legal drinking age in their country of residence in order to be approved and admitted by submitting a copy of their passport, residence permit or drivers license.

The Web-based WBA ABT program and modules require students to have a specific knowledge of brewing technologies and/or related sciences in order to be approved to enroll. This can be satisfied by:

- (a) Successfully passing the WBA Concise Course in Brewing Technology OR
- (b) Successfully passing the online Assessment

Individual module tuition fee and charges

Application Processing Fee (non-refundable): \$550.00

Regular Tuition: \$3,252.00

Total: \$3,875.00

Other expenses

Living Expenses: \$115.00 (hotel per day average)

Meals, city transportation, misc.: \$50.00 (per day average)

How to apply

Visit siebelinstitute.com

World Brewing Academy

Packaging and Process Technology

Module (Module 3)

Module Length: [3-months online access](#)

Clock Hours: 70

Graded: [Yes](#)

Document: [Transcript of Grades](#)

Course Number: [WT7](#)

Module Objectives

Our WBA Packaging and Process Technology Module deals with processing and packaging of finished beer, as well as important engineering and “physical properties” issues. The packaging information includes the most recent developments in alternative materials (such as plastic bottles) and super-high-speed bottling systems. Engineering and process instruction includes topics such as properties of metals and other materials, fluid and pump dynamics, and other areas critical to improving brewery performance.

Topics include

- Packaging Overview
- Packaging Materials
- Packaging Line Design and Flow
- Glass Bottles and PET Technology
- Bottle Washing
- Bottle Filling/Crowning
- Principles of Canning/Seaming
- Pasteurization
- Kegging Technology (single valve keg)
- Labelling Technology
- Bottle Conditioning
- Principles of Maintenance Effectiveness
- Brewery Design
- Fluid Flow Fundamentals
- Gases in the Brewery
- Valves in the Brewery
- Pumps in a Brewery (and Troubleshooting)
- Steam Fundamentals
- Principles of Heat Transfer
- Glycol Fundamentals
- Principles of Refrigeration
- Materials of Construction
- Basic Energy Calculations
- Process Control and Automation
- CO₂ Collection Systems
- Compressed Air Systems
- Statistics
- Process Troubleshooting
- Hygienic Design
- Introduction to PID
- Liquid Processing

Admission Requirements

All students applying for an online program, module or course must have proof to be of legal drinking age in their country of residence in order to be approved and admitted by submitting a copy of their passport, residence permit or drivers license.

The Web-based ABT program and modules require students to have a specific knowledge of brewing technologies and/or related sciences in order to be approved to enroll. This can be satisfied by:

- (a) Successfully passing the WBA Concise Course in Brewing Technology OR
- (b) Successfully passing the online assessment

Individual module tuition fee and charges

Application Processing Fee (non-refundable): \$550.00

Regular Tuition: \$3,252.00

Total: \$3,875.00

Other expenses

Living Expenses: \$115.00 (hotel per day average)

Meals, City transportation, misc.: \$50.00 (per day average)

How to apply

Visit siebelinstitute.com

World Brewing Academy

Specialized Lectures

Lecture Lengths: [30-90 minutes \(depending on lecture\)](#)

Lecture Access Time (upon time of purchase): [10-days](#)

Graded: [No](#)

Document: [None](#)

These online lectures cover a multitude of specific topics pertaining to all processes of beer production, from raw materials and wort production to QA/QC, brewery engineering and packaging. The uniqueness of the WBA Specialized Lectures make them perfect for those looking to increase their knowledge in a particular area of the process without the need to travel or to enroll in more involved program or course. Business owners will also benefit from the flexibility these fully narrated online lectures offer by providing education to their workforce which can now be tailored to their exact needs. Furthermore, the learner has the opportunity to contact a monitor during the access period to answer questions related to the lecture being taken.

** Denotes coming lectures (please refer to website for when available)*

Structure and Morphology of Barley*

Biochemical Changes in Barley*

Barley Evaluation for Malting*

Malting Processes (Germination, Steeping, Kilning)*

Malt Specifications*

Adjuncts – Alternative Fermentables
 Cereal Cooker*
 Introduction to Hops
 History, Varieties, Aroma Evaluation of Hops*
 Hops: Types and Forms
 Chemistry and Analysis, Storage and Stability of Hops*
 Character and Advanced Products of Hops*
 Hops: Craft Brewers Perspective
 Specialty Malts*
 Brewing Water Composition*
 Brewing Water Adjustments*
 Brewery Hazards
 Milling
 Enzymes (mashing)*
 Mashing Techniques and Wort Composition*
 Wort Separation – Lautering
 Mash Filters
 Wort Boiling
 Wort Clarification*
 Wort Cooling*
 Wort Aeration*
 Hop Addition: “Hot Side”
 Brewing Calculations: Mixing Formula
 Recipe Formulation
 Brewery Waste: Liquid and Solid Effluents
 Brewhouse Cleaning and Sanitation
 Brewhouse Lab Analysis*
 Yeast Morphology
 Yeast Characteristics for Brewing
 Yeast Nutrition
 Yeast Metabolism
 Yeast Culture and Propagation
 Yeast Physical Behavior
 Yeast Derived Flavor Compounds*
 Fermentation Operations
 Hop Addition: “Cold Side”*
 Alternative Fermentation Techniques
 Yeast Quality Measurement
 Yeast Management – Handling Practices
 Dry Yeast Production
 Maturation – Storage Principles
 Alternative Aging and Storage Techniques
 Processing Aids and Cellar Additions
 Beer Filtration: Theory and Mechanisms
 Beer Filtration: Filters and Operations
 Centrifuges
 Sterile Filtration*
 Carbonation
 Introduction to Brewing Microbiology
 Beer Spoilage Potential and Brewery Contaminants
 Detection and Identification of Brewery Contaminants
 Brewery CIP
 Oxygen Control
 Colloidal Stability
 Flavor Stability
 Beer Chemical Analysis

Interpretation of Beer Analysis
 Comprehensive QA/QC Program
 Beer Foam
 Color*
 Gushing*
 Types of Taste Panels*
 Cleaning and Sanitizing
 Application of Genetic Tests in the Brewery
 Packaging Overview*
 Draught Dispense
 Cask Conditioning*
 Principles of Canning
 Packaging Materials*
 Glass Bottle and PET Technology*
 Packaging Line Design and Flow*
 Maintenance Principles
 Empty Bottles and Crates Inspection*
 Bottle Washing*
 Bottle Filling/Crowning*
 Single Valve Kegs
 Labeling Technology*
 Pasteurization*
 Brewery Design
 Fluid Flow Fundamentals
 Gases in a Brewery
 Valves in a Brewery
 Pumps in a Brewery (and Pump Troubleshooting Exercise)
 Steam Fundamentals
 Principles of Heat Transfer (and Basic Energy Calculations)
 Glycol Cooling Fundamentals
 Liquid Processing*
 Principles of Refrigeration*
 Compressed Air Systems*
 Materials of Construction
 Hygienic Design*
 Introduction to PID*
 Process Control and Automation
 Co2 Collection Systems
 Statistics
 Process Troubleshooting

Admission Requirements

All students applying for an online lecture must be of legal drinking age in their country of residence.

The WBA Specialized Lectures are at an advanced level, and students should have a specific knowledge of brewing technologies and/or related sciences in order to comprehend the information.

Tuition Fees and Charges

Lecture pricing is determinant upon the length of the individual lecture. Please see our website for pricing of each individual lecture.

How to apply

Visit siebelinstitute.com

Entry Level Studies Online

World Brewing Academy Executive Overview of the Brewing Process Course

Course Length: 3-weeks [Online Access](#)

Graded: [No](#)

Document: [Certificate of Attendance](#)

Course Number: [WT4](#)

Course Description

Brewing industry executives and those considering entering the industry need to know the ins-and-outs of professional brewery operations in order to make effective financial and managerial decisions. The World Brewing Academy (WBA) introduces a way to learn the basics of brewery dynamics without the need to travel.

This course allows executives, administrative staff, and brewing-industry decision makers around the globe to participate in professional-level English-language training over the Internet. Participants study as their schedule permits, and can utilize the resources of their own brewery (if applicable) for practical application of their course materials. The average time per student spent studying is 5-hours or less per week.

The WBA Executive Overview of the Brewing Process offers an extensive range of topics covering each critical area of brewing technology.

Topics include

- Brewing Process Overview
- Malting, adjuncts and other malts
- Brewing Water
- Brewer's Yeast
- Hops
- Milling
- Mashing and Wort Separation
- Wort Boiling, Whirlpool, Wort Cooling and Aeration
- Fermentation
- Maturation, Storage, Carbonation and Filtration
- Packaging, Warehousing
- Cleaning and Sanitizing
- Beer Dispense and Serving
- Biological Control
- Quality Issues
- Beer Styles

Admission Requirements

All students applying for an online program, module or course must have proof to be of legal drinking age in their country of residence in order to be approved and admitted by submitting a copy of their passport, residence permit or drivers license. For this course, prior brewing knowledge is not required.

Tuition Fees and Charges

Application Processing Fee (non-refundable): \$100.00

Regular Tuition: \$885.00

Total: \$985.00

How to apply

Visit siebelinstitute.com