

Academic Catalog 2019/2020



Table of Contents

Focus and History	3
General Information	4
Certificate Studies: Campus (World Brewing Academy)	5
WBA Concise Course in Brewing Technology	
WBA Advanced Brewing Theory Program	6
WBA International Diploma in Brewing Technology Program	8
WBA Master Brewer Program	9
Certificate Studies: Online (World Brewing Academy)	11
WBA Concise Course in Brewing Technology	11
WBA Advanced Brewing Theory Program	12
Continuing Education: Campus	15
Brewing Microbiology Course	15
Craft Distilling Operations and Technology Course	16
WBA Craft Cider Course	16
Essential Quality Control Course	17
Master of Beer Styles and Evaluation Course	17
Sensory Analysis for Flavor Production and Control Course	18
Master of Beer Styles Course	18
Sensory Panel Management Course	19
Start Your Own Brewery Course	19
Draught Master Course	20
Draught Executive Course	20
Continuing Education: Online	21
WBA Executive Overview of the Brewing Process	21
Consumer Information (Institutional Disclosure Reporting Tables)	22
Policies and Procedures	26
Disclaimer	27
Academic Calendar	28

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Siebel Institute of Technology: Focus and History

For over 140 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 who hail 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, methods and beer styles. In our formal lectures and demonstrations though, we focus their attention on one common theme: beer. Students may come to the institute with the biases of their own particular brewing environment, but they all leave in the simple and honest camaraderie of being a brewer.

We have a saying here at the Institute: "Not only do we teach our students, but we also help them to teach each other."

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 was born on September 17, 1845, near Wermelskirchen in the district of Dusseldorf, Germany. He studied physics and chemistry and earned his doctorate at the University of Berlin before moving to Chicago in 1866. In 1868, he founded John E. Siebel's Chemical Laboratory and the Zymotechnic Institute, which soon developed into a research station and school for the brewing sciences.

In 1872, the company moved into new facilities on Belden Avenue on the north side of Chicago, and the business 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.

In 1882, he started a scientific school for brewers with another progressive brewer, but the partnership was short lived. Dr. Siebel continued brewing instruction at his laboratory. The business expanded in the 1890's when two of Dr. Siebel's sons joined the company.

The company was incorporated in 1901 and conducted brewing courses in both English and German. By 1907 there were five regular courses: a six-month Brewers' Course, a two-month Post Graduate Course, a three-month Engineers Course, a two-month Maltsters' Course and a two-month Bottlers' Course. In 1910, the school's name, Siebel Institute of Technology, was formally adopted. With the approach of prohibition, the institute diversified and added courses in baking, refrigeration, engineering, milling, carbonated beverages and other related topics. On December 20, 1919, just twenty-seven days before prohibition became effective, Dr. J. E. Siebel passed away.

With the repeal of prohibition in 1933, the focus of the Institute returned to brewing under the leadership of F. P. Siebel Sr., the eldest son of Dr. J. E. Siebel. His sons, Fred and Ray, soon joined the business and worked to expand its scope. The Diploma Course in Brewing Technology was offered and all other non-brewing courses were soon eliminated.

The fourth generation, represented by Ron and Bill Siebel, joined the Institute in the 1960's. In 1974, they helped introduce the concept of shorter courses. These courses, at two-weeks or less in length, were designed to meet the specific training needs of a changing brewing industry. The longer Diploma Course in Brewing Technology has been maintained to this day, renamed the WBA International Diploma in Brewing Technology program.

Beginning in 2000, a number of changes occurred for the institute. After many years of ownership, the Siebel family sold their name-sake business to Montreal, Canada-based Lallemand, Inc., a company specializing in the development, production, and marketing of yeasts and bacteria. In 2001, the Siebel Institute of Technology of Chicago, U.S.A., in cooperation with Doemens Academy of Munich, Germany, formed and 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.

In 2013, the Siebel Institute of Technology moved to its current location at 900 N. North Branch Street in Chicago. The institute incorporated many of the previous locations elements, including the Bier Stube bar and furnishings, and the Stube remains a favorite spot where students and instructors socialize after a full day of study.

General Information

For information regarding educational offerings or course suggestions, please email John Hannafan, VP/Director of Education, at jhannafan@siebelinstitute.com.

For any other related issues (i.e.: course dates, registrations, financial payments, tuitions and deposits, course availability, cancellation, school visits and student visas) please contact Lupe Zepeda, Office Manager and Registrar, at lzepeda@siebelinstitute.com.

Office Hours:

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

Classroom Hours:

Monday-Friday

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

There are 10-minute breaks every hour between lectures, and a 1-hour lunch break each day.



Certificate Studies Campus

World Brewing Academy Concise Course in Brewing Technology

Level: Intermediate

Course Length: 2-weeks (10-days)

Clock Hours: 70

Campus: Chicago, U.S.A. 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
- Beer Styles
- Introduction to Sensory
- Barley Cultivation and Harvesting
- Malting and Malt Analysis
- Specialty Malts
- Enzymes in Brewing and Mashing
- Brewing
- Milling
- Brewing Calculations
- Adjuncts / Cereal Cooker
- Lautering and Mash Filters
- Hops
- Styles Tasting

- Recipe Formulation
- Brewery Hazards
- Nature of Yeast
- Fermentation Practices
- Yeast Growth and Fermentation
- Yeast Maintenance and Propagation
- Wort Boiling
- Wort Clarification
- Wort Cooling and Aeration
- Yeast Management
- Control of Fermentation Flavors
- Maturation and Aging
- Colloidal Stability
- Flavor Stability
- Filtration and Centrifugation
- Kegging and Dispense
- Beer Packaging
- Cleaning and Sanitizing
- Brewery CIP
- Quality Assurance and QC
- Biological Control
- Pumps and Valves

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

To apply for this course please visit our web-site at http://www.siebelinstitute.com



World Brewing Academy

Advanced Brewing Theory Program

Level: Advanced

Program Length: 6-weeks (30-days)

Clock Hours: 210 Campus: Chicago, U.S.A. Course Number: W11

Program 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.

Program Description

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

Module 1: Raw Materials and Wort Production

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 under-standing of the effects of products and processes on this area of the brewing cycle.

Topics include Barley

- Structure and Morphology
- Biochemical Changes
- Evaluation for Malting
- Malting Processes
- Specifications
- Specialty Malts
- Adjuncts and Cereal Cookers

Hops

- History, Varieties, Aroma Evaluation
- Botany, Cultivation, Types and Forms
- Chemistry and Analysis, Storage and Stability
- Character and Advanced Products
- Craft Brewers Perspective

Water

- Brewing Water Composition
- Water Adjustments

Milling

- 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

Brewhouse

- Lab Analysis
- Cleaning and Sanitizing
- Effluents
- Sensory Introduction
- Sensory Practical

Module 2: Beer Production and Quality Control

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.

Topics Include

Yeast

- Morphology
- Characteristics for Brewing
- Nutrition
- Metabolism
- Culture and Propagation
- Physical Behavior
- Dry Yeast Production
- Fermentation Operations
- Alternative Fermentation Techniques
- Flavor Compounds
- Quality Measurement
- Management (handling practices)

Beer

- 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

Quality Control

- 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
- Types of Taste Panels
- Sensory Practical Training (2)

Module 3: Packaging and Process Technology

Our 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
- Materials
- 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
- Sensory Practical Training (3)

Engineering

- 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
- C02 Collection Systems
- Compressed Air Systems
- Statistics
- Process Troubleshooting
- Hygienic Design
- Introduction to PID
- Liquid Processing

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

To apply for this course please visit our web-site at

http://www.siebelinstitute.com

World Brewing Academy

International Diploma in Brewing Technology Program

Level: Advanced

Program Length: 12-weeks (60-days)

Clock Hours: 420

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

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. Stu-dents may take any of these modules as a separate unit, electing to complete the program at a later date.

Module 1: Raw Materials and Wort Production

(Siebel Campus, Chicago, U.S.A.)

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 2-week module with a complete understanding of the effects of products and processes on this area of the brewing cycle.

Module 2: Beer Production and Quality Control

(Siebel Campus, Chicago, U.S.A.)

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.

Module 3: Packaging and Process Technology

(Siebel Campus, Chicago, U.S.A.)

Our 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.

Module 4: Business of Brewing and Technical Case Studies (Siebel Campus, Chicago, U.S.A.)

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 dynamic found in commercial breweries, students become part of small work groups where they are assigned case studies based on actual problematic situations.

Module 5: Applied Brewing Techniques

(Doemens Campus, Munich, GR)

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 state-of-the-art brewing techniques, giving them a truly international perspective of beer production.

Module 6: European Brewery Study Tour

(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 roundtrip 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

To apply for this course please visit our web-site at http://www.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

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.

Module 1: Raw Materials and Wort Production

(Siebel Campus, Chicago, U.S.A.)

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.

Module 2: Beer Production and Quality Control

(Siebel Campus, Chicago, U.S.A.)

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.

Module 3: Packaging and Process Technology

(Siebel Campus, Chicago, U.S.A.)

Our 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.

Module 4: Business of Brewing and Technical Case Studies (Siebel Campus, U.S.A.)

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 dynamic found in commercial breweries, students become part of small work groups where they are assigned case studies based on actual problematic situations.

Module 5: Applied Brewing Techniques

(Doemens Campus, Munich, GR)

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.

Module 6: European Brewery Study Tour

(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 con-ducted throughout this program by our World Brewing Academy instructional team, preparing students to get the most out of their visits.

Module 7: Advanced Applied Brewing Techniques

(Doemens Campus, Munich, GR)

The 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 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 roundtrip 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

To apply for this course please visit our web-site at http://www.siebelinstitute.com

Certificate 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 facilitators allowing them to directly consult with the student as required. If a student is having difficulty understanding an advanced brewing concept, instructors work with the student to help them gain full comprehension of the topic. It is called a "learner-centered approach" because it focuses on each learner developing a full understanding of the educational materials.

Great Content with Excellent Support

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

World Brewing Academy Concise Course in Brewing Technology

Level: Intermediate

Course Length: 3-months Online Access

Clock Hours: 70 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-pare 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
- Beer Styles
- Introduction to Sensory
- Barley Cultivation and Harvesting
- Malting and Malt Analysis
- Specialty Malts
- Enzymes in Brewing and Mashing
- Brewing
- Milling
- Brewing Calculations
- Adjuncts / Cereal Cooker
- Lautering and Mash Filters
- Hons



- Styles Tasting
- Recipe Formulation
- Brewery Hazards
- Nature of Yeast
- Fermentation Practices
- Yeast Growth and Fermentation
- Yeast Maintenance and Propagation
- Wort Boiling
- Wort Clarification
- Wort Cooling and Aeration
- Yeast Management
- Control of Fermentation Flavors
- Maturation and Aging
- Colloidal Stability
- Flavor Stability
- Filtration and Centrifugation
- Kegging and Dispense
- Beer Packaging
- Cleaning and Sanitizing
- Brewery CIP
- Quality Assurance and QC
- Biological Control
- Pumps and Valves

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

To apply for this course please visit our web-site at http://www.siebelinstitute.com

World Brewing Academy

Advanced Brewing Theory Program

Level: Advanced

Program Length: 9-months Online Access

Clock Hours: 210
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.

Module 1: Raw Materials and Wort Production

(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 under-standing of the effects of products and processes on this area of the brewing cycle.

Topics include Barley

- Structure and Morphology
- Biochemical Changes
- Evaluation for Malting
- Malting Processes
- Specifications
- Specialty Malts
- Adjuncts and Cereal Cookers

Hops

- History, Varieties, Aroma Evaluation
- Botany, Cultivation, Types and Forms
- Chemistry and Analysis, Storage and Stability



- Character and Advanced Products
- Craft Brewers Perspective

Water

- Brewing Water Composition
- Water Adjustments

Milling

- 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

Brewhouse

- Lab Analysis
- Cleaning and Sanitizing
- Effluents
- Sensory Introduction
- Sensory Practical

Module 2: Beer Production and Quality Control

(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.

Topics Include

Yeast

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

- Flavor Compounds
- Quality Measurement
- Management (handling practices)

Beer

- 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

Quality Control

- 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
- Types of Taste Panels
- Sensory Practical Training (2)

Module 3: Packaging and Process Technology

(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.

Topics include

Packaging

- Overview
- Materials
- 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
- Sensory Practical Training (3)

Engineering

- 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
- C02 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 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

To apply for this course please visit our web-site at http://www.siebelinstitute.com



Continuing Education Campus

Brewing Microbiology Course

Level: Intermediate

Course Length: 2-weeks* (9-days) Campus: Montréal, Canada Course Number: \$10

Course Description

The Siebel Institute Brewing Microbiology course is designed to provide the theoretical knowledge and practical skills required to implement an effective microbiological quality control / quality assurance program. The course will acquaint the student with the appropriate methods for biological and sanitary control within the brewery, and will promote an understanding of the essential modern-day tools for effective microbiological evaluation of process and product.

A study of the microorganisms that are likely to occur during the various stages of the brewing process will be conducted and laboratory exercises will provide opportunities to acquire skills in microbiology and microscopy in order to identify microorganisms as well as to demonstrate some of the latest developments in brewing microbiology.

Conducted at our Siebel Institute Microbiological Services division in Montreal, Quebec, Canada, and located at the National Research Council Biotechnology Research Institute, is one of the world's leading yeast and genetic research facilities. Students will be surrounded by research professionals using state-of-the-art equipment, creating an environment that is unique to brewing education. When not on campus, students will be able to enjoy the beauty and history of Montreal, one of the world's most scenic and vibrant cities.

Topics include

- The Nature of Yeast
- Pure Yeast Cultures: Maintenance and Selection
- Yeast Viability: Cell Concentration, Pitching, Measurement
- Yeast Handling Practices
- Microbiology of Grains and Water
- Wild Yeast and Yeast Mutants
- Wort Spoilage Bacteria
- Beer Spoilage Bacteria
- Identification of Contaminants
- Bacterial and Wild Yeast Detection
- Yeast Growth and Fermentation
- Beer Hazes and Sediments

- Microbiology Program for Breweries
- Sterile Membrane Filtration
- General Brewery Cleaning and CIP
- Flavor Production
- Rapid Microbiological Methods
- Sampling Techniques and Environmental Hygiene
- Pasteurization

Admission Requirements

All students applying for this course must be at least nineteen (19) years of age. For this course, minimally 1 year brewery laboratory experience is recommended and/or having completed the Essential Quality Control course.

Tuition Fees and Charges

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

Regular Tuition: \$3,500.00

Total: \$4,100.00

Other expenses

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

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

How to apply

To apply for this course please visit our web-site at http://www.siebelinstitute.com

Craft Distilling Operations and Technology Course

Level: Entry

Course Length: 1-week (5-days) Campus: Chicago, U.S.A. Course Number: S51

Course Description

The course is designed to give students the critical information they need to create distilled spirits in a small-scale distillation environment. Students will learn the theory behind working successfully in small distillery operations as well as related management and logistical issues. With content created and presented by experts in the international distilling industry, this course will give you the knowledge needed to operate a distillery efficiently, safely, and profitably. You will also learn production techniques involved in distillation from grain, fruit, and other products.

Topics Include

- Materials and Processing
- Fermentation: Theory and Fundamentals
- Fermentation: Distilling Applications
- Distillation Technology: Fundamentals of Distillation
- Distillation Technology: Applied Methodology
- Post-distillation: Flavor Development/Maturation/ Blending
- Sensory Aspects of Distilled Spirits
- Utilities: Energy, Water
- Process Control
- Quality Control, Plant Cleaning and Microbiological Control
- Taxation and Compliance
- Environmental Issues
- Engineering and Maintenance

Admission Requirements

All students applying for a program, module or course must be at least twenty-one (21) years of age. For this course, prior brewing or distilling knowledge is not required, but students will benefit from existing knowledge of brewing technologies and/ or related sciences such as fermentation.

Tuition Fees and Charges

Application Processing Fee (non-refundable): \$250.00

Regular Tuition: \$2,425.00

Total: \$2,675.00

Other expenses

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

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

How to apply

To apply for this course please visit our web-site at http://www.siebelinstitute.com

World Brewing Academy Craft Cider Course

Level: Entry

Course Length: 1-week (5-days) Campus: Chicago, U.S.A. Course Number: W60

Course Description

The participants of this 5-day course - created and presented by Gerrit Blümelhuber of Doemens Academy - will learn the history as well as the processes of producing cider, with an in-depth look into raw materials and the treatment of, fermentation techniques, and the packaging of the end product.

Topics Include

- Historical evolution of Cider
- Raw materials (apples and pears)
- Differing varieties and how to find them
- How to plan an orchard and cultivate the fruit
- Cleaning, crushing and pressing of the fruit
- Treatment of the juice
- Fermentation, Maturation and Lagering
- Cider tastings from world-wide producers
- Production process
- Filtration and filling process
- Visit to a cidery, and much more

Admission Requirements

All students applying for a program, module or course must be at least twenty-one (21) years of age. For this course, prior cider or brewing knowledge is not required, but students will benefit from existing knowledge of brewing technologies and/ or related sciences such as food science or fermentation.

Tuition Fees and Charges

Application Processing Fee (non-refundable): \$250.00

Regular Tuition: \$2,125.00

Total: \$2,675.00

Other expenses

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

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

How to apply

To apply for this course please visit our web-site at http://www.siebelinstitute.com



Essential Quality Control Course

Level: Entry

Course Length: 3.5-days

Campus: White Labs, San Diego, CA, U.S.A.

Course Number: S65

Course Description

This course is jointly offered by Siebel Institute and White Labs, and hosted at the White Labs facility in San Diego, California, and presents a full range of topics related to quality control (QC) that will give you the knowledge required to produce beers of the high quality with consistency.

This course will cover the most important and essential aspects of an in-house QC program, including; sensory evaluation, advanced sensory analysis techniques, analytical testing, microbiological testing, bacteria detection and sampling techniques. The emphasis in this course is practical hands-on learning enhanced by lectures dealing in the sciences behind the techniques. You will learn the tools and procedures used worldwide to evaluate beer at every critical phase of production, employing standards designed and tested by organizations like the ASBC and EBC.

Topics include

- Yeast Quality Measurements: Scope and Definition, Yeast Health and Quality
- How to Measure Health: Viability and Vitality
- Operations: Cropping, Storage, Pitching and Aeration
- Product Considerations
- Pure Cultures: Aims and Objectives, Methods, Maintenance
- Propagation: Why and When, Lab and plant-scale approaches, etc.

Admission Requirements

All students applying for a program, module or course must be at least twenty-one (21) years of age. For this course, prior brewing knowledge is not required, but students will benefit from existing knowledge of brewing technologies and/ or related sciences.

Tuition Fees and Charges

Application Processing Fee (non-refundable): \$250.00

Regular Tuition: \$1,420.00

Total: \$1,670.00

Other expenses:

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

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

How to apply

To apply for this course please visit our web-site at http://www.siebelinstitute.com

Master of Beer Styles and Evaluation Course

Level: Entry

Course Length: 4-days Campus: Chicago, U.S.A. Course Number: S30

Course Description

The Master of Beer Styles and Evaluation course is designed to give professional brewers the skills they need to formulate, brew, and evaluate gold-medal beer recipes.

The Master of Beer Styles and Evaluation is composed of 2 Siebel Institute courses, the Sensory Analysis for Flavor Production and Control course and the Master of Beer Styles course. Students may choose to take each of the courses separately or together here, resulting in a substantial savings over the individual course tuitions if taken separately.

While students do not need a brewing background to attend this course, we ask that those attending should have a basic understanding of how beer is made in order to get the most from this course.

Those with either professional brewing experience or formal education in the equivalence of our WBA Concise Course in Brewing Technology will find this course highly valuable in formulating beer styles for competitions such as the World Beer Cup® and Great American Beer Festival®, as well as for expanding their knowledge of beer styles.

Admission Requirements

All students applying for a program, module or course must be at least twenty-one (21) years of age. For this course, prior brewing knowledge is not required.

Tuition Fees and Charges

Application Processing Fee (non-refundable): \$250.00

Regular Tuition: \$1,350.00

Total: \$1.600.00

Other expenses

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

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

How to apply

To apply for this course please visit our web-site at

http://www.siebelinstitute.com

Sensory Analysis for Flavor Production and Control Course

Level: Entry

Course Length: 1-day Campus: Chicago, U.S.A. Course Number: S31

Course Description

The Sensory Analysis for Flavor Production and Control course has been designed to give brewers the knowledge they need to effectively identify and control flavors and aromas in beer. Part of the Master of Beer Styles and Evaluation, the 1-day Sensory Analysis course takes students through samples of flavor and aromatic compounds associated with raw materials and brewing, analyses the origins of those compounds, and gives students the knowledge required to effectively control them.

Whether taken alone or as part of the Master of Beer Styles and Evaluation course, the Sensory Analysis for Flavor Production and Control is the perfect way to "tune up" your sensory skills.

Topics include

- Overview of the Brewing Process: Origins of Flavors
- Introduction to Sensory Evaluation and the Beer Flavor Wheel
- Malt, Hop, and Water Evaluation
- Brewhouse, Fermentation and Maturation Associated Flavors
- Post Fermentation and Contamination Associated Flavors
- Admission Requirements

All students applying for a program, module or course must be at least twenty-one (21) years of age. For this course, prior brewing knowledge is not required.

Tuition Fees and Charges

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

Regular Tuition: \$420.00

Total: \$520.00

Other expenses

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

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

How to apply

To apply for this course please visit our web-site at http://www.siebelinstitute.com

Master of Beer Styles Course

Level: Entry

Course Length: 3-days Campus: Chicago, U.S.A. Course Number: S32

Course Description

The Master of Beer Styles course is designed to give brewers the skills needed to create award-winning ales, lagers and specialty beers. Using style guidelines created for the Association of Brewers' World Beer Cup®, this course provides analysis of the techniques incorporated to design and brew established and traditional along with emerging styles.

Topics include

- The purpose, origins and evolution of styles
- Recipe formulation mechanics (grist and hop bill calculations)
- Style-specific formulation and process planning
- Benchmarking style parameters: gravity, color, alcohol, etc.
- The flavor contributions of raw ingredients: malts, hops, etc.
- Yeast: selection for style, propagation, sources, alternate fermentation organisms, handling multiple yeasts
- Brewhouse: dealing with difficult ingredients, sour mashing, adjunct use, alternate mashing techniques
- Fermentation: pitching rates, temperature effects, high-alcohol fermentation, multiple fermentations, etc.
- Aging and maturation: storage on wood, etc.
- Beer evaluation: benchmark comparisons, key attributes by style, off-flavors and aromas, competitive judging

Each beer style and sub-category is presented with tastings in order to emphasize the methodology used to produce beers to match style parameters while retaining the brewer's own technique and vision. Instruction and content for this course is provided by beer professionals Ray Daniels and Randy Mosher.

Admission Requirements

All students applying for a program, module or course must be at least twenty-one (21) years of age. For this course, prior brewing knowledge is not required.

Tuition Fees and Charges

Application Processing Fee (non-refundable): \$250.00

Regular Tuition: \$1,215.00

Total: \$1,465.00

Other expenses

Living Expenses: \$115.00 (hotel per day average)
Meals, City transportation, misc.: \$50.00 (per day average)

How to apply

To apply for this course please visit our web-site at http://www.siebelinstitute.com



Sensory Panel Management Course

Level: Entry

Course Length: 3.5-days

Campus: White Labs, San Diego, CA, U.S.A.

Course Number: S33

Course Description

The first line of quality control and product evaluation in any brewery is formed by a trained taste panel. By effectively utilizing taste panels appropriately and collecting and analyzing the results compiled from trained tasters, and taking the right actions based on the results, your brewery will improve quality, consistency and profitability.

With instruction given by brewing industry sensory panel experts, this course instructs you in the tools and techniques used by many of today's leading craft breweries to assess their products and analyze data to ensure beer of the best quality and consistency. This course is critical for breweries of every size, and can also benefit brewing guilds looking to form member taste panels towards evaluating and improving the quality of beers produced by their members.

Topics include

- Definition of Panel and Panel Leader
- Basic Sensory Physiology: Human Flavor Perception
- Definition of Sensory Evaluation
- Non-Physiological Influences on Flavor Perception
- Personnel, facilities, resources required, etc.
- Establishing Panels for Breweries of Any Size
- Motivations, Rewards, Validation and Retention
- Running a Panel and Training the Trainer
- Difference Tests: Duo/Trio, Triangle, etc.
- Descriptive Tests: Characteristics, Intensity, etc.
- Significance and Analysis data analysis

Admission Requirements

All students applying for a program, module or course must be at least twenty-one (21) years of age. For this course, prior brewing knowledge is not required, but students will benefit from existing knowledge of brewing technologies and/ or related sciences.

Tuition Fees and Charges

Application Processing Fee (non-refundable): \$250.00

Regular Tuition: \$1,655.00

Total: \$1,905.00

Other expenses

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

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

How to apply

To apply for this course please visit our web-site at http://www.siebelinstitute.com

Start Your Own Brewery Course

Level: Entry

Course Length: 3-days Campus: Chicago, U.S.A. Course Number: S80

Course Description

Designing, building and operating a successful brewery requires a mix of business and brewing knowledge. This 3-day course covers the brewpub and microbrewery design and startup issues that everyone needs to understand, presenting issues every prospective brewery owner should know to help build a successful business from the ground up while avoiding pitfalls and mistakes that can compromise the efficiency and profitability of the brewery. Designed and conducted by Ray Daniels along with Siebel Institute faculty along specialists in brewery and brewpub operations and business planning, the course addresses brewing related and pub management issues, and successful brewery entrepreneurs will share their stories and experiences and answer class questions,.

Topics include

- Anatomy of a commercial brewery
- Buying brewing equipment and figuring production capacity
- Packaging equipment
- Site selection and practical considerations
- Utilities, waste water and regulations
- Public relations and events
- Packaging design and point-of-sale (POS) materials
- Finding and working with a distributor
- Franchise laws

Admission Requirements

All students applying for a program, module or course must be at least twenty-one (21) years of age. For this course, prior brewing knowledge is not required.

Tuition Fees and Charges

Application Processing Fee (non-refundable): \$250.00

Regular Tuition: \$1,215.00

Total: \$1,465.00 Other expenses

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

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

How to apply

To apply for this course please visit our web-site at

http://www.siebelinstitute.com



Draught Master Course

Level: Entry

Course Length: 4-days Campus: Milwaukee, U.S.A. Course Number: S55

Course Description

Master the "Art and Science" of draught beer dispense with the Siebel Draught Master Course. This 4-day course features industry-leading basic and advanced content and instruction for both the novice and the experienced draught personnel.

Offering a mix of technical theory along with "hands-on" practical in facilities dedicated specifically to draught training, this course is perfect for brewers, draught quality specialists, installation and service technicians, manufacturers and suppliers, as well as bar managers and staff will all find this course extremely useful.

Topics include

- Basic dispense systems
- Keg quality assurance
- Hardware related to taps, faucets and beer and gas hoses
- Installation of direct draw systems and all related hardware and hoses
- Glassware, styles and cleaning and care of
- Cooling systems (forced air to glycol) and installation of
- Beer pumps and FOBS
- Sensory evaluation skills
- Walk-in Cooler design
- Serving and foam issues
- Glycol cooling systems design and install
- Bright tank and cask ale dispense
- Evaluating pressure and beer flow
- Troubleshooting
- And much more...

Admission Requirements

All students applying for a program, module or course must be at least twenty-one (21) years of age. For this course, prior brewing knowledge is not required.

Tuition Fees and Charges

Application Processing Fee (non-refundable): \$250.00

Regular Tuition: \$1,410.00

Total: \$1,660.00

Other expenses

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

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

How to apply

To apply for this course please visit our web-site at http://www.siebelinstitute.com

Draught Executive Course

Level: Entry

Course Length: 2-days Campus: Milwaukee, U.S.A. Course Number: S56

Course Description

This course acts as an introduction to the "Art and Science" of draught beer dispense, and makes up the first 2-days of the Draught Master Course. Perfect for bartenders, bar managers and distributors who must understand the basics of draught management, and features basic content and instruction for both novice and experienced draught personnel, but at a more "executive-style" mix of technical theory and "hands-on" practical conducted in facilities dedicated specifically to draught training.

Topics include

- Basic dispense systems
- Keg quality assurance
- Taps and faucets, shanks and towers
- Carbonation principles, along with gases and regulators
- Ideal serving temperatures and Co2 pressure
- "Perfect pour, perfect taste"
- Glassware, styles and cleaning and care of
- Cooling systems (forced air to glycol)
- Beer Pumps and dispense systems
- Troubleshooting
- And much more...

Admission Requirements

All students applying for a program, module or course must be at least twenty-one (21) years of age. For this course, prior brewing knowledge is not required.

Tuition Fees and Charges

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

Regular Tuition: \$915.00 **Total:** \$1,015.00

Other expenses

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

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

How to apply

To apply for this course please visit our web-site at http://www.siebelinstitute.com

Continuing Education Online

World Brewing Academy **Executive Overview of the Brewing Process** Course

Level: Entry

Course Length: 3-weeks Online Access

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
- History of Brewing
- 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

To apply for this course please visit our web-site at http://www.siebelinstitute.com

Consumer Information

Certificate Studies (Campus)

Reporting Period:

July 1, 2018 – June 30, 2019

DISCLO	OSURE REPORTING CATEGORY	W30: Concise Course in Brewing Technology	W11: Advanced Brewing Theory Program	W10: International Diploma in Brewing Technology	W40: Master Brewer Program
(A1)	Students who were admitted in the program or course of instruction as of July 1 of this reporting period	46	7	16	25
(A2)	Additional students who were admitted in the program or course of instruction during the next 12 months and classified in one of the following categories				
	a) New starts	2	0	2	0
	b) Re-enrollments	0	0	0	0
	c)Transfers into the program from other programs at the school	0	0	0	0
(A3)	Students (total) admitted in the program or course of instruction during the 12-month reporting period	48	7	18	25
(A4)	Students enrolled in the program or course of instruction during the 12-month reporting period who:				
	a) Transferred out of the program/course and into another program/course	0	1	1	0
	b) Completed or graduated from a program or course of instruction	45	6	15	10
	c) Withdrew from the school	0	0	0	0
	d) Are still enrolled	0	0	0	15
(A5)	Students enrolled in the program or course of instruction who were:				
	a) Placed in their field of study	11	1	4	6
	b) Placed in a related field	1	0	1	0
	c) Placed out of the field	0	0	0	0
	d) Not available for placement due to personal reasons	2	0	0	0
	e) Not employed	2	0	0	1
(B1)	Students who took a State licensing examination or professional certification examination, if any, during the reporting period	n/a	n/a	n/a	n/a
(B2)	The number of students who took and passed a State licensing examination or professional certification examination, if any, during the reporting period	n/a	n/a	n/a	n/a
(C)	The number of graduates who obtained employment in the field who did not use the school's placement assistance during the reporting period (compiled by reasonable efforts)	13	1	5	4
(D)	The average starting salary (USD) for all school graduates employed during the reporting period (compiled by reasonable efforts)	\$ 35,000	\$35,000	\$44,000	\$35,000



Consumer Information

Certificate Studies (Campus)

Reporting Period:

July 1, 2018 – June 30, 2019

DISCLO	SURE REPORTING CATEGORY	W21: Raw Materials and Wort Production	W22: Beer Production and Quality Control	W23: Packaging and Process Technology	W24: Business of Brewing/ Technical Case Studies	W25: Applied Brewing Techniques
W1)	Students who were admitted in the program or course of instruction as of July 1 of this reporting period	2	1	7	4	1
(A2)	Additional students who were admitted in the program or course of instruction during the next 12 months and classified in one of the following categories					
	a) New starts	0	0	0	0	0
	b) Re-enrollments	0	0	0	0	0
	c)Transfers into the program from other programs at the school	0	0	0	0	0
(A3)	Students (total) admitted in the program or course of instruction during the 12-month reporting period	2	1	7	4	1
(A4)	Students enrolled in the program or course of instruction during the 12-month reporting period who:					
	a) Transferred out of the program/course and into another program/course	0	0	0	0	0
	b) Completed or graduated from a program or course of instruction	2	1	7	4	1
	c) Withdrew from the school	0	0	0	0	0
	d) Are still enrolled	0	0	0	0	0
(A5)	Students enrolled in the program or course of instruction who were:					
	a) Placed in their field of study	2	1	7	4	1
	b) Placed in a related field	n/a	n/a	n/a	n/a	n/a
	c) Placed out of the field	1	n/a	n/a	n/a	n/a
	d) Not available for placement due to personal reasons	n/a	n/a	n/a	n/a	n/a
	e) Not employed	n/a	n/a	n/a	n/a	n/a
(B1)	Students who took a State licensing examination or professional certification examination, if any, during the reporting period	n/a	n/a	n/a	n/a	n/a
(B2)	The number of students who took and passed a State licensing examination or professional certification examination, if any, during the reporting period	n/a	n/a	n/a	n/a	n/a
(C)	The number of graduates who obtained employment in the field who did not use the school's placement assistance during the reporting period (compiled by reasonable efforts)	2	1	7	4	1
(D)	The average starting salary (USD) for all school graduates employed during the reporting period (compiled by reasonable efforts)	\$32,000	n/a	\$40,000	\$25,000	\$25,000



Consumer Information

Certificate Studies (Campus)

Reporting Period:

July 1, 2018 – June 30, 2019

DISCLO	OSURE REPORTING CATEGORY	W26: European Brewery Study Tour	W45: Advanced Applied Brewing Techniques
(A1)	Students who were admitted in the program or course of instruction as of July 1 of this reporting period	4	1
(A2) classifie	Additional students who were admitted in the program or course of instruction during the next 12 months and ed in one of the following categories		
	a) New starts	0	0
	b) Re-enrollments	0	0
	c)Transfers into the program from other programs at the school	0	0
(A3)	Students (total) admitted in the program or course of instruction during the 12-month reporting period	4	1
(A4)	Students enrolled in the program or course of instruction during the 12-month reporting period who:		
	a) Transferred out of the program/course and into another program/course	0	0
	b) Completed or graduated from a program or course of instruction	4	1
	c) Withdrew from the school	0	0
	d) Are still enrolled	0	0
(A5)	Students enrolled in the program or course of instruction who were:		
	a) Placed in their field of study	n/a	n/a
	b) Placed in a related field	n/a	n/a
	c) Placed out of the field	n/a	n/a
	d) Not available for placement due to personal reasons	n/a	n/a
	e) Not employed	n/a	n/a
(B1)	Students who took a State licensing examination or professional certification examination, if any, during the reporting period	n/a	n/a
(B2)	The number of students who took and passed a State licensing examination or professional certification examination, if any, during the reporting period	n/a	n/a
(C)	The number of graduates who obtained employment in the field who did not use the school's placement assistance during the reporting period (compiled by reasonable efforts)	n/a	1
(D)	The average starting salary (USD) for all school graduates employed during the reporting period (compiled by reasonable efforts)	n/a	n/a



Consumer Information

Certificate Studies (Campus) Reporting Period: July 1, 2018 – June 30, 2019

DISCLO	SURE REPORTING CATEGORY	WT1: Concise Course in Brewing Technology	WT2: Advanced Brewing Theory Program (ABT)	WT5: ABT Mod. 1 Raw Materials & Wort Production	WT6: ABT Mod. 2 Beer Production & Quality Control	Packaging &
(A1)	Students who were admitted in the program or course of instruction as of July 1 of this reporting period	260	27	11	26	11
(A2)	Additional students who were admitted in the program or course of instruction during the next 12 months and classified in one of the following categories					
	a) New starts	7	0	0	0	0
	b) Re-enrollments	0	0	0	0	0
	c)Transfers into the program from other programs at the school	0	0	0	0	0
(A3)	Students (total) admitted in the program or course of instruction during the 12-month reporting period	267	27	11	26	11
(A4)	Students enrolled in the program or course of instruction during the 12-month reporting period who:					
	a) Transferred out of the program/course and into another program/course	0	0	0	0	0
	b) Completed or graduated from a program or course of instruction	169	8	11	7	5
	c) Withdrew from the school	0	0	0	0	0
	d) Are still enrolled	92	19	0	0	6
(A5)	Students enrolled in the program or course of instruction who were:					
	a) Placed in their field of study	6	n/a	1	4	2
	b) Placed in a related field	1	n/a	n/a	n/a	n/a
	c) Placed out of the field	0	3	1	1	1
	d) Not available for placement due to personal reasons	0	n/a	n/a	n/a	n/a
	e) Not employed	0	n/a	n/a	n/a	n/a
(B1)	Students who took a State licensing examination or professional certification examination, if any, during the reporting period	n/a	n/a	n/a	n/a	n/a
(B2)	The number of students who took and passed a State licensing examination or professional certification examination, if any, during the reporting period	n/a	n/a	n/a	n/a	n/a
(C)	The number of graduates who obtained employment in the field who did not use the school's placement assistance during the reporting period (compiled by reasonable efforts)	7	1	0	4	2
(D)	The average starting salary (USD) for all school graduates employed during the reporting period (compiled by reasonable efforts)	\$25,000	n/a	\$45,000	\$27,000	\$35,000



Policies and Procedures

Approval

Siebel Institute of Technology is approved by the Division of Private Business and Vocational Schools of the Illinois Board of Higher Education.

Accreditation

Siebel Institute of Technology is not accredited by an accrediting body recognized by the U.S. Department of Education. The school does not guarantee the transferability of credits to another school, college or university. Credits or coursework are not likely to transfer; any decision on the comparability, appropriateness and applicability of credit and whether credit should be accepted is the decision of the receiving institution.

Admission

It is the policy of Siebel Institute to admit students without regard to race, gender, sexual orientation, religion, creed, color, national origin, ancestry, marital status, age, disability, or any other factor prohibited by law.

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

Advanced level programs 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) Successful completion of the Concise Course in Brewing Technology OR

(b) Successful completion of an online assessment

Cancellation of Enrollment Agreement Prior to Start of Class

The student may cancel the enrollment agreement by delivering written notice of such cancellation to the Siebel Institute registrar prior to 5pm on the 5th business day after the student has entered into the enrollment agreement to receive a full refund of all monies paid to Siebel Institute, provided that classes have not yet started during such period. Cancellations received after the 5th business day and prior to the first day of class will lead to a full tuition refund less the Application Processing Fee (APF). If the application is not accepted by Siebel Institute all monies paid to Siebel Institute relating to the application, including the APF, will be refunded to the student. All course cancellations must be made in writing to the Registrar at Siebel Institute of Technology, 900 N. North Branch Street, Suite 1N, Chicago, Illinois, 60642, OR by submitting a cancellation request thru our website.

Cancellation after the Start of Class: Campus Courses

A student may withdraw from a course, module or program at any time, and partial tuition refunds, if any, will be given based on the number of calendar days that have elapsed since the first day of such course, module or program as set forth on the following schedule.

Number of caler	Refund			
Certificate Progra	am			
	1	90%		
	2-5	50%		
	6-8	25%		
	9+	0%		
Module and any 2	2-week Cours	se		
	1	90%		
	2	50%		
	3	25%		
	4+	0%		
Short Course (5-days or less)				
	1	50%		
	2+	0%		

^{*}Starting on the first day class is scheduled to meet up until and including the date written cancellation is received by the Siebel Institute Registrar

Online Courses:

A student may withdraw from an online course, module or program at any time, and partial tuition refunds, if any, will be given based on the percentage of completion as set forth on the schedule below.

Refund Schedule (Online Courses)

Percentage completed*:	Refund
up to 10%	90%
11-20%	70%
21-30%	50%
31%+	0%

^{*}Determined on the date written cancellation is received by the Siebel Institute Registrar

Active military or reservist students called to duty or training:

A student who is on active duty or is a military reservist (including members of the National Guard) may withdraw from Siebel Institute and receive a full tuition refund if such student is called for active duty or reassignment during the course/program, provided that the student officially withdraws and submits a copy of his/her Official Orders to the Registrar at Siebel Institute. Following withdrawal, the student will be dropped from all registered courses, modules and programs, and no certificate or diploma may be earned for any programs/courses for which a refund has been given.

Cancellation of Course

Siebel Institute reserves the right to cancel any course for any reason at any time. All monies paid to Siebel Institute, including the APF, for any cancelled course will be refunded within thirty (30) business days of any such cancellation.

Financial Aid

Siebel Institute of Technology is a privately-owned, vocational trade school, and therefore does not qualify for Federal student loans,

grants, or GI Bill. Siebel Institute is recognized by the Veterans Administration's Vocational Rehabilitation program.

Grading Information

Advanced and Intermediate-level programs, modules and courses within the "Certificate Studies" category is graded as follows:

Points	Grade	Description
95+	A+	Superior
90-94	Α	Excellent
85-89	B+	Very Good
80-84	В	Good
75-79	C+	Fair
70-74	С	Satisfactory
<69	D	Unsatisfactory

Grievance

Siebel Institute endeavors to treat all student complaints fairly and to address student concerns promptly. Students are directed to submit all complaints in a dated, signed writing to the Office Manager of Siebel Institute. Siebel Institute endeavors to address, and where practicable, respond to complaints within five (5) business days. If Siebel Institute deems necessary, a written response may be presented to the student. Records will be maintained in respective student files and treated as confidential.

Complaints against the school may be registered with the Board of Higher Education online at http://complaints.ibhe.org

Illinois Board of Higher Education

Division of Private Business and Vocational Schools 1 N. Old State Capitol Plaza, Suite 333 Springfield, Illinois 62701-1377

Phone: 217-782-2551 Fax Number: 217-782-8548

www.ibhe.org

Payment Terms: Campus Courses

To reserve a seat in any course, module or program, the required non-refundable Application Processing Fee (APF) must be paid within five (5) days after a student is accepted. To qualify for "Regular Tuition" pricing, full payment must be received no later than 60-days in advance of the course, module or program start date. "Late Tuition" pricing will apply after this time with full payment to be made no later than 45-days in advance of the course, module or program start date.

If a student application is received less than forty-five (45) days in advance of the course, module or program start date, full payment including the APF is required upon approval of attendance.

Payment Terms: Online (Web-based) Courses

To reserve a seat in any online course, module or program, the required non-refundable APF must be paid within five (5) days after a student is accepted. To qualify for "Regular Tuition" pricing, full payment must be received no later than fourteen (14) days in advance of the course, module or program start date. "Late Tuition" pricing will apply after this time. If a student application is received less than fourteen (14) days in advance of the course, module or program start date, full payment, including the APF is required upon approval of attendance.

Payment

Payments are accepted through Visa, MasterCard, Wire Transfer, checks drawn on a US bank and US money orders. Siebel Institute is not responsible for any transaction fees. If submitting payment by Wire Transfer, contact the registrar for banking information. Allocate sufficient time to process the Wire Transfer payments. It is the student's responsibility to ensure that their account is in order.

Privacy

Siebel Institute respects your privacy and will not provide any personal information to parties. For the benefit of networking, Siebel Institute will share contact information with other participants in the same class. Instructors will also have access to full names and reduced demographic information.

Termination

Siebel Institute reserves the right to cancel the enrollment agreement for any of the following reasons:

- (a) failure to maintain satisfactory academic progress
- (b) failure to pay school fees and/or tuition by applicable due dates
- (c) disruptive behavior
- (d) posing a danger to the health or welfare of students or other members of the Siebel Institute community
- (e) failure to comply with the policies and procedures of Siebel Institute.

Disclaimer

The information in this document was the best available at the time of release. Siebel Institute endeavors to present an accurate view of the policies, programs, facilities, fees, and personnel of the school in this document. However, Siebel Institute reserves the right to alter any policies, programs, facilities, and fees described herein without notice or obligation. This catalog is updated regularly and available for download from the Siebel Institute website at www.siebelinstitute.com/downloads/siebel-academic-catalog/

Important notice to currently enrolled students

The policies and procedures set forth in this copy of the Siebel Institute Academic Catalog become effective as of 2 August 2019 and may not necessarily apply to currently enrolled students.

Please refer to your signed enrollment agreement for policies and procedures applicable at the time your application was approved for attendance.

Academic Calendar 2019/2020

(R:080219)

Certificate Studies: Campus 2019/2020 *Application Processing Fee (APF) is non-refundable	APF* Fee	Regular Tuition	Late Tuition	Page No.
WBA Concise Course in Brewing Technology (W30) November 4-15, 2019 May 11-22, 2020 November 9-20, 2020	\$ 550.00	\$ 3,325.00	\$ 3,735.00	5
WBA Advanced Brewing Theory Program (W11) February 10-March 20, 2020 September 14-October 23, 2020	\$1,000.00	\$ 9,700.00	\$10,780.00	6
WBA International Diploma in Brewing Technology Program (W10) February 10-April 30, 2020 September 14-December 4, 2020	\$2,500.00	\$15,500.00	\$17,450.00	8
WBA Master Brewer Program (W40) February 10-April 30, 2020, then a 4-week break and recommences June 2 Those wishing to take a single module or modules as "stand-alone subject matter interest only", or if prefering to build-up to completion of a program, this can be done by enrolling and paying for each module in		\$25,480.00	\$27,350.00	9
Module 1: WBA Raw Materials and Wort Production (W21) February 10-21, 2020 September 14-25, 2020	\$ 550.00	\$ 3,325.00	\$ 3,735.00	9
Module 2: WBA Beer Production and Quality Control (W22) February 24-March 6, 2020 September 28-October 9, 2020	\$ 550.00	\$ 3,325.00	\$ 3,735.00	9
Module 3: WBA Packaging and Process Technology (W23) March 9-20, 2020 October 12-23, 2020	\$ 550.00	\$ 3,325.00	\$ 3,735.00	9
Module 4: WBA Business of Brewing/Technical Case Studies (W24) March 23-27, 2020 October 26-30, 2020 NOTE: Cannot be taken unless Modules 1.	\$ 250.00 -3 have been passed a	\$ 2,200.00 and completed.	\$ 2,430.00	9
Module 5: WBA Applied Brewing Techniques (W25) Munich, GR March 30-April 17, 2020 November 2-20, 2020 NOTE: Cannot be taken unless Modules 1-3 have been passed and completed.	\$1,000.00	\$ 5,350.00	\$ 5,995.00	9
Module 6: WBA Brewery Study Tour (W26) Munich, GR April 20-29, 2020 November 23-December 3, 2020	\$ 550.00	\$ 3,325.00	\$ 3,735.00	10
Module 7: WBA Advanced Applied Brewing Techniques (W45) Munich, G June 2-July 24, 2020 NOTE: Cannot be taken unless Modules 1-6 have been passed and complete the complete states of the complete states and complete states are considered as a second complete states of the complete states are considered as a second consid		\$12,870.00	\$15,370.00	10
Certificate Studies: Online 2019/2020				
WBA Concise Course in Brewing Technology (WT1) September 8-November 24, 2019 January 13-March 29, 2020 May 4-	\$ 550.00 -July 19, 2020	\$3,325.00 August 24-Oct	\$ 3,735.00 ober 1, 2020	11
WBA Advanced Brewing Theory Program (WT2) January 20-October 4, 2020	\$1,000.00	\$9,700.00	\$10,780.00	12
Module 1: WBA Raw Materials and Wort Production (WT5) January 20-April 5, 2020	\$ 550.00	\$3,325.00	\$ 3,735.00	12
Module 2: WBA Beer Production and Quality Control (WT6) April 20-July 5, 2020	\$ 550.00	\$3,325.00	\$ 3,735.00	13
Module 3: WBA Packaging and Process Technology (WT7) July 20-October 4, 2020	\$ 550.00	\$3,325.00	\$ 3,735.00	13



Academic Calendar 2019/2020 (continued)

(R:080219)

Continuing Education: Campus 2019/2020 *Application Processing Fee (APF) is non-refundable	APF* Fee	Regular Tuition	Late Tuition	Page No.
Brewing Microbiology (S10) Montreal, CN March 23-April 3, 2020	\$550.00	\$3,550.00	\$3,970.00	15
Craft Distilling Operations and Technology (S51) June 8-12, 2020	\$250.00	\$2,425.00	\$2,710.00	16
WBA Craft Cider Course (W60) November 18-22, 2019	\$250.00	\$2,125.00	\$2,355.00	16
Essential Quality Control (S65) San Diego, CA November 12-15, 2019	\$250.00	\$1,420.00	\$1,580.00	17
Master of Beer Styles and Evaluation (S30) August 26-29, 2019	\$250.00	\$1,350.00	\$1,530.00	17
Sensory Analysis for Flavor Production and Control (S31) August 26, 2019	\$100.00	\$ 420.00	\$ 465.00	18
Master of Beer Styles (S32) August 27-29, 2019	\$250.00	\$1,215.00	\$1,350.00	18
Sensory Panel Management (S33) San Diego, CA February 25-28, 2020	\$250.00	\$1,655.00	\$1,815.00	19
Start Your Own Brewery (S80) November 18-20, 2019	\$250.00	\$1,215.00	\$1,350.00	19
Draught Master (S55) Milwaukee, WI August 13-16, 2019	\$250.00	\$1,410.00	\$1,590.00	20
Draught Executive (S56) Milwaukee, WI August 13-14, 2019	\$100.00	\$ 915.00	\$1,010.00	20
Continuing Education: Online 2019/2020				
WBA Executive Overview of the Brewing Process (WT4) November 10-December 1, 2019 April 6-26, 2020 July 27- Augus	\$100.00 st 16, 2020 Nover	\$ 885.00 mber 9-29, 2020	\$ 980.00	21