Advanced Craft Brewing and Fermentation Science Training Course

Professional Development Training Course Outline

Category	Food processing and Technology	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Advanced Craft Brewing and Fermentation Science Training course is designed to provide brewers, entrepreneurs, and beverage enthusiasts with in-depth knowledge and practical skills in modern brewing, fermentation, and beverage innovation. With the global craft beer industry expanding rapidly, mastering brewing science and fermentation technology has become an essential skill for individuals and organizations seeking to thrive in this competitive sector. This course integrates theory with practical case studies, focusing on brewing techniques, yeast management, sustainable practices, and product development.

By emphasizing cutting-edge fermentation science, participants will explore innovative brewing methodologies, quality control measures, and flavor optimization. The program highlights the science behind brewing as well as the artistry of creating unique craft beverages that meet consumer demands and market trends. With expert-led sessions, interactive modules, and industry case studies, this training ensures participants are equipped with the skills needed to excel in brewing operations, research, product development, and entrepreneurial ventures in the craft brewing industry.

Programme Curriculum

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Course Objectives

1. Develop advanced knowledge of brewing and fermentation science.
2. Apply modern brewing technology for efficient craft beer production.
3. Analyze yeast strains and fermentation processes for quality enhancement.
4. Understand sustainable brewing practices and eco-friendly innovations.
5. Master sensory evaluation techniques for flavor profiling.
6. Enhance product consistency through advanced quality control.
7. Explore global craft beer trends and consumer preferences.
8. Learn packaging, branding, and marketing strategies for craft beer.
9. Implement safety, hygiene, and sanitation practices in brewing operations.
10. Apply business models for craft brewing entrepreneurship.
11. Gain hands-on training in experimental brewing and recipe development.
12. Examine supply chain and raw material sourcing for brewing efficiency.
13. Study case studies from leading breweries on innovation and growth.

Organizational Benefits

- Enhanced brewing and fermentation capabilities.
- Improved product quality and consistency.
- Increased innovation in recipe development.
- Strengthened market competitiveness.
- Better alignment with sustainability goals.
- Improved safety and compliance standards.
- Streamlined brewing operations and cost efficiency.
- Expanded consumer base through quality products.
- Skilled workforce with specialized brewing expertise.
- Growth opportunities in domestic and international markets.

Target Audiences

1. Professional brewers
2. Brewery owners and managers
3. Aspiring craft beer entrepreneurs
4. Beverage industry professionals
5. Brewing scientists and researchers
6. Food technologists
7. Hospitality and beverage managers
8. Students of food and fermentation sciences

Course Duration: 5 days

Course Modules

Module 1: Fundamentals of Brewing Science

- Brewing ingredients and raw material analysis
- Chemistry of water, malt, hops, and yeast
- Brewing process design and optimization
- Role of microbiology in brewing
- Introduction to sensory evaluation
- Case study: Traditional vs. modern brewing techniques

Module 2: Advanced Fermentation Science

- Fermentation pathways and yeast metabolism
- Temperature and pH management in fermentation
- Yeast strain selection and propagation
- Handling stuck or sluggish fermentation
- Troubleshooting off-flavors in beer
- Case study: Yeast innovation in craft brewing

Module 3: Brewing Technology and Equipment

- Brewhouse design and operations
- Automation and digital brewing technologies
- Sustainable energy solutions in brewing
- Heat exchange and cooling systems
- Filtration and clarification techniques
- Case study: Smart brewing technology adoption

Module 4: Sensory Analysis and Flavor Profiling

- Techniques for sensory panel training
- Beer tasting protocols and descriptive analysis
- Identifying flavor defects
- Consumer preference testing
- Balancing flavors for product development
- Case study: Flavor innovation in IPA styles

Module 5: Quality Assurance and Safety

- Quality assurance systems in brewing
- ISO standards and brewery compliance
- Safety and sanitation practices
- Hazard analysis and critical control points (HACCP)
- Risk management in brewery operations
- Case study: Quality control in global breweries

Module 6: Sustainable Brewing Practices

- Waste reduction and recycling in breweries
- Water efficiency strategies
- Renewable energy in brewing operations

- Sustainable sourcing of raw materials
- Eco-friendly packaging solutions
- Case study: Carbon-neutral brewery initiatives

Module 7: Business and Marketing for Craft Breweries

- Craft beer branding and identity creation
- Distribution channels and market entry
- Pricing strategies for craft beer
- Consumer behavior and market segmentation
- Legal frameworks for alcohol production
- Case study: Successful brewery brand expansion

Module 8: Innovation and Entrepreneurship in Brewing

- Craft beer product diversification
- Innovation in brewing recipes and styles
- Scaling up from microbrewery to large operations
- Collaboration models in the craft beer industry
- International market opportunities
- Case study: Entrepreneurial success in craft brewing

Training Methodology

- Interactive lectures and expert presentations
- Hands-on brewing demonstrations and lab work
- Case study analysis and group discussions
- Sensory evaluation workshops
- Business simulation exercises
- Peer-to-peer networking and collaboration

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

Ready to enroll or request a customized program? Book online or contact us:

Register Online Now

Email: info@fineskilltrainingcenter.com | Website: www.fineskilltrainingcenter.com