Meat Science and Advanced Meat Processing Training Course

Professional Development Training Course Outline

Category	Food processing and Technology	**Duration**	10 Days
Base Fee	$3,000 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Meat Science and Advanced Meat Processing Training Course is designed to equip professionals with comprehensive knowledge and hands-on skills in meat production, processing, preservation, and quality assurance. This intensive program integrates the latest trends and innovations in meat science, including sustainable processing methods, modern packaging technologies, food safety standards, and advanced processing equipment. Participants will gain the expertise to enhance productivity, ensure product safety, and maintain high-quality meat products aligned with global market demands.

This course emphasizes both theoretical and practical learning, empowering participants to understand the biochemical, microbiological, and technological aspects of meat processing. Through case studies, interactive sessions, and real-world applications, trainees will explore carcass evaluation, meat curing, smoking, refrigeration, and modern processing innovations such as automation and waste reduction techniques. By the end of the training, learners will have developed critical problem-solving skills to improve efficiency and profitability in meat production operations.

Programme Curriculum

Meat Science and Advanced Meat Processing Training Course

Introduction

Meat Science and Advanced Meat Processing Training Course is designed to equip professionals with comprehensive knowledge and hands-on skills in meat production, processing, preservation, and quality assurance. This intensive program integrates the latest trends and innovations in meat science, including sustainable processing methods, modern packaging technologies, food safety standards, and advanced processing equipment. Participants will gain the expertise to enhance productivity, ensure product safety, and

maintain high-quality meat products aligned with global market demands.

This course emphasizes both theoretical and practical learning, empowering participants to understand the biochemical, microbiological, and technological aspects of meat processing. Through case studies, interactive sessions, and real-world applications, trainees will explore carcass evaluation, meat curing, smoking, refrigeration, and modern processing innovations such as automation and waste reduction techniques. By the end of the training, learners will have developed critical problem-solving skills to improve efficiency and profitability in meat production operations.

Course Objectives

1. Understand the fundamentals of meat science and muscle biology.
2. Analyze the biochemical and microbiological changes during meat processing.
3. Apply food safety and hygiene principles in meat production.
4. Explore advanced meat preservation and storage technologies.
5. Gain hands-on skills in cutting, deboning, and trimming techniques.
6. Learn modern meat curing, smoking, and marination methods.
7. Utilize automation and digital technologies in meat processing plants.
8. Assess meat quality using scientific and sensory evaluation tools.
9. Implement quality control measures for meat and meat products.
10. Understand global standards and certification requirements in meat processing.
11. Develop strategies for sustainable and eco-friendly meat production.
12. Analyze case studies on successful meat processing industries.
13. Enhance leadership and management skills for meat processing operations.

Organizational Benefits

?Çó Improved operational efficiency and reduced production losses.
?Çó Enhanced compliance with international food safety standards.
?Çó Strengthened workforce technical capacity in meat processing.
?Çó Increased productivity and profitability through process optimization.
?Çó Better waste management and sustainability practices.
?Çó Improved product quality and consumer satisfaction.
?Çó Strengthened brand reputation through adherence to global standards.
?Çó Advanced innovation and technology adoption in production.
?Çó Streamlined quality assurance and control mechanisms.
?Çó Greater competitiveness in the meat processing industry.

Target Audiences

?Çó Meat processing plant managers
?Çó Quality assurance and food safety officers
?Çó Butchers and meat technologists
?Çó Livestock production officers
?Çó Food processing engineers
?Çó Cold storage and packaging specialists
?Çó Agricultural extension officers
?Çó Research and development personnel

Course Duration: 10 days

Course Modules

Module 1: Introduction to Meat Science
?Çó Overview of meat science and its industrial relevance
?Çó Composition and structure of muscle tissues
?Çó Factors influencing meat quality and yield
?Çó Importance of food safety and hygiene in meat production
?Çó Practical demonstration on carcass evaluation
?Çó Case Study: Understanding meat quality grading in commercial slaughterhouses

Module 2: Meat Microbiology and Food Safety
?Çó Microbial spoilage and contamination sources
?Çó Pathogen detection and control in meat products
?Çó HACCP and GMP applications in meat processing
?Çó Sanitation and hygiene management in facilities
?Çó Risk assessment and traceability systems
?Çó Case Study: Managing microbial outbreaks in processing plants

Module 3: Meat Processing Technologies
?Çó Overview of meat processing equipment and tools
?Çó Cutting, deboning, and trimming operations
?Çó Automation and robotics in meat processing
?Çó Meat grinding, emulsifying, and forming methods
?Çó Technological innovations for efficiency improvement
?Çó Case Study: Implementing automation in a medium-scale meat factory

Module 4: Meat Preservation and Storage
?Çó Chilling, freezing, and refrigeration techniques
?Çó Modified atmosphere packaging (MAP)
?Çó Use of preservatives and natural antioxidants
?Çó Cold chain management and temperature monitoring
?Çó Shelf-life extension strategies
?Çó Case Study: Cold chain optimization in export meat industries

Module 5: Meat Curing and Smoking
?Çó Principles of curing and smoking processes
?Çó Use of salt, nitrates, and flavor enhancers
?Çó Modern smoking technologies and flavor control
?Çó Safety and health implications of curing agents
?Çó Quality evaluation of cured meats
?Çó Case Study: Production of high-quality smoked meats for retail markets

Module 6: Advanced Marination and Tenderization Techniques
?Çó Enzymatic and mechanical tenderization
?Çó Vacuum tumbling and injection systems
?Çó Flavor infusion and texture enhancement
?Çó Role of marinades in product differentiation
?Çó Optimization of marination processes
?Çó Case Study: Development of value-added marinated meat products

Module 7: Meat Quality Evaluation and Control
?Çó Sensory, physical, and chemical evaluation of meat
?Çó Color, texture, and flavor measurement techniques
?Çó Instrumental methods for quality control
?Çó Implementation of ISO and Codex standards
?Çó Data interpretation for product improvement
?Çó Case Study: Quality assurance practices in premium meat production

Module 8: Packaging and Labeling Technologies
?Çó Packaging materials and sustainability trends
?Çó Smart and active packaging innovations
?Çó Labeling regulations and traceability systems
?Çó Consumer perception and market preferences
?Çó Eco-friendly packaging solutions
?Çó Case Study: Redesigning meat packaging for export compliance

Module 9: By-Product Utilization and Waste Management
?Çó Value addition from animal by-products
?Çó Rendering and processing of secondary products
?Çó Environmental management in processing plants
?Çó Circular economy and resource efficiency
?Çó Waste minimization strategies
?Çó Case Study: Sustainable waste management in slaughter facilities

Module 10: Refrigeration and Cold Chain Management
?Çó Cold storage design and operation
?Çó Temperature and humidity control systems
?Çó Monitoring technologies and data logging
?Çó Energy-efficient refrigeration practices
?Çó Maintenance and troubleshooting techniques
?Çó Case Study: Cold chain logistics for meat export supply chains

Module 11: Meat Plant Design and Layout
?Çó Principles of efficient plant design
?Çó Workflow optimization and equipment arrangement
?Çó Hygiene zoning and contamination control
?Çó Regulatory compliance in plant construction
?Çó Safety and ergonomic considerations
?Çó Case Study: Designing a compliant modern meat processing plant

Module 12: Meat Product Innovation and Development
?Çó Product design and sensory innovation
?Çó New product formulation and testing
?Çó Consumer-driven market research
?Çó Nutritional improvement of meat products
?Çó Launching and scaling new products
?Çó Case Study: Developing a new line of healthy meat snacks

Module 13: Regulatory and Certification Standards
?Çó Global meat processing standards (ISO, HACCP, FSSC)

?Çó National and international certification processes
?Çó Regulatory frameworks for meat exports
?Çó Labeling, documentation, and audits
?Çó Compliance monitoring and renewal processes
?Çó Case Study: Achieving HACCP certification in a processing firm

Module 14: Leadership and Team Management in Processing Plants
?Çó Communication and leadership in production environments
?Çó Team motivation and capacity building
?Çó Conflict management and problem-solving
?Çó Time management and productivity enhancement
?Çó Workplace safety and welfare improvement
?Çó Case Study: Transforming team performance in a meat processing unit

Module 15: Practical Training and Industrial Visit
?Çó Hands-on training in processing techniques
?Çó Application of learned quality control skills
?Çó Interaction with industry professionals
?Çó Field observation and report preparation
?Çó Industrial exposure to best practices
?Çó Case Study: Real-life operations in a certified meat processing facility

Training Methodology

?Çó Instructor-led classroom sessions with multimedia presentations
?Çó Practical demonstrations in meat processing facilities
?Çó Group discussions and collaborative workshops
?Çó Case studies and problem-based learning exercises
?Çó Industrial visits and experiential learning sessions

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	04 Dec 2026	Online	$2,000
23 Nov 2026	04 Dec 2026	Physical	$3,000
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$9,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$12,000

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

Register Online Now

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