Formulation of Sports Nutrition and Performance Foods 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

The formulation of sports nutrition and performance foods has become a key driver in the global food and beverage industry. With rising demand for personalized nutrition, functional foods, and performance-based dietary supplements, professionals require advanced training to understand product development, formulation techniques, and regulatory compliance. Formulation of Sports Nutrition and Performance Foods Training Course provides in-depth knowledge and practical skills necessary for creating scientifically validated, market-ready products in line with consumer trends.

Participants will explore cutting-edge research, trending innovations, and global best practices in sports nutrition, functional proteins, hydration strategies, and recovery supplements. The training emphasizes real-world application, industry insights, and technical expertise for producing high-performance nutritional products. By the end of the course, participants will be able to design effective formulations that meet both athletic and commercial demands while ensuring product safety, efficacy, and consumer trust.

Programme Curriculum

Formulation of Sports Nutrition and Performance Foods Training Course

Introduction

The formulation of sports nutrition and performance foods has become a key driver in the global food and beverage industry. With rising demand for personalized nutrition, functional foods, and performance-based dietary supplements, professionals require advanced training to understand product development, formulation techniques, and regulatory compliance. Formulation of Sports Nutrition and Performance Foods Training Course provides in-depth knowledge and practical skills necessary for creating scientifically validated, market-ready products in line with consumer trends.

Participants will explore cutting-edge research, trending innovations, and global best practices in sports nutrition, functional proteins, hydration strategies, and recovery supplements. The training emphasizes real-world application, industry insights, and technical expertise for producing high-performance nutritional products. By the end of the course, participants will be able to design effective formulations that meet both athletic and commercial demands while ensuring product safety, efficacy, and consumer trust.

Course Objectives

1. Understand core principles of sports nutrition science
2. Explore global trends in performance food formulations
3. Develop knowledge of functional ingredient applications
4. Gain insights into protein, carbohydrate, and fat utilization in athletes
5. Analyze hydration and electrolyte replacement strategies
6. Study recovery formulations for endurance and strength athletes
7. Apply sports supplementation regulatory standards
8. Evaluate consumer demand and sports nutrition market growth
9. Learn formulation of energy bars, gels, and sports beverages
10. Master micro and macronutrient balancing for performance
11. Integrate scientific research into practical formulation methods
12. Apply product testing, stability, and sensory evaluation techniques
13. Understand commercialization and scaling of sports nutrition products

Organizational Benefits

- Improved staff expertise in sports nutrition innovation
- Increased competitiveness in the functional food industry
- Enhanced product quality and consumer trust
- Accelerated time-to-market for new products
- Stronger compliance with regulatory frameworks
- Expanded market opportunities in sports and health nutrition
- Cost reduction through optimized formulation strategies
- Strengthened brand positioning in performance nutrition
- Increased ability to meet consumer demand for clean-label products
- Long-term organizational growth through innovation and expertise

Target Audiences

1. Food scientists and technologists
2. Nutritionists and dieticians
3. Sports scientists and performance coaches
4. R&D professionals in food industries
5. Quality assurance and regulatory specialists
6. Entrepreneurs in health and sports nutrition
7. Product managers and marketers
8. Academic researchers and students in nutrition sciences

Course Duration: 10 days

Course Modules

Module 1: Fundamentals of Sports Nutrition

- Overview of sports nutrition science
- Macronutrient roles in athletic performance
- Micronutrient functions in exercise metabolism
- Nutrient timing strategies
- Energy balance and performance
- Case study: Designing a balanced nutrition plan for endurance athletes

Module 2: Functional Ingredients in Sports Nutrition

- Role of proteins, amino acids, and peptides
- Use of carbohydrates and fibers in formulations
- Lipids and omega-3 in performance foods
- Bioactive compounds and antioxidants
- Trends in plant-based performance ingredients
- Case study: Formulating a vegan protein sports drink

Module 3: Hydration and Electrolyte Replacement

- Importance of hydration in sports performance
- Electrolyte balance and muscle function
- Isotonic, hypotonic, and hypertonic beverage formulations
- Hydration testing methods
- Consumer preferences in hydration products
- Case study: Designing an isotonic sports beverage

Module 4: Protein Formulation for Performance

- Protein requirements for athletes
- Whey, casein, soy, and plant-based proteins
- Protein hydrolysates and isolates
- Protein fortification strategies
- Protein blends for sustained release
- Case study: Developing a protein recovery shake

Module 5: Energy and Endurance Formulations

- Role of carbohydrates in endurance
- Energy gels and bar formulations
- Glycogen replenishment strategies
- Use of caffeine and ergogenic aids
- Balancing quick vs. sustained energy sources
- Case study: Formulating an energy gel for marathon runners

Module 6: Recovery and Muscle Repair Nutrition

- Post-exercise recovery requirements
- Nutrient timing for recovery
- Role of proteins and amino acids
- Anti-inflammatory foods and supplements
- Sleep and recovery nutrition
- Case study: Creating a recovery blend for weightlifters

Module 7: Supplementation and Ergogenic Aids

- Common supplements in sports nutrition
- Legal vs. banned substances
- Supplement safety and efficacy testing
- Role of creatine, beta-alanine, and nitrates
- Market trends in sports supplements
- Case study: Formulating a pre-workout supplement

Module 8: Carbohydrate Utilization and Strategies

- Carbohydrate metabolism in exercise
- Glycemic index and athletic performance
- Carbohydrate loading strategies
- Blends of simple and complex carbs
- Carbohydrate beverages in endurance
- Case study: Developing a carb-loading plan for athletes

Module 9: Fat and Performance

- Role of fats in sports nutrition
- Ketogenic diets and performance outcomes
- MCT oil and performance foods
- Essential fatty acids in recovery
- Fat oxidation during endurance activities
- Case study: Designing a ketogenic energy bar

Module 10: Sports Beverages and Innovative Drinks

- Categories of sports beverages
- Functional waters and enhanced hydration
- Caffeine and nootropic beverages
- Fermented and probiotic drinks
- Clean-label beverage formulation
- Case study: Formulating a probiotic sports drink

Module 11: Sensory and Stability Testing

- Shelf-life evaluation in sports foods
- Stability testing methods
- Sensory profiling for product development
- Packaging innovations in sports nutrition
- Consumer feedback incorporation
- Case study: Stability testing of an energy bar

Module 12: Regulatory Standards and Compliance

- Global sports nutrition regulations
- Labeling requirements for supplements
- Banned substances compliance
- Good manufacturing practices (GMP)
- Import/export regulations in nutrition products

- Case study: Navigating FDA compliance for a new supplement

Module 13: Market Trends in Sports Nutrition

- Growth of sports nutrition industry
- Consumer behavior in functional foods
- Influence of e-commerce and digital marketing
- Personalization and AI in nutrition
- Sustainability and eco-friendly trends
- Case study: Analyzing a leading sports nutrition brand

Module 14: Commercialization and Product Launch

- Product development pipeline
- Branding and packaging strategies
- Pricing and market positioning
- Distribution channels in sports nutrition
- Post-launch evaluation and adaptation
- Case study: Launching a new protein bar brand

Module 15: Innovation in Performance Nutrition

- Emerging technologies in formulation
- Use of nanotechnology in supplements
- AI-driven product innovation
- Novel protein sources (insects, algae)
- Future directions in sports performance foods
- Case study: Exploring innovative protein sources in sports nutrition

Training Methodology

- Interactive lectures and expert presentations
- Practical formulation workshops and lab activities
- Real-world case study discussions
- Group projects and problem-solving exercises
- Hands-on product testing and evaluation
- Knowledge assessments and feedback 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