Nutritional Epidemiology Training Course

Professional Development Training Course Outline

Category	Public Health	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Nutritional Epidemiology Training Course is designed to equip learners with cutting-edge competencies in dietary assessment methods, population health analytics, biostatistics, and evidence-based nutrition research. With the rise of AI-driven nutrition analytics, precision nutrition, and global non-communicable disease (NCD) surveillance, the field has become central to modern public health strategies. Participants will gain practical and theoretical expertise to analyze nutritional data, interpret epidemiological findings, and design impactful interventions for disease prevention and health promotion.

In an era defined by big data health science, digital food tracking systems, metabolomics, and machine learning in public health, nutritional epidemiology is transforming how we understand diet-disease relationships. This course integrates traditional epidemiological frameworks with modern innovations such as wearable health technology, genomic nutrition, and global burden of disease modeling. Learners will be empowered to contribute to research, policy-making, and program implementation targeting malnutrition, obesity, cardiovascular diseases, diabetes, and micronutrient deficiencies across diverse populations.

Programme Curriculum

Nutritional Epidemiology Training Course

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Course Duration

5 days

Course Objectives

1. Master nutritional epidemiology principles for public health impact
2. Apply AI-powered dietary data analytics and interpretation tools
3. Conduct population-based dietary exposure assessments
4. Evaluate diet-disease relationships using advanced biostatistics
5. Integrate precision nutrition and personalized diet modeling
6. Analyze global burden of disease (GBD) nutrition datasets
7. Utilize biomarkers in nutritional exposure assessment
8. Design longitudinal cohort and case-control nutrition studies
9. Apply machine learning in nutrition research analytics
10. Assess food insecurity and malnutrition surveillance systems
11. Develop evidence-based dietary guidelines and policies
12. Interpret metabolomics and nutrigenomics data in epidemiology
13. Strengthen public health nutrition intervention strategies

Target Audience

1. Public health nutritionists
2. Epidemiologists and biostatisticians
3. Medical and clinical researchers
4. Dietitians and clinical dietetics professionals
5. Health policy makers and planners
6. Nutrition graduate and postgraduate students
7. NGO and humanitarian health workers
8. Data scientists in health and nutrition sectors

Course Modules

Module 1: Foundations of Nutritional Epidemiology

- Principles of diet-health relationship analysis
- Historical evolution of nutrition research
- Population health and dietary risk factors
- Introduction to epidemiological frameworks
- Case Study: Impact of Mediterranean diet on cardiovascular health in Europe

Module 2: Dietary Assessment Methods

- 24-hour dietary recall techniques
- Food frequency questionnaires (FFQ)

- Digital food tracking and mobile apps
- Measurement error and validation methods
- Case Study: NHANES dietary assessment system (USA nutrition surveillance)

Module 3: Nutritional Biomarkers & Metabolomics

- Biomarkers of nutrient intake and status
- Blood, urine, and tissue nutrient indicators
- Omics technologies in nutrition research
- Laboratory quality control methods
- Case Study: Vitamin D deficiency mapping using serum biomarkers

Module 4: Study Designs in Nutritional Epidemiology

- Cohort, case-control, and cross-sectional studies
- Randomized controlled trials in nutrition
- Bias, confounding, and causality
- Data interpretation frameworks
- Case Study: EPIC Study (European Prospective Investigation into Cancer and Nutrition)

Module 5: Biostatistics & Data Analytics in Nutrition

- Regression models in dietary data
- Survival analysis for disease outcomes
- Big data analytics in nutrition science
- Software tools (R, STATA, Python)
- Case Study: Obesity trend modeling using US population datasets

Module 6: Nutrition & Chronic Disease Epidemiology

- Diet and cardiovascular disease linkage
- Diabetes and obesity epidemiology
- Cancer and dietary risk factors
- Inflammation and metabolic syndrome pathways
- Case Study: Sugar-sweetened beverages and global obesity epidemic

Module 7: Global Nutrition Policy & Public Health Programs

- WHO nutrition guidelines and frameworks
- Food fortification and supplementation programs
- Malnutrition and food security strategies
- Policy impact evaluation methods
- Case Study: Kenya national nutrition intervention programs

Module 8: Advanced Topics – AI, Big Data & Precision Nutrition

- Machine learning in dietary prediction
- Wearable health technology integration
- Nutrigenomics and personalized nutrition
- Digital epidemiology platforms
- Case Study: AI-based dietary recommendation systems in chronic disease prevention

Training Methodology

This course employs a participatory and hands-on approach to ensure practical learning, including:

- Interactive lectures and presentations.
- Group discussions and brainstorming sessions.
- Hands-on exercises using real-world datasets.
- Role-playing and scenario-based simulations.
- Analysis of case studies to bridge theory and practice.
- Peer-to-peer learning and networking.
- Expert-led Q&A sessions.
- Continuous feedback and personalized guidance.

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

Start Date	End Date	Location	Price
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