Field 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

Field Epidemiology Training is a competency-based public health capacity-building program designed to strengthen disease surveillance, outbreak investigation, health data analytics, and emergency response systems. In an era of emerging infectious diseases, pandemic threats, antimicrobial resistance (AMR), and climate-sensitive outbreaks, field epidemiology has become a cornerstone of global health security and One Health surveillance systems. Field Epidemiology Training Course equips health professionals with practical skills in real-time outbreak detection, epidemiological intelligence, risk assessment, and evidence-based decision-making to support national and international health systems.

The program emphasizes hands-on field experience, applied epidemiological methods, and data-driven public health action. Participants are trained to work within Integrated Disease Surveillance and Response (IDSR) frameworks, leveraging modern tools such as digital epidemiology, GIS mapping, rapid diagnostic technologies, and health informatics dashboards. By bridging theory and practice, the course builds a workforce capable of responding to epidemics, pandemics, humanitarian emergencies, and health system challenges, ensuring rapid containment and effective public health interventions.

Programme Curriculum

Field Epidemiology Training Course

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Course Duration

5 days

Course Objectives

1. Master field epidemiology principles and outbreak investigation techniques
2. Apply real-time disease surveillance and early warning systems (EWARS)
3. Conduct descriptive and analytical epidemiological studies
4. Perform epidemic intelligence and situational risk assessment
5. Utilize biostatistics and advanced data analytics for public health
6. Implement Integrated Disease Surveillance and Response (IDSR) strategies
7. Strengthen One Health surveillance and zoonotic disease control
8. Apply GIS mapping and spatial epidemiology tools
9. Develop public health emergency preparedness and response plans
10. Conduct case-control and cohort studies during outbreaks
11. Improve data visualization using epidemiological dashboards
12. Strengthen health communication and risk communication strategies
13. Enhance global health security and pandemic preparedness competencies

Target Audience

1. Public health officers and epidemiologists
2. Medical doctors in field and hospital settings
3. Laboratory scientists and microbiologists
4. Disease surveillance officers (DSOs)
5. Veterinary public health professionals (One Health practitioners)
6. NGO and humanitarian health workers
7. Health data analysts and biostatisticians
8. Ministry of Health emergency response teams

Course Modules

Module 1: Foundations of Field Epidemiology

- Principles of epidemiology and public health surveillance
- Types of epidemiological studies and outbreak definitions
- Disease transmission dynamics and epidemic curves
- Surveillance systems (passive, active, sentinel)
- Case Study: Cholera outbreak investigation in coastal settlements

Module 2: Disease Surveillance Systems & IDSR

- Integrated Disease Surveillance and Response (IDSR) framework
- Data reporting channels and health information systems
- Early warning alert and response systems (EWARS)
- Data quality assurance in surveillance systems
- Case Study: Measles surveillance strengthening in low-resource settings

Module 3: Outbreak Investigation & Response

- Steps in outbreak investigation (1–10 standard steps)
- Case definition development and line listing
- Hypothesis generation and field verification
- Rapid response team coordination
- Case Study: COVID-19 cluster investigation in urban communities

Module 4: Biostatistics & Data Analysis

- Descriptive and inferential statistics in epidemiology
- Measures of disease frequency and association
- Risk ratios, odds ratios, and confidence intervals
- Software tools: Epi Info, R, SPSS basics
- Case Study: Foodborne illness statistical analysis in schools

Module 5: Epidemiological Study Designs

- Cohort, case-control, cross-sectional studies
- Bias, confounding, and validity in studies
- Sampling techniques in field research
- Data interpretation and reporting
- Case Study: Dengue fever risk factor study in endemic regions

Module 6: One Health & Zoonotic Diseases

- Human-animal-environment health interface
- Emerging zoonotic diseases (Ebola, avian influenza)
- Veterinary surveillance integration
- Environmental health risk mapping
- Case Study: Rabies elimination program in rural districts

Module 7: Digital Epidemiology & GIS Mapping

- Introduction to GIS in public health
- Spatial mapping of disease outbreaks
- Mobile data collection tools
- Digital dashboards for real-time monitoring
- Case Study: Malaria hotspot mapping using GIS analytics

Module 8: Public Health Emergency Preparedness

- Incident management systems (IMS)
- Risk communication and community engagement
- Emergency response planning and coordination
- International Health Regulations (IHR 2005) compliance

- Case Study: Ebola preparedness and response simulation exercise

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

Start Date	End Date	Location	Price
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:

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