Training Course on Introduction to Public Health and Epidemiology

Professional Development Training Course Outline

Category	Research and Data Analysis	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

This comprehensive training course offers a foundational understanding of **Public Health** and **Epidemiology**, two critical fields for promoting population health and preventing disease. Participants will explore the core principles of public health, including health promotion, disease prevention, and health equity, while delving into the methodologies of epidemiology, the science of understanding disease patterns and determinants in populations. Through engaging content and practical examples, this course equips individuals with essential knowledge and skills to contribute effectively to public health initiatives and address pressing health challenges in communities. Understanding the interplay between public health strategies and epidemiological investigations is crucial for effective **disease surveillance**, **outbreak management**, and the development of evidence-based interventions to improve overall **community health** and well-being.

The curriculum is designed to provide a robust introduction to key concepts and practical applications in both disciplines. Participants will learn about **disease transmission**, **risk factors**, and the use of **biostatistics** in analyzing health data. The course emphasizes the importance of **public health interventions**, **health policy**, and **community engagement** in addressing health issues. By understanding epidemiological principles, participants will gain insights into identifying **health disparities**, evaluating the effectiveness of **preventive measures**, and contributing to the development of **health programs** that target specific populations. This training fosters a critical understanding of how evidence-based approaches, rooted in epidemiology, underpin effective public health practice and contribute to a healthier society.

Programme Curriculum

Training Course on Introduction to Public Health and Epidemiology

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Course Duration

5 days

Course Objectives

1. Understand the **foundations of public health**, including its history, core functions, and essential services.
2. Define **epidemiology** and its role in public health practice and **disease prevention**.
3. Identify and describe different **types of epidemiological studies** used to investigate health issues.
4. Calculate and interpret basic measures of **disease frequency**, such as prevalence and incidence.
5. Explain the concept of **disease causation** and the role of risk factors in public health.
6. Describe the **chain of infection** and strategies for controlling infectious diseases.
7. Understand the principles of **public health surveillance** and its importance in monitoring health trends.
8. Learn the steps involved in **outbreak investigation** and management.
9. Apply basic **biostatistical methods** to analyze and interpret public health data.
10. Understand the principles of **health promotion** and **disease prevention** strategies at the population level.
11. Recognize the importance of **health equity** and addressing **health disparities** in public health practice.
12. Describe the role of **environmental health** in preventing disease and promoting well-being.
13. Understand the fundamentals of **public health policy** and its impact on community health.

Organizational Benefits

- **Improved Workforce Capacity:** Equips staff with essential skills in disease surveillance, outbreak response, and data analysis.

- **Enhanced Program Effectiveness:** Enables evidence-based decision-making for the design and implementation of public health programs.
- **Better Health Outcomes:** Contributes to improved community health by addressing health issues proactively and effectively.
- **Increased Preparedness:** Strengthens organizational capacity to respond to public health emergencies and disease outbreaks.
- **Data-Driven Decision Making:** Fosters a culture of using data and epidemiological findings to inform policies and interventions.
- **Improved Collaboration:** Enhances communication and collaboration among public health professionals and stakeholders.
- **Enhanced Reputation:** Demonstrates a commitment to public health excellence and community well-being.
- **Cost Savings:** Prevents costly disease outbreaks and reduces the burden on healthcare systems through effective prevention strategies.

Target Audience

1. Public Health Professionals
2. Healthcare Workers
3. Environmental Health Officers
4. Community Health Workers
5. Policy Makers in Health Sector
6. Researchers in Health Sciences
7. Students of Public Health and Related Fields
8. Non-governmental Organization (NGO) Staff involved in Health Programs

Course Outline

Module 1: Introduction to Public Health

- Defining public health: Scope and importance.
- History and evolution of public health.
- Core functions of public health: Assessment, Policy Development, Assurance.
- Essential public health services and their application.
- The ecological model of health and determinants of health.

Module 2: Fundamentals of Epidemiology

- Definition and principles of epidemiology.
- The epidemiological approach to health problems.
- Measures of disease frequency: Prevalence, incidence, rates, ratios, proportions.
- Types of data used in epidemiology: Primary and secondary sources.
- Descriptive epidemiology: Person, place, and time.

Module 3: Epidemiological Study Designs

- Observational studies: Ecological, cross-sectional, case-control, cohort.
- Experimental studies: Randomized controlled trials, community trials.
- Strengths and limitations of different study designs.
- Bias and confounding in epidemiological studies.
- Causality in epidemiology: Bradford Hill criteria.

Module 4: Infectious Disease Epidemiology

- The chain of infection: Agent, host, environment.
- Modes of disease transmission: Direct and indirect.
- Herd immunity and its significance in public health.
- Surveillance and control of infectious diseases.
- Outbreak investigation: Steps and strategies.

Module 5: Chronic Disease Epidemiology

- Understanding the burden of chronic diseases globally and locally.
- Risk factors for major chronic diseases (e.g., cardiovascular disease, cancer, diabetes).
- Natural history of chronic diseases.
- Prevention and control strategies for chronic diseases.
- The role of lifestyle and behavior in chronic disease epidemiology.

Module 6: Biostatistics for Public Health

- Basic concepts in biostatistics: Variables, data types, distributions.
- Measures of central tendency and dispersion.
- Introduction to statistical inference: Hypothesis testing, p-values.
- Common statistical tests used in public health research.
- Interpreting statistical results in the context of public health.

Module 7: Health Promotion and Disease Prevention

- Principles and models of health promotion.
- Levels of prevention: Primary, secondary, tertiary.
- Strategies for health behavior change.
- Community-based health promotion interventions.
- Evaluating the effectiveness of health promotion programs.

Module 8: Public Health Surveillance and Policy

- Purpose and types of public health surveillance systems.
- Data collection, analysis, and dissemination in surveillance.
- Ethical considerations in public health surveillance.
- Introduction to health policy development and implementation.
- The role of evidence in shaping public health policy.

Training Methodology

This course will utilize a blended learning approach incorporating:

- **Interactive Lectures:** Engaging presentations with real-world examples and case studies.
- **Group Discussions:** Facilitated sessions for participants to share experiences and perspectives.
- **Case Study Analysis:** Applying epidemiological principles to analyze public health scenarios.
- **Practical Exercises:** Hands-on activities to reinforce concepts and develop skills in data interpretation.
- **Online Resources:** Access to supplementary materials, readings, and multimedia content.

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

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Physical	$6,000

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