Public Health and Epidemiology Foundations Course

31 January – 4 February 2027
Muscat

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Training Center

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Ref: 1491_210115 **Date:** 31 January – 4 February 2027 **Location:** Muscat **Fees:** 5700 Euro

Overview

Public Health and Epidemiology Foundations Course is a one-week foundation course for healthcare, community, municipal, policy, data, and program personnel, who leave with a Population Health Evidence Workbook. The course connects essential public health functions, determinants and equity, population measures, descriptive and analytic reasoning, surveillance, screening, prevention, study designs, and evidence communication without clinical diagnosis or advanced modeling. Agile Leaders Training Center presents public health and epidemiology foundations for population-level decisions.

Who Should Attend

- Teams beginning work in population health and public health services
- Personnel responsible for community health and prevention activities
- Functions supporting surveillance, program data, and evidence reporting
- Teams responsible for policy, planning, and multisectoral health action
- Personnel supporting screening, health promotion, and service equity

The course assumes basic workplace numeracy and leaves out clinical diagnosis, patient treatment, laboratory methods, and advanced statistical modeling.

Departments and Industries

The course supports organizations that use population evidence to protect health, prevent harm, and improve services.

- Public health and community health services
- Healthcare planning, quality, and prevention functions
- Municipal, environmental, and occupational health teams
- Education, humanitarian, and nonprofit organizations
- Policy, research, insurance, and health-data units

Learning Objectives

By the end of this course, participants will be able to:

- Apply essential public health functions to population issues
- Use incidence, prevalence, risk, rate, and ratio measures
- Analyze health patterns by time, place, and person
- Compare descriptive, observational, and experimental study designs
- Evaluate surveillance, screening, and prevention evidence
- Build concise evidence messages for public health decisions

Course Agenda

Day 1: Public Health Functions and Determinants

- Essential Public Health Functions Map
- Population Health Problem Definition Canvas
- Social and Environmental Determinants Framework
- Health Equity and Distribution Analysis Grid
- Prevention and Health Promotion Action Ladder

Day 2: Epidemiological Measures and Patterns

- Population, Case, Exposure, and Outcome Definitions
- Incidence and Prevalence Calculation Guide
- Risk, Rate, Ratio, and Proportion Comparison
- Time, Place, and Person Description Matrix
- Table, Chart, and Map Selection Method

Day 3: Study Designs and Causal Reasoning

- Descriptive and Analytic Study Design Map
- Cross-Sectional, Cohort, and Case-Control Comparison
- Experimental and Community Intervention Overview
- Bias, Confounding, and Chance Identification Checklist
- Association, Causation, and Alternative Explanation Guide

Day 4: Surveillance, Screening, and Action

- Public Health Surveillance Cycle
- Signal Verification and Baseline Comparison Method
- Screening Pathway Benefit-Harm Appraisal
- Primary, Secondary, and Tertiary Prevention Matrix
- Evidence-to-Action Communication Template

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Day 5: Public Health Evidence Practice

- Suggested Exercise: Public Health Function Selection
- Suggested Exercise: Population Measure Calculation
- Suggested Exercise: Pattern and Study Design Interpretation
- Suggested Exercise: Screening and Prevention Appraisal
- Capstone Exercise: Population Health Evidence Workbook

Practical Exercises

The course uses suggested activities with fictional communicable disease, chronic disease, environmental health, injury, and service-access data.

- Suggested activity: frame a population issue using determinants, equity, and public health functions.
- Suggested activity: calculate measures and describe patterns by time, place, and person.
- Suggested activity: compare study designs and identify bias, confounding, and interpretation limits.
- Suggested activity: appraise a surveillance or screening scenario and communicate an action recommendation.

FAQs

Who suits public health and epidemiology foundations training, and what does it assume?

Healthcare, community, municipal, policy, program, data, prevention, and research-support personnel suit the course; it assumes only basic workplace numeracy.

How does public health and epidemiology foundations training differ from advanced biostatistics?

Public health and epidemiology foundations training emphasizes concepts, measures, study choices, interpretation, surveillance, prevention, and communication rather than advanced probability, statistical software, multivariable modeling, or mathematical derivation.

What is the difference between incidence and prevalence in epidemiology?

Incidence describes new occurrence during a defined period or amount of time at risk, while prevalence describes existing cases in a population at a specified point or across a period.

How is descriptive epidemiology used in public health?

Descriptive epidemiology organizes counts and rates by time, place, and person to identify affected populations, detect patterns, generate questions, guide immediate action, and communicate the scale and distribution of a health issue.

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Conclusion

Participants leave with a Population Health Evidence Workbook containing function maps, determinant grids, measure guides, pattern displays, study-design comparisons, bias checks, surveillance cycles, screening appraisals, and communication templates. The workbook turns population data into structured reasoning. It helps teams explain evidence, recognize limits, and connect public health findings to proportionate action.