

Public Health Emergencies and Biosecurity Training Course

Professional Development Training Course Outline

Category	Defense and Security	Duration	10 Days
Base Fee	\$3,000 USD	Delivery Mode	Online / On-site Hybrid

Course Introduction

Public health emergencies and biosecurity risks have intensified globally due to emerging infectious diseases, climate-induced outbreaks, antimicrobial resistance, and increased mobility of populations. Governments, health agencies, and organizations must be equipped with the skills to detect, manage, and respond to biological threats with speed, accuracy, and coordination. Public Health Emergencies and Biosecurity Training Course provides comprehensive training on emergency preparedness, outbreak investigation, biosurveillance, laboratory safety, operational response planning, and crisis communication. Through practical frameworks and actionable tools, participants learn to strengthen national and institutional resilience against public health crises.

As the world continues to experience pandemics, zoonotic spillovers, and deliberate biological threats, developing robust biosecurity systems is critical for national security and community protection. The course integrates global best practices, One Health approaches, risk communication strategies, and advanced analytics to ensure timely detection and containment of public health threats. Through case studies and scenario-based learning, participants will build capabilities to enhance preparedness, coordinate multi-sectoral responses, and safeguard populations during health emergencies.

Programme Curriculum

Public Health Emergencies and Biosecurity Training Course

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Course Objectives

1. Understand core concepts of public health emergency preparedness and biosecurity.
2. Apply global frameworks such as IHR, One Health, and national biosecurity policies.
3. Strengthen outbreak detection, biosurveillance, and early warning systems.
4. Conduct epidemiological investigations and risk assessments.
5. Implement laboratory biosafety and biosecurity protocols.
6. Coordinate multisectoral emergency response structures.
7. Develop effective incident management and operational planning.
8. Strengthen risk communication and community engagement mechanisms.
9. Manage critical resources such as PPE, vaccines, and medical supplies.
10. Assess and mitigate biological threats including pandemics and bioterrorism.
11. Build data-driven monitoring systems for emergency forecasting.
12. Strengthen institutional resilience through preparedness planning.
13. Apply lessons learned from global emergencies to improve future response capacity.

Organizational Benefits

- Enhanced preparedness and response capacity against biological threats
- Strengthened biosurveillance and early warning capabilities
- Improved accuracy in outbreak detection and data interpretation
- Better coordination between health, security, and emergency sectors
- Reduced vulnerability to pandemics and intentional bio-events
- Improved laboratory biosafety and institutional biosecurity standards
- Strengthened crisis communication and stakeholder trust
- Better resource allocation and emergency logistics management
- Increased compliance with international health regulations
- Enhanced institutional resilience and operational readiness

Target Audiences

- Public health officers and emergency response teams
- Epidemiologists and disease surveillance specialists
- Disaster management and emergency operations personnel
- Laboratory managers and biosafety professionals
- Health policy makers and government officials
- Security agencies involved in biological threat management
- Healthcare administrators and facility managers
- NGOs and international organizations working in emergency health

Course Duration: 10 days

Course Modules

Module 1: Foundations of Public Health Emergencies

- Define key concepts in public health emergencies and biosecurity
- Examine global trends in disease outbreaks and biological risks
- Review emergency preparedness frameworks
- Assess vulnerabilities across health systems
- Identify core principles of emergency response coordination
- Case Study: Global response gaps during a pandemic onset

Module 2: International Health Regulations & One Health Approaches

- Understand IHR obligations and country capacities
- Integrate animal–human–environment surveillance
- Apply multisectoral strategies for outbreak prevention
- Strengthen collaboration between veterinary and public health systems
- Map national biosecurity structures
- Case Study: Zoonotic spillover linked to poor surveillance integration

Module 3: Biosurveillance & Early Warning Systems

- Implement syndromic and digital surveillance tools
- Strengthen event-based and indicator-based surveillance
- Build early warning thresholds and triggers
- Apply real-time data analytics for outbreak detection
- Coordinate community-level reporting channels
- Case Study: Early detection of cholera through enhanced community surveillance

Module 4: Outbreak Investigation & Epidemiological Analysis

- Conduct case identification, description and classification
- Apply epidemiological methods for outbreak confirmation
- Perform contact tracing and exposure mapping
- Analyze epidemic curves and transmission patterns
- Report findings efficiently to decision makers
- Case Study: Field investigation of a measles outbreak

Module 5: Laboratory Biosafety & Biosecurity Management

- Understand biosafety levels and laboratory risk groups
- Implement personal protective and decontamination procedures
- Strengthen sample handling, storage and transport protocols
- Apply biosecurity measures to protect high-risk materials
- Develop laboratory emergency response plans
- Case Study: Containment breach due to inadequate biosafety practices

Module 6: Biological Threat Assessment & Risk Mitigation

- Identify natural, accidental and deliberate biological threats

- Conduct risk assessment and threat modelling
- Implement mitigation strategies across institutions
- Strengthen border health security and screening
- Build threat reporting and intelligence-sharing pathways
- Case Study: Threat assessment of a suspected biological agent

Module 7: Emergency Operations & Incident Management Systems

- Understand the structure of incident management systems
- Activate emergency operations centers
- Assign roles, responsibilities, and command structures
- Streamline decision-making processes during crises
- Coordinate inter-agency operations
- Case Study: National emergency operations during a large-scale outbreak

Module 8: Public Health Logistics & Supply Chain Management

- Manage procurement and distribution of emergency supplies
- Optimize stockpiling and inventory systems
- Implement cold chain and vaccine logistics
- Identify supply chain vulnerabilities during emergencies
- Strengthen partnerships with logistics providers
- Case Study: Supply chain disruptions during an Ebola response

Module 9: Health System Preparedness & Surge Capacity

- Evaluate hospital and clinic readiness
- Strengthen triage systems and emergency care pathways
- Expand staffing and volunteer mobilization
- Manage critical care resources
- Integrate surge planning into national preparedness
- Case Study: Surge capacity challenges during COVID-19 peaks

Module 10: Risk Communication & Community Engagement

- Develop crisis communication strategies
- Strengthen culturally appropriate messaging
- Manage misinformation and public anxiety
- Collaborate with media and community leaders
- Build trust through transparency and accountability
- Case Study: Communication failures during a vaccine rollout

Module 11: Emergency Response for Chemical, Biological & Radiological Events

- Differentiate between CBR threats and response measures
- Implement detection and decontamination procedures
- Coordinate cross-sector emergency responses
- Strengthen protection protocols for first responders
- Evaluate long-term impacts on health and environment
- Case Study: Multi-agency response to a chemical exposure event

Module 12: Mental Health & Psychosocial Support in Emergencies

- Identify psychological impacts on responders and communities
- Provide supportive services for affected populations
- Implement stress management and resilience strategies
- Coordinate psychosocial first aid teams
- Integrate mental health into emergency planning
- Case Study: Psychosocial interventions after a disaster

Module 13: Data Management, Forecasting & Decision Support

- Collect high-quality surveillance and emergency data
- Apply analytic tools to forecast outbreak scenarios
- Use dashboards for decision support
- Integrate data sharing across agencies
- Ensure data privacy and ethical management
- Case Study: Predictive modelling for dengue response

Module 14: Strengthening National Biosecurity Systems

- Develop national biosecurity policies and strategies
- Create institutional oversight and governance structures
- Conduct biosecurity audits and compliance reviews
- Build coordination between civilian and security sectors
- Monitor implementation of national action plans
- Case Study: National biosecurity reforms in response to a threat

Module 15: Recovery, After-Action Reviews & Resilience Building

- Conduct after-action reviews to capture lessons
- Implement recovery plans for affected communities
- Strengthen long-term resilience strategies
- Build systems to prevent recurrence of emergencies
- Document best practices for future preparedness
- Case Study: Lessons learned from a major health system disruption

Training Methodology

- Trainer-led presentations and expert demonstrations
- Group activities using real emergency scenarios
- Case study analysis and role-based simulations
- Practical exercises in risk assessment and response planning
- Tools, templates, and checklists for institutional application
- Action plan development for strengthening preparedness

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.com 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
07 Sep 2026	18 Sep 2026	Physical	\$3,000
14 Sep 2026	25 Sep 2026	Physical	\$3,000
21 Sep 2026	02 Oct 2026	Physical	\$3,000
28 Sep 2026	09 Oct 2026	Physical	\$3,000
05 Oct 2026	16 Oct 2026	Physical	\$3,000
12 Oct 2026	23 Oct 2026	Physical	\$3,000
19 Oct 2026	30 Oct 2026	Physical	\$3,000
26 Oct 2026	06 Nov 2026	Physical	\$3,000

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