Wildlife Epidemiology and Disease Ecology Training Course

Professional Development Training Course Outline

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

Course Introduction

Wildlife epidemiology and disease ecology Training Course are rapidly emerging fields that shape our understanding of how diseases spread, adapt, and impact biodiversity, public health, and ecosystem sustainability. This course provides a deep insight into the ecological dynamics of pathogens, their transmission among wildlife populations, and the implications for global health security. With wildlife? Çôhuman interfaces expanding due to deforestation, climate change, and urbanization, this training integrates cutting-edge research, applied conservation strategies, and evidence-based practices to empower participants with advanced knowledge.

This program is designed with a practical and research-driven approach that focuses on zoonotic diseases, wildlife population health monitoring, ecological modeling, and risk analysis. By leveraging modern tools in disease surveillance, bioinformatics, and ecological assessment, participants will learn how to evaluate and mitigate risks associated with emerging infectious diseases. The course emphasizes interdisciplinary collaboration between ecologists, veterinarians, conservationists, and public health experts to build resilience in managing wildlife health challenges globally.

Programme Curriculum

Wildlife Epidemiology and Disease Ecology Training Course

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Course Objectives

1. To analyze the ecological drivers of wildlife diseases using trending epidemiological frameworks.
2. To develop expertise in wildlife health surveillance systems and digital data integration.
3. To apply advanced statistical modeling tools for predicting disease outbreaks in wildlife populations.
4. To examine zoonotic disease spillover risks at wildlife?Çôlivestock?Çôhuman interfaces.
5. To evaluate the impacts of climate change on wildlife disease transmission pathways.
6. To implement innovative field-based diagnostic and sampling techniques.
7. To strengthen skills in One Health approaches for managing transboundary animal diseases.
8. To investigate case studies on emerging infectious diseases with global significance.
9. To enhance capacity in using GIS and remote sensing for wildlife disease mapping.
10. To promote sustainable conservation practices that reduce disease threats in biodiversity hotspots.
11. To design integrated response strategies for wildlife disease emergencies.
12. To assess socio-economic implications of wildlife disease outbreaks in local communities.
13. To foster interdisciplinary collaboration in wildlife epidemiology research and policy development.

Organizational Benefits

1. Strengthened institutional capacity in wildlife health management.
2. Improved readiness for zoonotic disease outbreaks.
3. Access to global wildlife health monitoring networks.
4. Enhanced organizational reputation in biodiversity conservation.
5. Practical skills in data-driven decision-making.
6. Cost savings from early detection of emerging diseases.
7. Alignment with international One Health initiatives.
8. Integration of climate resilience strategies into operations.
9. Increased stakeholder engagement in wildlife health projects.
10. Contribution to global Sustainable Development Goals.

Target Audiences

1. Wildlife veterinarians
2. Conservation biologists
3. Epidemiologists
4. Public health professionals
5. Ecologists
6. Policy makers and planners
7. Environmental NGOs
8. Academic researchers

Course Duration: 5 days

Course Modules

Module 1: Introduction to Wildlife Epidemiology and Disease Ecology

- Understanding wildlife disease ecology principles
- Key concepts in epidemiology of wild populations
- Role of biodiversity in disease regulation
- Wildlife disease surveillance frameworks
- Interdisciplinary nature of wildlife epidemiology
- Case study: White-nose syndrome in bats

Module 2: Zoonotic Diseases and Spillover Events

- Defining zoonoses and host-pathogen interactions
- Human-wildlife conflict and disease emergence
- Ecological factors in spillover events
- Global health implications of zoonotic outbreaks
- Tools for early warning systems
- Case study: Ebola virus transmission dynamics

Module 3: Climate Change and Disease Ecology

- Climate variables influencing pathogens
- Shifts in vector-borne disease ranges
- Impact on wildlife population health
- Adaptation and mitigation strategies
- Predictive climate-disease models
- Case study: Avian malaria in Hawaiian birds

Module 4: Wildlife Disease Surveillance Systems

- Designing surveillance programs
- Community-based participatory monitoring
- Molecular diagnostic techniques
- Integration of digital health platforms
- Role of international collaborations
- Case study: Global avian influenza surveillance

Module 5: GIS and Remote Sensing in Disease Mapping

- Principles of GIS in epidemiology
- Remote sensing for habitat analysis
- Data visualization of disease hotspots
- Geospatial modeling of pathogen spread
- Integrating environmental variables into maps
- Case study: Rift Valley fever distribution mapping

Module 6: One Health and Wildlife Epidemiology

- Core principles of One Health
- Cross-sectoral collaborations in health security
- Wildlife-livestock-human disease interfaces

- Policy frameworks supporting One Health
- Implementation challenges in field settings
- Case study: Nipah virus outbreaks in Asia

Module 7: Diagnostic and Field Sampling Techniques

- Standard methods for wildlife sample collection
- Laboratory biosafety protocols
- Portable diagnostic tools in the field
- Advances in molecular epidemiology
- Challenges in wildlife diagnostics
- Case study: Canine distemper in wild carnivores

Module 8: Conservation and Disease Management Strategies

- Linking conservation biology with disease ecology
- Habitat restoration for disease prevention
- Vaccination strategies in wild populations
- Stakeholder engagement in disease mitigation
- Ethical considerations in wildlife health management
- Case study: Black-footed ferret recovery programs

Training Methodology

- Interactive lectures and expert-led discussions
- Hands-on GIS and data analysis workshops
- Group work and collaborative projects
- Case study analysis with real-world examples
- Field simulations and diagnostic demonstrations
- Participant presentations for knowledge sharing

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
23 Nov 2026	27 Nov 2026	Physical	$6,000

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