

Public Health Informatics 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

Public Health Informatics is a rapidly evolving interdisciplinary field that integrates health data science, digital health systems, epidemiology, artificial intelligence, and information technology to improve population health outcomes. Public Health Informatics Training Course is designed to equip learners with advanced competencies in health data analytics, disease surveillance systems, electronic health records (EHR), health information systems (HIS), and digital epidemiology. With the rise of global health threats, pandemics, and data-driven decision-making, Public Health Informatics has become a critical pillar in modern healthcare transformation.

This comprehensive program focuses on building practical and analytical skills required to design, implement, and manage real-time health information systems, AI-powered disease prediction models, interoperable health data platforms, and digital public health surveillance tools. Participants will gain hands-on experience in leveraging big data in healthcare, machine learning for outbreak detection, mobile health (mHealth) solutions, and cloud-based health informatics systems, preparing them for high-demand roles in global health organizations, governments, NGOs, and healthcare technology industries.

Programme Curriculum

Public Health Informatics Training Course

Introduction

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Course Duration

5 days

Course Objectives

1. Understand fundamentals of Public Health Informatics and Digital Health Transformation
2. Apply health data analytics and predictive modeling in epidemiology
3. Develop skills in electronic health records (EHR) management systems
4. Implement real-time disease surveillance and outbreak detection systems
5. Utilize artificial intelligence in healthcare decision-making
6. Design interoperable health information systems (HIS)
7. Analyze big data in public health and population health metrics
8. Strengthen data privacy, cybersecurity, and health data governance
9. Integrate mobile health (mHealth) and telemedicine platforms
10. Apply geospatial information systems (GIS) in disease mapping
11. Improve health informatics workflow automation and optimization
12. Develop capacity in cloud-based health data infrastructure
13. Enhance skills in global health informatics leadership and policy development

Target Audience

1. Public health professionals and epidemiologists
2. Healthcare IT specialists and system analysts
3. Medical doctors and clinical researchers
4. Data scientists and health data analysts
5. Government health policymakers and planners
6. NGO and global health program managers
7. Biomedical and health informatics students
8. Digital health entrepreneurs and innovators

Course Modules

Module 1: Foundations of Public Health Informatics

- Overview of digital health ecosystems
- Role of informatics in population health
- Evolution of health information systems
- Key terminologies and frameworks
- Public health data lifecycle
- **Case Study:** COVID-19 digital surveillance systems in South Korea

Module 2: Health Data Analytics & Epidemiology

- Descriptive and predictive analytics
- Epidemiological modeling techniques
- Data cleaning and preprocessing
- Visualization of health trends
- Statistical tools for outbreak analysis
- **Case Study:** Ebola outbreak prediction using data modeling in West Africa

Module 3: Electronic Health Records (EHR) Systems

- Structure of EHR systems
- Interoperability standards (HL7, FHIR)
- Clinical data integration
- Workflow optimization in hospitals
- EHR security protocols
- **Case Study:** Nationwide EHR implementation in Estonia

Module 4: Disease Surveillance & Outbreak Detection

- Real-time surveillance systems
- Syndromic surveillance techniques
- Early warning systems
- Reporting frameworks
- Public health alert systems
- **Case Study:** Global Influenza Surveillance and Response System (GISRS)

Module 5: Artificial Intelligence in Public Health

- Machine learning in disease prediction
- AI-based diagnostic tools
- Natural language processing in healthcare
- Risk stratification models
- Ethical AI in healthcare
- **Case Study:** AI-powered COVID-19 diagnosis tools in China

Module 6: Health Information Systems (HIS) & Interoperability

- HIS architecture and components
- Data exchange standards
- System integration strategies
- Cloud-based HIS solutions
- Data quality management
- **Case Study:** Rwanda national health information system integration

Module 7: Mobile Health (mHealth) & Telemedicine

- Mobile health applications
- Remote patient monitoring systems
- Telehealth platforms
- SMS-based health interventions
- Digital health accessibility
- **Case Study:** mHealth maternal health program in India

Module 8: GIS & Global Health Informatics

- Geographic Information Systems in health
- Disease mapping and spatial analysis
- Climate and health relationships
- Health resource allocation mapping
- Global health data dashboards
- **Case Study:** Malaria mapping and control strategies in sub-Saharan Africa

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.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	11 Sep 2026	Online	\$1,500
14 Sep 2026	18 Sep 2026	Online	\$1,500
21 Sep 2026	25 Sep 2026	Online	\$1,500
28 Sep 2026	02 Oct 2026	Online	\$1,500
05 Oct 2026	09 Oct 2026	Online	\$1,500
12 Oct 2026	16 Oct 2026	Online	\$1,500
19 Oct 2026	23 Oct 2026	Online	\$1,500
26 Oct 2026	30 Oct 2026	Online	\$1,500

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