CERTIFICATE IN APPLIED HEALTH INFORMATICS CURRICULUM
(LMIC-Focused | Hybrid Delivery | Moodle LMS)

1. PROGRAM OVERVIEW

Program Title: Certificate in Applied Health Informatics
Duration: 6 Months (24 Weeks)
Credit Equivalent: ~12 – 15 Academic Credits (estimated)
Delivery Mode: Hybrid (Asynchronous + Monthly Live Sessions)
Learning Platform: Moodle LMS
Tracks: Clinical & Care delivery (CCD) and Digital Health Systems (DHS)
This Applied Health Informatics Certificate Program curriculum is designed to explicitly align with the World Health Organization (WHO) Digital Health Workforce Framework and International Medical Informatics Association (IMIA) Recommendations on Health Informatics Education

2. PROGRAM PURPOSE

This program is designed to develop a **practice-ready health informatics workforce** capable of supporting digital health implementation, improving data quality, and strengthening healthcare delivery systems – particularly in **low- and middle-income countries (LMICs)**.
The curriculum integrates **clinical workflows, digital systems, and data use** to prepare learners for roles in:

- Health system strengthening
- Digital transformation initiatives
- Oncology and population health data systems
- Research and data-driven decision-making

3. PROGRAM LEARNING OUTCOMES

Upon completion, learners will be able to:

- Explain foundational concepts of health informatics and digital health systems
- Analyze clinical workflows and identify informatics-driven improvements
- Use and evaluate electronic health records (EHRs) in real-world settings
- Apply data standards and interoperability principles
- Improve clinical documentation and data quality
- Understand data governance, privacy, and ethical considerations
- Support population health reporting and surveillance systems
- Design basic health information system architectures
- Develop and present an applied informatics solution through a capstone project

4. Program Structure

Core Courses

Course Code	Course Title
AHI-CCD-C101	Foundations of Health Informatics
AHI-CCD-C201	Clinical Workflow & Nursing Informatics
AHI-DHS-C202	Health Data Standards & Interoperability
AHI-DHS-C201	Electronic Health Records & Health IT Systems
AHI-CCD-C202	Clinical Documentation Improvement
AHI-DHS-C202	Health Systems Architecture & Digital Infrastructure
AHI-CCD-C301	Public Health Informatics & Global Population Health
AHI-DHS-C301	Data Security, Privacy & Ethics
AHI-C108	Research Informatics & Data Management

Electives

Course Code	Course Title
AHI-E201	Pharmacy Informatics
AHI-E202	Telehealth & Digital Health
AHI-E203	Imaging Informatics
AHI-E204	Laboratory & Pathology Informatics

Capstone Project

Course Code	Course Title
AHI-CAP200	Applied Informatics Capstone Project

COURSE DESCRIPTIONS (CORE)

AHI-CCD-C101: Foundations of Health Informatics

Introduces core concepts of health informatics, including data flow, informatics domains, and LMIC health system challenges.

AHI-CCD-C201: Clinical Workflow & Nursing Informatics

Focuses on workflow mapping, nursing documentation, and care coordination processes.

AHI-DHS-C201: Electronic Health Records & Health IT Systems
Hands-on course exploring EHR functionality (OpenMRS), documentation workflows, and system design.

AHI-DHS-C202: Health Data Standards & Interoperability
Covers data standards, coding systems, and interoperability frameworks enabling system integration.

AHI-CCD-C202: Clinical Documentation Improvement
Develops skills in structured documentation, coding, and improving data quality for care and research.

AHI-DHS-C203: Health Systems Architecture & Digital Infrastructure
Provides a systems-level understanding of digital health infrastructure and architecture design.

AHI-CCD-C301: Public Health Informatics & Global Population Health
Examines disease surveillance, DHIS2 systems, and population health analytics.

AHI-DHS-C301: Data Security, Privacy & Ethics
Explores ethical, legal, and cybersecurity considerations in digital health systems.

AHI-C108: Research Informatics & Data Management
Introduces research workflows, data governance, and real-world evidence.

6. CAPSTONE PROJECT

The capstone project allows learners to apply informatics concepts to solve a real-world healthcare problem.

Components

- Problem identification
- Workflow and system analysis
- Solution design
- Implementation plan
- Final presentation

Expected Outputs

- Written project report
- Presentation
- Applied solution framework

7. TECHNOLOGY REQUIREMENTS

Students are required to have:

- Internet-enabled device (laptop recommended)
- Stable internet connection
- Access to Moodle LMS
- Basic digital literacy

8. ASSESSMENT STRATEGY

Component	Weight
Weekly Quizzes	20%
Assignments/Labs	30%
Discussion Participation	20%
Capstone Project	30%

9. TECHNOLOGY REQUIREMENTS

ACADEMIC POLICIES

Attendance & Engagement

- Participation in discussions is required
- Completion of assignments is mandatory

Academic Integrity

- All submissions must be original
- Proper citation required

Late Submission Policy

- Late work may incur penalties unless approved

10. CERTIFICATE REQUIREMENTS

To receive the certificate, learners must:

- Complete 6 core courses
- Complete at least one elective
- Achieve minimum passing grade (≥80%)
- Successfully complete capstone project

10. FINAL STATEMENT

This program is designed to bridge the gap between **healthcare delivery and digital systems**, equipping professionals with the knowledge and skills to drive **sustainable digital health transformation** in LMICs.