Leadership in Health Information Technology for Health Professional Certificate

**Purpose**
By combining formal clinical or public health advanced preparation with course work in health information technology (HIT), individuals will be able to lead the successful deployment and use of HIT to achieve transformational improvement in the quality, safety, outcomes, and thus in the value of health services.

**Requirements**
This certificate requires the completion of 16 credits of graduate course work. Students may petition out of 40% of courses taken elsewhere and or request credit for relevant work experience. Additional admission information can be found at: [http://www.nursing.umn.edu/CPHLI/home.html](http://www.nursing.umn.edu/CPHLI/home.html).

**Eligibility**
Health care and public health professionals with a baccalaureate or advanced degree from an accredited institution with a minimum GPA of 3.0 are eligible. Example degrees would be a BS/B.A., MS, MN, DNP or PhD in Nursing, MD, or BA/BS, MS, or PhD in Pharmacy, Dentistry, Physical Therapy, or other health related degrees. Examples of public health degrees would be a BS/B.A., MPH, MS, or PhD in Public Health. Clinical or public health experience required. A minimum of 2 years of management experience is required if the applicant does not hold an advanced degree.

**For further information, contact:**
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**Required Courses:**

**Course Title: HINF 5510 Applied Health Database Course**
Credits: 3
Method of Delivery: In-Person OR through United – Online only system

Principles of database theory, modeling, design, and manipulation of databases will be introduced, taught with a healthcare applications emphasis. Students will gain experience using a relational database management system (RDMS), and database manipulation will be explored using Structured Query Language (SQL) to compose and execute queries. Students will be able to critically evaluate database query methods and results, and understand their implications for healthcare.

**Course Title: Interdisciplinary Healthcare Informatics, NURS 5115**
Credits: 3
Method of Delivery: 80% Online and 3 In person sessions
100% online for certificate students who attend the 3 scheduled sessions virtually

Examine the implications of informatics for practice, including nursing, public health, and healthcare in general. Describe the role of standards to build a national electronic health record, including vocabularies and classification systems and health record architecture. Discuss issues associated with implementing an electronic health record/management information system. Apply functional requirements and ethical, legislative, and political issues to a use case. Explore global and future informatics issues.
Course Title: Consumer Health Informatics, NURS 5116
Credits: 1
Method of Delivery: 80% Online and 3 In person sessions
100% online for certificate students who attend the 3 scheduled sessions virtually

Examine consumer preferences, information needs, and information use for self. Analyze consumer quality, credibility of consumer health information, and consumer on-line strategies for improving health. Examine personal health record applications to support individual, family, and community information needs. Relate the power-shift, ethical, and legal issues affecting or resulting from consumer health informatics.

Course Title: System Analysis and Design, NURS 6105
Credits: 3
Method of Delivery: 80% Online and 3 In person sessions
100% online for certificate students who attend the 3 scheduled sessions virtually

Examine the role of the informatician in an interprofessional team for analysis and design of information systems. Integrates concepts and theories of systems analysis, system life cycle, project management, system requirements, human factors, and evaluation of effective use of health information systems. Examples of assignments: working with a clinical agency to analyze workflow for a use case in preparation for implementing an EHR.

Course Title: Knowledge Representation & Interoperability, NURS 7105
Credits: 2
Method of Delivery: 80% Online and 3 In person sessions
100% online for certificate students who attend the 3 scheduled sessions virtually

Examines conceptual and operational aspects of knowledge representation structures in nursing and health care, including standards and interoperability. Students relate representation of data and information in the electronic health record and critically analyze issues for interoperability. Stakeholder values and ethical issues of knowledge representation are explored. Assignments include looking at specific populations, data sources, and data mapping.

Course Title: Population Health Informatics, NURS 7108
Credits: 2
Method of Delivery: 80% Online and 3 In person sessions
100% online for certificate students who attend the 3 scheduled sessions virtually

Examine standards, interoperability, and integration of information systems for population health. Analyze population health use cases for potential benefits and legal, ethical, and practical issues related to the development of population health information systems. Students select a use case and analyze multiple data sources and how these can be integrated to example factors influencing a population health condition.

Course Title: Clinical Decision Support, NURS 7113
Credits: 2
Method of Delivery: 80% Online and 3 In person sessions
100% online for certificate students who attend the 3 scheduled sessions virtually

Examine principles and concepts of knowledge management and decision making for support of clinical practice. Design a clinical decision support intervention and examine the legal, ethical, and practical issues related to its implementation and maintenance of CDS interventions. Students partner with clinical, public health, or industry partners to evaluate specific types of clinical decision, the data structure, and recommend specific types of CDS tools for improving decision making.