

January 6, 2006

**Dual Degree Program:
MLS/ MS in Health Informatics**

**Indiana University
School of Library & Information Science - Indianapolis
School of Informatics - Indianapolis**

Executive Summary

The emerging discipline of healthcare informatics is largely due to advances in computing and communications technologies in the healthcare industry, an increased reliance on computer-based knowledge management applications, and the need for knowledge retrieval and management expertise. Healthcare is a trillion dollar industry, with employers seeking out individuals who possess communication and problem solving abilities, technological skills, and an understanding of the possibilities that new technologies promise for the healthcare industry. There exists a critical need for graduate professional education in healthcare informatics to meet the increasing breadth and depth in the areas of the computerized patient record, cost reimbursement, and integrated health information systems.

The IU School of Library & Information Science at Indianapolis (SLIS-Indy) and the IU School of Informatics at Indianapolis (Informatics-Indy) propose to combine two existing programs to create a 60-credit, master's level dual-degree program, leading to Master of Library Science (30 credit hours) and a Master of Science in Health Informatics (24 credit hours; 6 thesis credits). The MLS/MS in Health Informatics graduate program is distinguished by its socio-technological orientation.

The proposed program promotes the study of the interconnections of social, behavioral, and technological issues associated with the use of information and communication technologies. Students will work in a variety of healthcare settings to select and implement health information management systems; apply these systems to patient care, clinical practice, and research; and effectively utilize the data and knowledge supplied by these systems. Graduates will possess the skills and knowledge to pursue successful careers that focus on human and technological issues of informatics and knowledge management in healthcare. The following skills and competencies are emphasized:

- Understanding of the technological aspects of computing systems operations
- Ability to adapt, assess and apply new trends in information technology
- Well-developed problem-solving skills
- Well-developed communications skills to clearly convey solutions and observations to others
- Understanding of social and ethical principles as they relate to IT issues in healthcare
- Ability to prepare and apply policies and procedures that support the management of information resources
- Ability to manage, evaluate, and preserve print and electronic information resources
- Understanding of and ability to apply principles of representation and systems of organization
- Understanding of a wide range of organizational structures and management and leadership styles
- Ability to demonstrate positive attitudes and constructive actions which characterize innovative leadership

- Recognition of the value of collaborative planning and project management; the ability to work in teams
- Ability to apply the interpersonal and organizational skills necessary to manage and evaluate projects and personnel successfully
- Ability to apply research and evaluation methods to investigate questions related to the acquisition, representation, organization, use and/or dissemination of information
- Comprehension of the social, political, and legal aspects of information creation, access, and ownership

Proposal Development

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Expected Enrollment

It is anticipated that 5 – 10 students will take part in this program during the first year. Because many of the courses are offered online and there is a growing demand for professional health care information experts, it is expected that program enrollment may double or triple within several years.

Required Resources

Support for and faculty access to needed resources is provided by the SLIS-Indy and Informatics-Indy. No additional resources are required.

Admissions Requirements and Procedures

Students must apply for admission to the master's programs of both the School of Library and Information Science and the School of Informatics. Admissions criteria established for each program must be met. To graduate under the dual degree option, the two degrees must be awarded simultaneously.

Minimum overall GPA

Students will be required to receive a final overall grade point average of 3.0 or better. The minimum grade that will be accepted in any single course is B-.

Maximum Time for Program Completion

The maximum time for program completion is six years. Because continuity in the program allows better reinforcement of principles and course concepts, students who have been admitted to the program are expected to remain in course work with no significant breaks (e.g., more than two

semesters) between courses. Many students enrolled in this program will be part-time students, employed full-time.

Proposed Curriculum

60 credit dual degree program

MLS: 30 credit hours

MS in Health Informatics: 24 course credits; 6 thesis credits

Prerequisites⁺

Computing (3 cr)

INFO I500 or SLIS L401 or CSCI N301

Science: anatomy, biology, or physiology

(3 cr, 200-level or higher, including a laboratory component)

Examples of pre-requisite courses taken at IUPUI include:

BIOL N261 Human Anatomy

BIOL N21 Human Physiology 7

BIOL N212/N213 Biology

Medical Terminology

2 cr (e.g. HIA M330 or CLAS C209 or others by departmental approval)

Statistics

3 cr (e.g. SPEA K300 or PSY B305 or others by departmental approval)

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| <ul style="list-style-type: none">+ Computing prerequisites must be completed prior to admission. Credits earned in 200-, 300-, or 400-level courses do not count towards the master's degrees; credits earned in INFO I500 do count towards the M.S. in Health Informatics.+ SLIS will waive its L401 requirement for students in the dual degree program.+ Informatics has a statistics prerequisite for admission and a graduate requirement. Informatics is willing to accept L509 for the core graduate requirement.+ Informatics usually waives a formal medical terminology course for individuals who have experience in healthcare. |
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Core (all 3 cr. unless otherwise noted)

Required (36 - 39 cr.)

SLIS L505 Organization and Representation of Knowledge and Information

SLIS L509 Introduction to Research and Statistics

SLIS L524 Information Sources and Services

SLIS L528 Collection Development and Management

SLIS L559 Introduction to Health Sciences Librarianship

SLIS L570 Online Information Retrieval

INFO I501 Intro to Informatics

INFO I502 Information Management

INFO I503 Social Impact of IT

INFO I530 Health Informatics Applications

SPHA H501 US Health Care System (+for students with no healthcare background)

INFO I691 Thesis for Health Informatics (6 cr.)

Directed (Select a minimum of 12 - 15 cr. All courses are 3 cr. unless otherwise noted)

SLIS L546 User-Centered Database Design

SLIS L597/I635 Consumer Health Informatics

SLIS L620 Library Resources and Technologies for Patrons with Special Needs

SLIS L651 Evaluation of Library Sources and Services or L643 Evaluation of Information Systems

INFO I505 Project Management

INFO I535 Clinical Information Systems

Electives (Partial list below; students may select up to 6 or 9 cr. All courses are 3 cr. unless otherwise noted)

SLIS L520 Bibliographic Management and Control

SLIS L526 Library Automation

SLIS L542 Introduction to Human-Computer Interaction

SLIS L545 Systems Analysis and Design

SLIS L548 Computer Programming for Information Management

SLIS L563 Information Policies, Economics, and the Law

SLIS L566 Digital Libraries

SLIS L571 Information Architecture for the Web / Information Networking

SLIS L583 Indexing Theory and Practice

SLIS L596 Internship in Library and Information Science

SLIS L624 Information in Science and Technology

INFO I512 Scientific Data Management

INFO I540 Data Mining for Security

INFO I590 Prototyping for Interactive Systems

INFO I590 Health Applications for GIS

INFO I590 Scientific Applications of XML