2013 Biennial Report
Indiana University School of Informatics and Computing
Department of Information and Library Science (Bloomington)
Department of Library and Information Science (Indianapolis)

The Committee on Accreditation granted continuing accreditation to the Master of

Information Science (MIS) and Master of Library Science (MLS) programs on June 24, 2012.

Outstanding questions were addressed in subsequent special reports, which the Committee

accepted as satisfactory responses on April 13, 2013. This is the first biennial report since

reaccreditation, with the next comprehensive review anticipated in spring 2019.

As discussed with the Review Panel and with the Committee during our review in 2012,

the School of Library and Information Science (SLIS) has merged with the School of Informatics

to form the School of Informatics and Computing (SoIC). This document reports on the

preparation for and progress of the merger, which was effective July 1, 2013. Like SLIS, SoIC is

what Indiana University calls a core school: it has a presence on both the Bloomington and

Indianapolis campuses. As discussed below, this provides an effective way to maintain useful

consistency in programs while adapting the offerings to the needs of various constituencies. The

merger proposal, approved by the university Trustees on October 12, 2012, states:

> The information age has evolved in fundamental and exciting ways that more
>
> deeply link information and computing, and Indiana University is in a particularly
>
> strong position to address this evolution. ... This expanding scope for information
>
> and computing highlights the importance of both the theoretical foundations and
>
> the practical understanding of information organization, analysis and use, as well
>
> as a broad array of foundational and applied areas of computing. As ever-
>
> increasing volumes of data threaten to overwhelm citizens and researchers alike,

students and researchers need support from the documentary tradition and related

expertise on how information can be acquired, represented and organized to

facilitate its effective and efficient use. At the same time, applications of

computing in areas including health and life sciences, business and many more

increasingly blend computational and information-based approaches and

techniques. These forces are spawning new academic areas, such as data science,

that blend both long-standing and emergent techniques spanning computer,

information and library science.

Merger to form the School of Informatics and Computing

Throughout the 2012-2013 academic year, faculty members and staff from SLIS met with

their SoIC counterparts. The overall understanding was that the merged school would have three

academic units on each campus:

Bloomington	Indianapolis
Computer Science	BioHealth Informatics
Informatics	Human-Centered Computing
Information and Library Science	Library and Information Science

Representation on faculty planning committees included equal representation from each

unit. This representation, plus the diligent work of SLIS faculty members, helped assure the

consideration of library and information science perspectives in the new school's constitution,

bylaws, promotion and tenure guidelines, and other governance documents. The equal

representation for each academic unit has been maintained in the governance documents for the merged school.

New Administrative Structure

The Department of Information and Library Science (Bloomington) is the location for residential programs in information and library science, especially specializations and dual degree programs that make use of the research university's distinctive resources such as the Lilly Library for rare books and manuscripts and the University Archives. The Master of Information Science and Ph.D. degrees are offered only in Bloomington.

The Department of Library and Information Science (Indianapolis) is the focus for addressing the school's responsibilities to the state in providing graduate professional education for librarians, and for specializations in health information and philanthropy. Faculty based at Indianapolis are well connected with professional organizations at the state and national levels.

The Master of Library Science degree is offered through both campuses; it is available entirely online through the Indianapolis campus.

Declining Enrollments

The number of students enrolling in library science graduate programs has declined notably in recent years – for example, the number of credit hours enrolled is down 24% from 2006. MLS enrollment has been hit by the sharp drop in demand for school librarians, a consequence of changes in Indiana state laws. In addition, the economic downturn has reduced the relatively weak demand for librarians that was noted in the 2010 Occupational Outlook from the U.S. Bureau of Labor Statistics. (See Appendix 1 for chart of enrollment numbers.)

Managing the unexpected decline has been a top priority throughout the merging of the schools. Faculty have responded by identifying the programs more closely with the academic missions of the two campuses, by making curricular adjustments, and by taking on more effective teaching assignments. These are discussed in relation to the applicable standards in the body of this report.

The official launch of the combined school (celebrated on September 27, 2013) represented an important re-start of marketing within the new academic context.

I. Mission, Goals, and Objectives

The merger and reconceptualization of the school provides the opportunity for strategic planning. The overall mission of the School of Informatics and Computing is:

to excel and lead in education, research, and outreach spanning and integrating the full breadth of computing and information technology, including the scientific and technical core, a broad range of applications, and human and societal issues and implications.

The School aims to lead the nation in creating a new, broad and interdisciplinary view of computing and information technology, and uses this viewpoint as the foundation of its main areas of emphasis:

• Education and Research

• Economic Development and Entrepreneurship

• Diversity

In the light of enrollment declines, the ILS (Bloomington) and LIS (Indianapolis) departments are each integrating their master's degree programs with the missions of their respective campuses. At Bloomington, the university's flagship residential, doctoral-extensive campus, the Department of Information and Library Science is focusing on increasing enrollment in the Master of Information Science program and maintaining excellence in the Master of Library Science areas that draw on the university's strengths, particularly in preparing academic librarians. Faculty members are also exploring ways to educate undergraduate students and possibly to develop pathways for liberal arts majors into our master's programs. Closer connections with SoIC faculty colleagues provide opportunities for more extensive research collaboration for both faculty and doctoral students.

At Indianapolis, the IUPUI campus is the state's focus for urban research and academic health sciences. The Department of Library and Information Science is developing its strategic path, considering Indianapolis-specific strengths of the school, including support for non-traditional students. A January 2013 survey of Indianapolis-MLS alumni provided information for this review. In August, the Indiana Commission on Higher Education approved the online MLS program, which has become the primary format for the MLS offered through the Indianapolis campus. Integration with state organizations is a central mission at this campus, as is the commitment to public librarianship. Department Chair Rachel Applegate serves on the advisory board for the state-wide library technical assistant program (LTA, at Ivy Tech Community College) and on the Indiana Library Federation Professional Development committee; she is also an evaluator for a Public Libraries Association leadership development project, which allows close communication with important constituencies.

The goals and objectives of the MIS and MLS programs have not changed. They have been useful touchstones for the adjustments to curricula, which are discussed in the next section.

II. Curriculum

The goals and objectives for all programs and the curricula for the Master of Information Science and the Master of Library Science at Indianapolis are unchanged. Faculty at Bloomington revised slightly the MLS curriculum on that campus. The changes are based on advice from recent graduates, other alumni, employers of graduates, and external advisory groups – including comments from the External Review Panel in 2012. The goal is to prepare the Bloomington MLS students, who tend to be younger and less experienced than their Indianapolis counterparts, to meet the expectations of a graduate professional program. In summary, the revised curriculum:

• Removes collection development as a required course and integrates its cross-library-type content into the User Services and Tools course as well as Computer-Based Information Tools. Skills and understanding that are specialized by library type are addressed, for example, in Scholarly Communication, Materials for Youth, Adult Readers Advisory, and courses on information in specific areas and disciplines (science and technology, government information, etc.). The collection development course at IUPUI offers both general principles and type-of-library specialization through more tailored readings and assignments possible in online courses.

• Drops Cataloging as an option for the Represent and Organize Information requirement; Cataloging remains available as an elective course but only Z503 Representation and Organization of Information fulfills the foundation requirement.

• Adds two foundational requirements: Z510 Introduction to Information Studies and a Technology Course Requirement, which can be fulfilled from an array of courses and workshops, ranging from Digital Libraries to Web Programming. Most students take at least one of these courses as an elective; with the change, all students will have at least one graduate-level course or two graduate-level workshops related to technology.

The School administration supported the development of a statement on the coordination of the Master of Library Science program, presented in Appendix 2. To facilitate this change, the course numbers for Bloomington courses now have the "Z" prefix; the IUPUI courses retain the "S." The revised curriculum and its connection with the program goals are in Appendix 3.

Master of Information Science

The only change in the Master of Information Science curriculum is renaming the required introductory course: Z510, formerly Introduction to Information Science, is retitled Introduction to Information Studies. The course is required for both MIS and MLS students in Bloomington and is overseen by the directors of the two programs.

Specializations Added

The faculty at Bloomington approved specializations in Data Science and Information Architecture within both the MLS and MIS degrees.

III. Faculty

There have been no changes in the faculty in the Department of Information and Library Science at Bloomington. In the Department of Library and Information Science at Indianapolis, two faculty members have transferred to other departments within the School of Informatics and

Computing, where their research and teaching interests fit well with departmental strengths. Assistant Professor Xi Nu is now in the department of Human-Centered Computing and Associate Professor Katherine Schilling is in the Department of BioHealth Informatics.

As a response to lower enrollments, teaching assignments focus on core courses and electives with relatively high demand. In Bloomington, summer teaching by tenured and tenure-track faculty has been reduced; Indianapolis continues to include faculty-taught summer courses to support the student population that studies year-round.

IV. Students

The number of students in the Master of Information Science program increased in fall 2013, in part as a result of closer collaboration with the Informatics unit. Enrollment in the MLS programs at both campuses remains lower than in recent years, but seem to have stabilized at Indianapolis (see Appendix 1). Renewed recruitment efforts have emphasized the programs' place within the School, especially as SoIC revises its web presence to reflect the newly-merged school. The availability of the MLS completely online through the IUPUI campus is an important vehicle to reach potential students who are unable to complete courses in residence.

V. Administration and Financial Support

As noted in the introduction, the School of Library and Information Science has become two departments in the merged School of Informatics and Computing. At the Bloomington campus, Debora Shaw is Chair of the Department of Information and Library Science; she reports to Dean Robert Schnabel. On the Indianapolis campus, Rachel Applegate is Chair of the
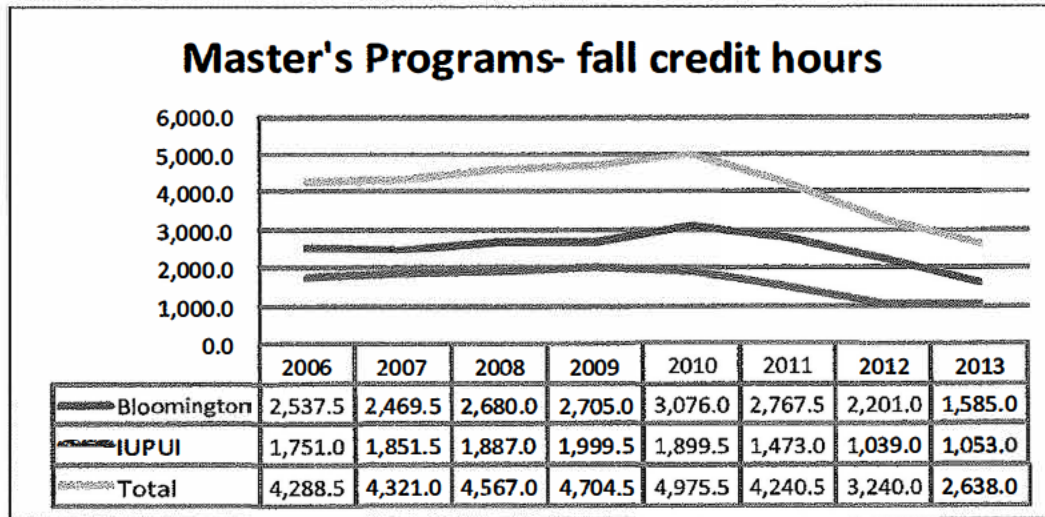
Department of Library and Information Science; she reports to Executive Associate Dean

Mathew Palakal. ILS Associate Professor Howard Rosenbaum is now the Associate Dean for

Graduate Education in the School of Informatics and Computing at Bloomington.

At both campuses, many administrative and support functions are merged at the school

level. The school is subsidizing budget shortfalls and has directed actions to reduce expenses and

increase revenue. At Bloomington, the ILS department maintains staff for admissions/recruiting,

information technology, and some financial/personnel functions but the staff work closely with

school-level counterparts. SoIC faculty and administrators have encouraged cross-departmental

teaching and collaboration to increase student recruitment. The school at Indianapolis, including

the LIS department, now has a single website and SoIC has absorbed most of the administrative

work such as admissions processing.

VI. Physical Resources and Facilities

The physical spaces occupied have not changed since the 2012 site visit. At

Bloomington, three faculty members have moved offices to the Informatics West building, about

a quarter-mile from the ILS department in the Wells Library. These moves facilitate

collaboration among faculty from ILS and Informatics who conduct research on social

informatics.

Appendix 1. Enrollment Trends

Master's Programs- fall credit hours

	2006	2007	2008	2009	2010	2011	2012	2013
Bloomington	2,537.5	2,469.5	2,680.0	2,705.0	3,076.0	2,767.5	2,201.0	1,585.0
IUPUI	1,751.0	1,851.5	1,887.0	1,999.5	1,899.5	1,473.0	1,039.0	1,053.0
Total	4,288.5	4,321.0	4,567.0	4,704.5	4,975.5	4,240.5	3,240.0	2,638.0

Appendix 2. MLS Coordination Agreement

Agreement on Coordination of MLS Program between the Department of Information and Library Science (Bloomington) and the Department of Library and Information Science (IUPUI)

September 18, 2013

The IU School of Informatics and Computing offers one ALA-accredited Master of Library Science degree. The MLS is offered on the Bloomington and IUPUI campuses; both departments adhere to a common set of goals and objectives.
• The Bloomington program is designed for students in residence, many of whom are new to the profession. Required courses are used to assure coverage of essential topics.
• The IUPUI program is available completely online, allowing greater flexibility of course content to fit the career paths of the more experienced students. In addition to required courses, advising helps students achieve coverage of essential topics.

A joint committee facilitates communication about the MLS curriculum and any review and revision of the goals and objectives. Members of this committee are the department chairs and the chairs of the departmental curriculum committees on the two campuses.

Appendix 3 Master of Library Science Curriculum - Bloomington

PREREQUISITE (3 credit hours) - must be fulfilled before completion of 9 credits hours
- Skills Development

Z401 Computer-Based Information Tools

FOUNDATION REQUIREMENTS (18 credit hours) one course from each area
- Approach Professional Issues with Understanding - 3 credit hours

Z510 Introduction to Information Science (new title: Introduction to Information Studies)
*must be fulfilled before completion of 18 credit hours
- Assist and Educate Users - and - Develop and Manage Collections of Information Resources - 3 credit hours

Z501 Reference (new title: User Services and Tools)
- Represent and Organize Information Resources - 3 credit hours

Z503 Representation and Organization
- Manage and Lead Libraries and Other Information Organizations - 3 credit hours

Z551 Library Management
Z552 Academic Library Management
Z553 Public Library Management
Z671 School Media
- Use Research Effectively - 3 credit hours

Z505 Evaluation of Resources and Services
Z506 Introduction to Research (P: completion of 9 credit hours)
- Deploy Information Technologies in Effective and Innovative Ways - 3 credit hours

Z511 Database Design
Z512 Information Systems Design
Z516 Human Computer Interaction
Z517 Web Programming
Z532 Information Architecture for the Web
Z534 Information Retrieval
Z554 Library Systems
Z556 Systems Analysis and Design
Z634 Metadata
Z636 Semantic Web
Z637 Information Visualization
Z652 Digital Libraries
Z656 Information Technology Standardization
Z661 Concepts and Contemporary Issues in Human-Computer Interaction

ELECTIVES: (18 credit hours)

Appendix 4 Master of Library Science Curriculum - Indianapolis
(unchanged since reaccreditation)

PREREQUISITE (3 credit hours) - must be fulfilled before completion of 9 credit hours
S401 Computer-Based Information Tools

FOUNDATION (15 credit hours) one course from each area:
• Assist and Educate Users of Libraries and Information Centers
S501 Reference (3 credit hours)

• Develop and Manage Library Collections
S502 Collection Development and Management (3 credit hours)

• Organize and Represent Information Resources
S503 Organization and Representation of Knowledge and Information (3 credit hours)
S504 Cataloging (3 credit hours)

• Apply Management and Leadership Skills
S551 Library Management (3 credit hours)
S552 Academic Library Management (3 credit hours)
S553 Public Library Management (3 credit hours)
S671 School Media (3 credit hours)

• Conduct and Analyze Research
S506 Introduction to Research (3 credit hours)
S505 Evaluation of Library Sources and Services (3 credit hours)

ELECTIVES (21 credit hours)

Appendix 5 Specializations in Data Science and Information Architecture

The <u>Specialization in Data Science</u> is available with the Master of Information Science and the Master of Library Science degrees. In addition to the basic degree requirements, students must complete:
- ILS courses (3 credit hours)

Z605 Internship in Data Science

- Required courses outside of ILS (9 credits) three of the following:

CSCI B555 Machine Learning

CSCI B649 Cloud Computing

CSCI B669 Scientific Data Management and Preservation

INFO I573 Programming for Science Informatics

STAT S520 Intro to Statistics

STAT S670 Exploratory Data Analysis

- Electives - ILS courses (12 credit hours)

Z503 Representation and Organization

Z512 Information Systems Design

Z532 Information Architecture for the Web

Z534 Information Retrieval Theory and Practice

Z603 Workshop in Library and Information Science (with Specialization Director approval)

Z604 Topics: Information Networks

Z604 Topics: Scholarly Communication

Z634 Metadata

Z636 Semantic Web

Z637 Information Visualization

Z643 The Information Industry

Z661 Concepts and Contemporary Issues in Human-Computer Interaction

The <u>Specialization in Information Architecture</u> is available with the Master of Information Science and the Master of Library Science degrees. In addition to the basic degree requirements, students must complete:
- ILS courses (3 credit hours)

Z690 Captsone in Information Architecture
- Electives - ILS courses (12 credit hours)

Z503 Representation and Organization
Z512 Information Systems Design
Z519 Evaluation of Information Systems
Z520 Information Seeking and Use
Z532 Information Architecture for the Web
Z603 Workshop in Library and Information Science (with Specialization Director approval)
Z604 Topics in Library and Information Science (with Specialization Director approval)
Z633 Indexing
Z634 Metadata
Z635 Ontologies
Z636 Semantic Web
Z637 Information Visualization
Z643 The Information Industry
Z661 Concepts and Contemporary Issues in Human-Computer Interaction