# $\Psi$ indiana university

### University Graduate School 2008-2009 Academic Bulletin

### Library and Information Science

School of Library and Information Science Bloomington

**Dean** Professor Blaise Cronin\*

Departmental E-mail slis@indiana.edu

Departmental URL www.slis.indiana.edu

### **Graduate Faculty**

(An asterisk [\*] denotes membership in the University Graduate School faculty with the endorsement to direct doctoral dissertations.)

### **Distinguished Professors**

David Kaser\* (Emeritus), Herbert White\* (Emeritus)

### Professors

Blaise Cronin\*, Stephen Harter\* (Emeritus), Susan C. Herring\*, Thomas Nisonger\*, Yvonne R. Rogers\*, Debora Shaw\*

### **Associate Professors**

Josefa Abrera\* (Emerita), Katy Börner, Ronald E. Day\*, Hamid Ekbia, Shirley Fitzgibbons\* (Emerita), Elin K. Jacob\*, John C. Paolillo\*, Verna L. Pungitore\* (Emerita), Alice Robbin\*, Howard S. Rosenbaum\*, Judith Serebnick\* (Emerita)

### **Assistant Professors**

Noriko Hara, Lokman Meho, Pnina Shachaf, Kiduk Yang\*

### **Adjunct Professors**

William Aspray\* (Informatics), Michael McRobbie\* (Informatics)

### **Adjunct Assistant Professors**

Kalpana Shankar (Informatics)

Senior Fellow Charles H. Davis

### **Graduate Advisor**

Director of Doctoral Program Elin K. Jacob\*, LI 011, (812) 855-4671

University Graduate School Kirkwood Hall 111 Indiana University Bloomington, IN 47405 (812) 855-8853 Contact: grdschl@indiana.edu

### **Degrees Offered**

Doctor of Philosophy, and, jointly with other academic programs, Master of Library Science and Doctor of Jurisprudence; Master of Information Science and master's degrees in folklore and ethnomusicology, public affairs, and Russian and East European studies; Master of Library Science and master's degree in African American and African Diaspora Studies, art history, comparative literature, English, folklore and ethnomusicology, history, history and philosophy of science, journalism, Latin American and Caribbean studies, music theory or musicology, public affairs, and Russian and East European studies. The School of Library and Information Science offers the Specialist in Library and Information Science, the Master of Library Science, the Master of Information Science, the Master of Library Science with specializations in African studies librarianship, archives and records management, library technology management, music librarianship, rare books and manuscripts librarianship, and the Master of Library Science or Master of Information Science with specialization in chemical information degrees. For further information, see the School of Library and Information Science Bulletin.

### Graduate Certificate in Information Architecture

### Admission Requirements:

Applicants must meet requirements for admission to the master's degree programs in the School of Library and Information Science: www.slis.indiana.edu

### **Course Requirements**

Students must complete 18 graduate credit hours; credits counted toward another degree may not be applied toward the Certificate. Required courses: S515 Information Architecture (3 cr.); S556 Systems Analysis and Design (3 cr.); S512 Information System Design (3 cr.); S633 Indexing (3 cr.); S516 Human Computer Interaction (3 cr.); S690 Capstone in Information Architecture (3 cr.)

### **Special School Requirements**

(See also general University Graduate School requirements.)

## Dual Master's Degree Programs with the University Graduate School

African American and African Diaspora Studies (M.A.) and M.L.S. African Studies (M.A.) and M.L.S. Art History (M.A.) and M.L.S. Comparative Literature (M.A.) and M.L.S. English (M.A.) and M.L.S. Folklore and Ethnomusicology (M.A.) and M.I.S. Folklore and Ethnomusicology (M.A.) and M.L.S. History (M.A.) and M.L.S. History and Philosophy of Science (M.A.) and M.L.S. Journalism (M.A.) and M.L.S. Latin American and Caribbean Studies (M.A.) and M.L.S. Musicology or Music Theory (M.A.) and M.L.S. Russian and East European Studies (M.A.) and M.I.S. Russian and East European Studies (M.A.) and M.L.S.

### African American and African Diaspora Studies (M.A.) and Master of Library Science (M.L.S.)

The dual M.A./M.L.S. program requires completion of a minimum of 58 credit hours of graduate course work. (The degrees, if completed separately, would require 68 credit hours.) Students must apply for admission to the master's programs of both the School of Library and Information Science and the Department of African American and African Diaspora Studies and meet the admissions criteria established for each. The two degrees must be awarded at the same time.

Requirements for the Master of Library Science are as follows:

- 1. Completion of the M.L.S. Foundation courses (15 credit hours).
- 2. Either SLIS S521 Humanities Information or SLIS S522 Social Sciences Information (3 cr.).
- 3. SLIS elective courses (12 cr.) to bring the total of SLIS credit hours completed to 30.

A minimum of 28 credit hours is required in the Department of African American and African Diaspora Studies for the Master of Arts degree. For specific requirements, see the entry for the Department of African American and African Diaspora Studies in this bulletin.

African Studies (M.A.) and Master of Library Science (M.L.S.) The dual MA/MLS program requires completion of a minimum of 56 credit hours of graduate course work, rather than the 66 credit hours required if the two degrees are earned separately. Students must apply for admission to the masters programs of both the School of Library and Information Science and the African Studies Program and meet the admissions criteria established for each. The two degrees must be awarded simultaneously.

In addition to the SLIS S401 pre-requisite, students must complete:

- 1. Completion of the M.L.S. Foundation courses (15 credit hours), with S551 Library Management to fulfill the management and leadership skills requirement
- 2. Either S521 Humanities Information or S522 Social Science Information (3 cr.)
- 3. SLIS elective courses (12 credits). Chosen in consultation with the student's SLIS advisor (an internship related to African Studies Librarianship is strongly advised). Internships may be taken for S605 course credit.

A minimum of 26 credit hours is required in the African Studies

Program for the Master of Arts degree. For specific requirements, see the entry for the African Studies Program in this bulletin.

### Art History (M.A.) and Master of Library Science (M.L.S.)

This program is designed to prepare students for professional library and information specialist positions in fine arts and related libraries and information centers. The program requires a minimum of 60 credit hours of graduate course work including a comprehensive set of required courses and overlapping electives. Students must apply for admission to the master's programs of both the School of Library and Information Science and the School of Fine Arts/History of Art and meet the admission criteria established for each. The two degrees must be awarded simultaneously.

Requirements for the Master of Library Science degree are as follows:

- 1. Completion of SLIS M.L.S. Foundation course requirements (15 credit hours).
- 2. Other required SLIS courses (9 cr.): S521, S651, and S605.
- 3. SLIS elective courses (6 cr.) chosen from among S532, S533, S633, or S652 to bring the total of SLIS credit hours completed to 30.

At least 30 credit hours in the School of Fine Arts are required. Course work must include A500, A575, and no fewer than two seminars in two areas. Also required are four lecture courses at the 400 and 500 levels, at least two of which must be in Western art. See specific requirements under "Art History" in this bulletin.

### Comparative Literature (M.A.) and Master of Library Science (M.L.S.)

This program prepares candidates for positions in academic, research, and other libraries with a humanities orientation. The total program consists of at least 50 graduate credit hours. Students must apply for admission to the master's programs of both the School of Library and Information Science and the Department of Comparative Literature and meet the admission criteria established for each. The two degrees must be awarded simultaneously.

Requirements for the Master of Library Science degree are as follows:

- 1. Completion of SLIS M.L.S. Foundation course requirements (15 credit hours).
- At least 15 credit hours of SLIS elective courses appropriate to the student's background and interests to bring the total of SLIS credit hours to 30.

At least 20 graduate credit hours are required in comparative literature course work. The Department of Comparative Literature requires certification in at least two foreign languages, which does not count toward the 20 credit hour total required for the degree. Emphasis in the course work may be in Western literatures, East-West relations studies, Third World literatures, film studies, or studies of the interrelations of the arts (literature, music, the visual arts). For specific requirements see the entry for the Department of Comparative Literature in this bulletin.

### English (M.A.) and Master of Library Science (M.L.S.)

Study for these two degrees can be combined for a total of 54 credit hours rather than the 66 credit hours required for the two degrees taken separately. Admission to each of the two master's programs is approved separately on the same basis as for applicants not in the dual program. The Department of English requires an English undergraduate major or its equivalent, and the Graduate Record Examination (GRE), both General Test and Subject Test in English Literature. A superior student who has not majored in English may be admitted conditionally, but must remove deficiencies without graduate credit.

Requirements for the Master of Library Science degree are as follows:

- 1. Completion of SLIS M.L.S Foundation courses (15 credit hours);
- 2. SLIS S521 Humanities Information (3 credit hours); and
- 3. SLIS elective courses (12 credit hours) to bring the total of SLIS credit hours completed to 30.

A minimum of 24 credit hours is required in the Department of English. All students must fulfill the core requirements as outlined in the English Department's Master of Arts with Concentration in Literature or Special Field Master of Arts degree requirements. No thesis or examination is required for the M.A. in English. The M.A. in English does require reading proficiency in one of the following languages: French, German, Greek, Italian, Latin, Russian, Spanish.

Both degrees must be awarded simultaneously to receive the benefit of the overlapping electives. Consult the entry for the Department of English in this bulletin for additional details on the M.A. in English.

### Folklore and Ethnomusicology (M.A.) and Master of Information Science (M.I.S.)

Study for these two degrees can be combined for a total of 57 credit hours rather than the 72 credit hours required for the two degrees taken separately. Students take at least 36 graduate credit hours in information science, and at least 21 credit hours in folklore and ethnomusicology. To graduate under the dual-degree option, the two degrees must be awarded simultaneously.

- Master of Information Science (36 credit hours): 15 credit hours of required Foundation/Specialization courses, 21 credit hours of SLIS elective courses.
- Master of Arts in Folklore and Ethnomusicology (21 credit hours): consult the Department of Folklore and Ethnomusi-cology.

Students must apply for admission to the master's programs of both the School of Library and Information Science and the Department of Folklore and Ethnomusicology. Admissions criteria established for each program must be met. For specific M.A. requirements, see the entry for the Department of Folklore and Ethnomusicology in this bulletin.

### Folklore and Ethnomusicology (M.A.) and Master of Library Science (M.L.S.)

Study for these two degrees can be combined for a total of 51 credit hours rather than the 66 credit hours required for the two degrees taken separately. Students take at least 30 graduate credit hours in library and information science, and at least 21 credit hours in folklore and ethnomusicology. To graduate under the dual-degree option, the two degrees must be awarded simultaneously.

- Master of Library Science (30 credit hours): 15 credit hours of required Foundation courses, plus 15 credit hours of SLIS elective courses.
- Master of Arts in Folklore and Ethnomusicology (21 credit hours): Consult the Department of Folklore and Ethnomusicology.

Students must apply for admission to the master's programs of both the School of Library and Information Science and the Department of Folklore and Ethnomusicology. Admissions criteria established for each program must be met. For specific M.A. requirements, see the entry for the Department of Folklore and Ethnomusicology in this bulletin.

### History (M.A.) and Master of Library Science (M.L.S.)

Interest in public history, genealogy, historic preservation, and archives and museum administration creates a demand for professionals with expertise in both historical research and information management. The dual M.L.S./M.A. in history program requires completion of a minimum of 50 credit hours of graduate course work. Students must apply for admission to the master's programs of both the School of Library and Information Science and the Department of History and meet the admission criteria established for each. The two degrees must be awarded simultaneously.

Requirements for the Master of Library Science degree are as follows:

- Completion of SLIS M.L.S. Foundation course requirements (15 credit hours).
- 2. Other required SLIS courses (9 cr.): S521 or S522; S581, S584, or History H547 [Archives], S605.
- 3. SLIS elective courses (6 cr.) to bring the total of SLIS credit hours completed to 30.

A minimum of 20 credit hours is required in the Department of History for the Master of Arts degree. For specific requirements, see the entry for the Department of History in this bulletin.

### History and Philosophy of Science (M.A.) and Master of Library Science (M.L.S.)

This program meets the growing demand for information professionals with a scientific academic specialty and prepares students for a variety of positions in library, research, and archival settings. The program consists of a total of approximately 51 credit hours for both degrees. Students must apply for admission to the master's programs of both the School of Library and Information Science and the Department of History and Philosophy of Science and meet the admission criteria established for each. The two degrees must be awarded simultaneously.

Requirements for the Master of Library Science degree are as follows:

- 1. Completion of SLIS M.L.S. Foundation course requirements (15 credit hours).
- 2. Other required SLIS courses (9 cr.): S523; S581 or S584; S605.
- 3. SLIS elective courses (6 cr.) to bring the total of SLIS credit hours completed to 30.

A minimum of 21 credit hours is required in the Department of History and Philosophy of Science for the Master of Arts degree. For specific requirements, see the entry for the Department of History and Philosophy of Science in this bulletin.

#### Journalism (M.A.) and Master of Library Science (M.L.S.)

The dual M.L.S./M.A. in journalism program provides excellent preparation for professional library and information specialist positions in news media and in corporate, academic, and public libraries. The program consists of a total of approximately 51 credit hours for both degrees. Students must apply for admission to the master's programs of both the School of Library and Information Science and the School of Journalism and meet the admission criteria established for each. The two degrees must be awarded simultaneously.

Requirements for the Master of Library Science degree are as follows:

- 1. Completion of SLIS M.L.S. Foundation course requirements (15 credit hours).
- 2. Other required SLIS courses (9 cr.): S525, S533, and at least one of the following: S521, S522, or S523.
- 3. SLIS elective courses (6 cr.) to bring the total of SLIS credit hours completed to 30.

A minimum of 21 credit hours is required in journalism. For specific requirements contact the School of Journalism, and consult the entry for the School of Journalism in this bulletin.

### Latin American and Caribbean Studies (M.A.) and Master of Library Science (M.L.S.)

The School of Library and Information Science and the Center for Latin American and Caribbean Studies jointly offer a threeyear program that qualifies students for two master's degrees. Study for these two degrees in the dual program (M.A./M.L.S.) can be completed in a total of 51 credit hours rather than the 66 credit hours that would otherwise be required to take the two degrees separately. In the dual degree, specific courses contribute to both degrees. The two degrees must be awarded simultaneously.

Requirements for the Master of Library Science degree are as

follows:

- 1. Completion of SLIS M.L.S. Foundation course requirements (15 credit hours).
- Other required SLIS courses (9 cr.): S533, S605 (under the supervision of the Latin American bibliographer), and S629 (Topic: Latin American Bibliography).
- 3. SLIS elective courses (6 cr.) to bring the total of SLIS credit hours to 30.

Students take 21 credit hours of advanced courses relating to Latin American and Caribbean Studies (LTAM). The interdisciplinary seminar LTAM L501 (3 credits) must be taken, together with 18 credit hours in other LTAM courses or those Latin American and Caribbean Studies courses that are cross-listed with other departments. All other requirements for completion of the Latin American Studies M.A., including language proficiency and thesis or oral examination, remain as listed in the entry for the Department of Latin American and Caribbean Studies in this bulletin.

Application for admission to the dual M.A./M.L.S. degree program must be made to the LTAM program and the University Graduate School for study toward the M.A. and to SLIS for study of the M.L.S. Students must be accepted by all three units in order to be admitted to the program.

### Musicology or Music Theory (M.A.) and Master of Library Science (M.L.S.)

The dual-degree program combines an M.L.S. with an M.A. in musicology or an M.A. or M.M. in music theory. It combines the advantages of top-ranked graduate programs in library and information science and in music, and the librarians and professional staff of one of the country's largest music libraries. Through enrollment in these curricula, students may earn two master's degrees by a combination of work in the School of Library and Information Science (SLIS) and the Jacobs School of Music amounting to approximately 60 credit hours (6 credits are shared between the two degrees). Applicants are expected to hold at least a bachelor's degree in music from an accredited four-year collegiate institution. For this program, students must apply for admission to both schools and the Music Librarianship Specialization and meet the admission criteria established for all three. (The admissions committee for the specialization consists of the IU music librarians.) Degrees from both schools must be awarded simultaneously.

Requirements for the Master of Library Science degree are as follows:

- 1. Completion of SLIS M.L.S. Foundation course requirements (15 credit hours).
- 2. MUS M539 Introduction to Music Bibliography (3 cr.).
- SLIS S605 Internship in Library and Information Science (6 cr.). 3 credits will normally be in music cataloging; the other 3 credits may also be in music cataloging or else in music collection development, reference, or technology (P: M539, S504).
- 4. SLIS S655 Seminar in Music Librarianship (3 cr.) (P: M539,

P or C: S504 or consent of instructor). Music library administration, circulation, collection development, facilities and design, recording collections, reference, and technology; music printing and publishing.

5. SLIS elective courses sufficient to bring the total of SLIS credit hours completed to 30.

For the requirements for the M.A. in musicology or the M.A. or M.M. in music theory, see the Jacobs School of Music Bulletin.

### Russian and East European Studies (M.A.) and Master of Information Science (M.I.S.)

Study for the two degrees can be combined for a total of 60 credit hours rather than the 72 credit hours required for the two degrees taken separately.

Requirements for the Master of Information Science degree are as follows:

- 1. Completion of SLIS M.I.S. Foundation, Cross-Cutting Areas, and Specialization Areas course requirements (15 credit hours).
- SLIS electives (21 cr.), not including SLIS S605 and REEI R620, which are considered part of the Russian and East European Studies degree, chosen in consultation with the advisor, to bring the total of credit hours to 36.

Students take 24 credit hours in Russian and East European Studies, including R600, R601, R620, four area studies courses (one each from the social science group, the historical/geographical group, the sociocultural group, and the literature group), SLIS S605 (in an area pertinent to REEI), and complete all other requirements for the Russian and East European Studies M.A., including the language proficiency exam, M.A. essay, and oral defense.

Application for admission to the dual M.A./M.I.S. degree program must be made to the School of Library and Information Science for study toward the Master of Information Science and to the Russian and East European Institute (REEI) for study toward the Master of Arts degree. Applicants must be accepted by both degree programs. The student must select an M.A. essay committee of three faculty members representing both REEI and the School of Library and Information Science. Both degrees will be awarded simultaneously. Consult the entry for the REEI in this bulletin for details.

### Russian and East European Studies (M.A.) and Master of Library Science (M.L.S.)

Study for the two degrees can be combined for a total of 54 credit hours rather than the 66 credit hours required for the two degrees taken separately.

Requirements for the Master of Library Science degree are as follows:

- 1. Completion of SLIS M.L.S. Foundation course requirements (15 credit hours).
- 2. SLIS electives (15 cr.), not including SLIS S605 and REEI R620 (SLIS S629), which are considered part of the Russian and

East European Studies degree, chosen in consultation with the advisor, to bring the total of credit hours to 30.

3. Students take 24 credit hours in Russian and East European Studies, including R600, R601, R620, four area studies courses (one each from the social science group, the historical/geographical group, the sociocultural group, and the literature group), SLIS S605 (in an area pertinent to REEI), and complete all other requirements for the Russian and East European Studies M.A., including the language proficiency exam, M.A. essay, and oral defense.

Application for admission to the dual M.A./M.L.S. degree program must be made to the School of Library and Information Science for study toward the Master of Library Science and to the Russian and East European Institute for study toward the Master of Arts degree. Applicants must be accepted by both degree programs. The student must select an M.A. essay committee of three faculty members representing both REEI and the School of Library and Information Science. Both degrees will be awarded simultaneously. Consult the entry for the REEI in this bulletin for details.

### **Doctor of Philosophy Degree**

### Admission Requirements

Bachelor's degree and minimum GRE scores (V=500, Q=500, A=4.5) are required, but since entry is competitive, higher scores are usually needed, as well as an undergraduate grade point average of at least 3.2. In addition to a personal statement of 800-1,000 words, we require a single-authored writing sample. A published article, a technical white paper, a grant proposal, or a paper submitted to fulfill course requirements are examples of papers that are acceptable. Questions about the writing sample should be directed to the program director. We strongly encourage school visits.

### **Course Requirements**

A total of 90 credit hours, including S701, S702, S703, S710, S790, and S799 dissertation (15 credit hours).

### Major

Any area of information science approved by the student's advisory committee.

### Minor

A total of 12 to 15 credit hours.

### **Research Skills**

Basic requirement: introductory statistics course and a second graduate course in statistics or in research design. The research-skill requirement may then be completed by passing, with a grade of B or higher, a third graduate course in statistics or in research design.

### **Qualifying Examination**

Written paper and oral presentation, over the field of concentration, emphasizing theory and research methods. Examination over the minor field at the discretion of the minor-field department.

**Final Examination** 

Confined to dissertation and related matters.

### Ph.D. Minor in Information Science

The School of Library and Information Science offers an outside minor through the University Graduate School for Ph.D. students in other fields. Ordinarily, students will take from 12 to 15 credit hours of graduate credit in fulfilling this option (minimum: 12 credit hours).

### Courses

For course descriptions, see the School of Library and Information Science Bulletin. S501 Reference (3 cr.) S502 Collection Development and Management (3 cr.) S503 Representation and Organization (3 cr.) S504 Cataloging (3 cr.) S505 Evaluation of Resources and Services (3 cr.) S506 Introduction to Research (3 cr.) S510 Introduction to Information Science (3 cr.) S511 Database Design (3 cr.) S512 Information Systems Design (3 cr.) S513 Organizational Informatics (3 cr.) S514 Computerization in Society (3 cr.) S515 Information Architecture (3 cr.) S516 Human-Computer Interaction (3 cr.) S517 Web Programming (3 cr.) S518 Communication in Electronic Environments (3 cr.) S519 Evaluation of Information Systems (3 cr.) S520 Information Seeking and Use (3 cr.) S521 Humanities Information (3 cr.) S522 Social Sciences Information (3 cr.) S523 Science and Technology Information (3 cr.) S524 Adult Readers Advisory (3 cr.) S525 Government Information (3 cr.) S526 Business Information (3 cr.) S531 Subject Access Systems (3 cr.) S532 Information Architecture for the Web (3 cr.) S533 Online Searching (3 cr.) S534 Information Retrieval: Theory and Practice (3 cr.) S541 Information Policy (3 cr.) S542 International Information Issues (3 cr.) S543 Computer-Mediated Communication (3 cr.) S544 Gender and Computerization (3 cr.) S550 Perspectives on Librarianship (3 cr.) S551 Library Management (3 cr.) S552 Academic Library Management (3 cr.) S553 Public Library Management (3 cr.) S554 Library Systems (3 cr.) S555 Strategic Intelligence (3 cr.) S556 Systems Analysis and Design (3 cr.) S561 User Interface Design for Information Systems (3 cr.) S571 Materials for Youth (3 cr.) S572 Youth Services (3 cr.) S573 Bibliographic Instruction (3 cr.) S574 Information Inquiry for School Teachers (3 cr.) S580 History of Libraries (3 cr.) S581 Archives and Records Management (3 cr.) S582 Preservation (3 cr.)

S583 Rare Book Librarianship (3 cr.) S584 Manuscripts (3 cr.) S585 Records Management (3 cr.) S601 Directed Readings (1-6 cr.) S602 Directed Research (1-6 cr.) S603 Workshop in Library and Information Science (cr. arr.) S604 Topics in Library and Information Science (1-4 cr.) S605 Internship (2-6 cr.) S621 Audio and Video Sources (3 cr.) S622 Resources and Services for People with Disabilities (3 cr.) S623 Genealogy and Local History (3 cr.) S629 Topics in Information Sources and Services (3 cr.) S631 Advanced Cataloging (3 cr.) S632 Technical Services (3 cr.) S633 Indexing (3 cr.) S634 Metadata (3 cr.) S635 Ontologies (3 cr.) S636 Semantic Web (3 cr.) S637 Information Visualization (3 cr.) S640 Seminar in Intellectual Freedom (3 cr.) S641 Computer-Mediated Discourse Analysis (3 cr.) S642 Content Analysis for the Web (3 cr.) S643 The Information Industry (1-3 cr.) S650 Library Philanthropy (3 cr.) S651 Art Librarianship (3 cr.) S652 Digital Libraries (3 cr.) S653 Health Sciences Librarianship (3 cr.) S654 Law Librarianship (3 cr.) S655 Music Librarianship (3 cr.) S656 Information Technology Standardization (3 cr.) S661 Concepts and Contemporary Issues in Human-Computer Interaction (3 cr.) S662 Information Design for Collaborative Information Spaces (3 cr.) S671 School Media (3 cr.) S672 Seminar on Literature for Youth (3 cr.) S680 The Book to 1450 (3 cr.) S681 The Book 1450 to the Present (3 cr.) S683 Reference Sources for Rare Books (3 cr.) S684 Descriptive Bibliography (3 cr.) S685 Electronic Records Management (3 cr.) S690 Capstone in Information Architecture (3 cr.) **S701** Introduction to Doctoral Research in Information Science (3 cr.) S702 Doctoral Research Practicum I (2 cr.) S703 Doctoral Research Practicum II (2 cr.) S706 Introduction to Research (3 cr.) S710 Doctoral Research Practicum III (3 cr.) **S763 Research Problems and Methods in Information Science** (3 cr.) S764 Seminar in Information Science (3 cr.) S765 Doctoral Research in Information Science (1-6 cr.) S790 Dissertation Proposal in Information Science (3 cr.)

S799 Ph.D. Thesis (cr. arr.)\*

### **Cross-Listed Courses**

Computer Science A538 Network Technologies and Administration (3 cr.)

Graduate G732 Bibliography of Sub-Saharan Africa (3 cr.)

Fine Arts A575 Research Sources in Art History (2 cr.)

Music M539 Introduction to Music Bibliography (3 cr.)