



Ph.D. in Information Science & Learning Technologies

...the intersection of information and learning...



University of Missouri • School of Information Science & Learning Technologies
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Welcome

We hope you find this handbook helpful if you are considering a Ph.D. in Information Science and Learning Technologies, are already admitted to the program, or are simply curious about what we are doing.

For specific information, contact the School of Information Science & Learning Technologies (SISLT) Student Coordinator:

Toll-free: (877) 747-5868
Email: sislt@missouri.edu
Mail: School of Information Science & Learning Technologies
University of Missouri
303 Townsend Hall
Columbia, MO 65211
Web: education.missouri.edu/SISLT/PhD

The Ph.D. Student Handbook is your guide to doctoral study in information science and learning technologies and includes information about:

- Gaining admission to the Ph.D. program
- Seeking financial assistance
- Selecting an advisor and Program Committee
- Meeting the degree requirements (including residency)
- Completing the comprehensive examination
- Building doctoral research skills
- Conducting dissertation research

Also included is information about SISLT faculty and a few sample forms and planning aids.

The Handbook is updated periodically, with the most recent version available at the SISLT Ph.D. web site.

Table of Contents

| | |
|---|---------|
| About the University of Missouri | 1 |
| About SISLT | 1 - 2 |
| Ph.D. Program | 3 |
| Application Process | 3 - 4 |
| Advisor and Program Committee | 5 |
| Financial Assistance | 5 |
| Program of Study | 6 |
| Degree Requirements | 7 |
| Residency | 7 - 8 |
| Comprehensive Examination | 9 - 10 |
| Doctoral Research Skills | 11 |
| Dissertation | 12 |
| Meeting Protocol | 12 |
| SISLT Faculty | 13 - 14 |
| Useful Web Sites | 14 |
| Contact Information | 14 |
| Doctoral Program Planning Sheet (Sample) | 15 |
| Ph.D. Professional Immersion Residency Planning Form (Sample) | 16 - 17 |

"Our Ph.D. program is all about the connection of Information Science & Learning Technologies. Small groups of kids in the same class or scholars scattered around the world...our program is about making information available and enabling learning to happen."

*John Wedman,
SISLT Director*



About SISLT

SISLT focuses its talents, resources, and scholarship on the improvement of learning, information organization and retrieval, and human performance through the invention, innovative application, and dissemination of new technologies and processes.

In 1996, the Library and Informational Science program joined the College of Education, forming SISLT. Since that time, SISLT has continued to evolve, develop, and strengthen its teaching, research, and service mission. New courses, greater access to technology, and an aggressive outreach program are among the many benefits. The combination of hard work and creative ideas is paying dividends today and laying the foundation for tomorrow.

SISLT operates three research and computing facilities: the Allen Institute, the IE Lab, and the Reflector.

Allen Institute

The Allen Institute for Research on Learning, Information & Technology is a research and development center dedicated to the reform of teaching and learning methods through the innovative application of technology.

The Allen Institute is home to a range of projects that promote the high-impact application of technology in education. The staff and researchers that work there have a range of interests and expertise that they bring to these projects. Innovation involves technological, educational, cognitive, and social change to improve learning. For more information, visit alleninstitute.missouri.edu.

IE Lab

The IE Lab (Information Experience Laboratory) is a usability design and testing facility operated by the School of Information Science & Learning Technologies. The IE Lab's mission is to

About the University of Missouri

The University of Missouri (MU) is the oldest state university west of the Mississippi River and the largest of the four institutions in the MU system.

It is one of the most comprehensive and diverse universities in the United States and proudly embraces the land grant mission.

MU has a student body of over 26,000 at the graduate and undergraduate levels.

As a member of the American Association of Universities, a state land grant institution, and a university classified Research I by the Carnegie Foundation for the Advancement of Teaching, MU is a premier provider of graduate and professional education.

For more information about MU, please visit www.missouri.edu.



These columns are the traditional symbol of MU and once supported the portico of Academic Hall, which was destroyed by fire in 1892.

improve the usability of digital products at every step in the product life cycle. Beginning with the initial idea and continuing through full-scale deployment, the IE Lab helps ensure the end-users are driving the design and development process. This is the essence of user-centered design.

As a Ph.D. student, you will have access to the IE Lab by joining a research project team. These teams work on real products for real clients, including small start-up companies, major universities and government agencies, and large multi-national corporations. Involvement in an IE Lab project is a great way to learn and apply new skills while adding value to an increasingly digital world. For more information about the IE Lab, please visit: ielab.missouri.edu.

Reflector

The Reflector is an integral component of the College of Education Teacher Development Program, blending digital and print resources for teacher development into one environment rich with instructional materials and educational technology.

The Reflector provides a new concept in technology support in teaching and learning environments. The unique design of the Reflector environment enhances cooperative learning, inquiry, and reflection for students, faculty, and pre-K-12 educators. For more information, visit reflector.missouri.edu.

Townsend Hall

SISLT offices and faculty are located in Townsend Hall.

Townsend Hall has become home to a technologically-advanced, innovative, and flexible teaching environment and has evolved to become a national showplace for training teachers.

After undergoing an 18-month, \$8.2 million renovation, its classrooms, learning labs, and seminar rooms are now equipped with the latest technology to develop the next generation of teachers.



The Allen Institute's 8,000-square-foot facility located in London Hall is perfectly suited to educational research and development using technology.



IE Lab's control, experience, and focus group rooms provide a flexible environment for conducting a variety of usability studies.



The Reflector is located on three floors in Townsend Hall and houses the Instructional Materials Center.

Ph.D. Program

Doctoral study in information science and learning technologies focuses on defining, understanding, and expanding the intersection of information and learning. Areas of inquiry are manifested from two perspectives: human and technological.

These two perspectives share the common purpose of designing systems and services for information and learning.

Paths

As a SISLT doctoral student, you can follow one of two distinct but potentially intersecting paths.

One path analyzes and practices research and development for innovative information and learning systems. This path emphasizes:

- Advanced study of contemporary learning and instructional theories
- Learner-centered design, interface design, and information access design
- Advanced networked learning systems, including digital libraries and learning communities

The second path analyzes and practices research and development into the human elements of information. This path includes:

- Information-seeking and use
- Information organization
- Human institutions, including libraries, that support the production and dissemination of and access to information

For both paths, approaches to inquiry include technical, cultural, cognitive, epistemological, political, and economic aspects of information and learning.

Application Process

The application process involves several stages.

Materials Submission Stage

Note: We cannot evaluate your application until our Student Coordinator and the Graduate School office have received all of your application materials.

- *Winter Semester Admission:* Materials must all be received by September 15.
- *Fall Semester Admission:* Materials must all be received by February 15.

All applicants should apply online.

Submit the following materials to the Graduate School, 210 Jesse Hall, University of Missouri-Columbia, Columbia, MO 65211, toll free 1-800-877-6312, fax 573-884-5454:

Note: Applicants are encouraged to load their supplementary materials (resume, statement) through the ApplyYourself web site (gradschool.missouri.edu/apply), in addition to asking recommenders to submit letters of reference through the ApplyYourself system.

1. Application to the Graduate School: Applications are now submitted through the online system ApplyYourself. All applications must be accompanied by an application fee. You can apply online at gradschool.missouri.edu/apply.
2. Up-to-date official transcripts from all institutions where you have earned credits.
3. Take the Graduate Record Examination (GRE) and have the results sent by using institution code 6875.
4. If your native language is other than English, the Test of English as a Foreign Language (TOEFL) is required. Please also send this to the Graduate School office.

You must submit the following information directly to: SISLT Student Coordinator, 303 Townsend Hall, University of Missouri, Columbia, MO 65211 or fax to (573) 884-0122:

1. Attach a letter of application (also referred to as a Statement of Purpose). This is a very important part of the application process. Your letter will be a major source of information when the faculty considers your application.

Your letter should explain your professional intentions, career goals, intellectual beliefs, and research interests. You need to convince the faculty that you are a mature, self-directed, and purposeful individual.

Please do not copy ideas from our website. Rather, convince the faculty why pursuing a doctoral degree is an important life goal for you.

Note: Students may load statements to the ApplyYourself web site or send a hard copy to the Student Coordinator's Office.

2. Attach a current copy of your curriculum vitae (resume). *Note: Students may load curriculum vitae/resumes to the ApplyYourself web site or send a hard copy to the Student Coordinator's Office.*
3. Arrange to have three letters of reference sent on letterhead or sent by the recommenders to [sislt@missouri.edu](mailto:sisl@missouri.edu).
4. Send any other materials (papers you have published, technical reports you have written, or any other supportive materials) to the Student Coordinator's Office.

Review Stage

Complete applications for admission to the fall semester are due by February 15 prior to the semester in which you seek admission. Complete applications for the winter/spring semester are due by September 15 prior to the semester in which you seek admission.

Within one week following the application deadline, the Student Coordinator will make complete files available to the application screening committee for its review.

Within three weeks after the deadline, the faculty will schedule and complete an interview with each qualified candidate.

Within six weeks following the application deadline, a special meeting of the SISLT faculty will be scheduled. At this meeting, the faculty will present their recommendations for admission.

The faculty will review these

meeting, an initial advisor will be assigned to accepted applicants based on compatible interests and current advising loads. Decisions regarding financial assistance will not be made at this meeting.

Admissions Decision Stage

Decisions on admission will be based on due consideration of all of the information you have presented, including the statement of purpose, test scores, your professional experiences, previous faculty experiences with you, the interview, and any of the artifacts you have provided.

Minimum recommended standards for admission include:

- If you have taken the GRE comprised of Verbal, Quantitative, and Analytical sections, a total score of 1500 is required, or a minimum of 500 on each section. If you took the new GRE version comprised of Verbal, Quantitative, and Analytical Writing

Quantitative, and 3.5 on Analytical Writing

- TOEFL (if applicable) minimum score:
 - 500 for paper-based test
 - 173 for computer-based test
 - 61 for internet-based test
- Undergraduate GPA of at least 3.0 in the last 60 credit hours of the degree
- Graduate GPA of 3.5

If you do not meet these standards, you should provide evidence of exceptional ability in one or more other categories.

Review of applications will result in one of the following actions:

- Acceptance
- Rejection based upon your lack of qualifications or lack of match with program foci

Prior to program action on your application, you are free to enroll as a non-degree graduate student, hoping that your application will be approved later.

Memorial Union's stunning gothic architecture makes it one of MU's most impressive landmarks.



“The School of Information Science & Learning Technologies is looking for doctoral students who are willing to become partners in the exploration and design of information and learning environments. Curiosity, intentionality, and tenacity are among the most desirable qualities in our students.”

*David Jonassen,
Distinguished Professor*

Advisor and Program Committee

Upon admission, you will be assigned an advisor to guide you through your program of study. Contact your advisor before enrolling to help you plan your first semester or year of courses, plus other activities.

Within 12 months after beginning your first course, you should select the members of your Doctoral Program Committee in conjunction with your advisor. The SISLT director of graduate studies and the MU Graduate School must approve the Committee.

The Committee consists of four or five members: at least three from SISLT (one of whom is your advisor) and one who is a graduate faculty member from a different MU program. The outside member cannot be from outside MU. The fifth member may be another SISLT faculty member, from another MU program, or from outside MU with specialized expertise.

The Doctoral Program Committee negotiates and approves your program of study, ensures you meet all minimum requirements of the IS< program, and helps you plan and execute other professional aspects of your degree program. The Committee also approves requests for transfer of graduate credit and guides you through the comprehensive examination.

Having completed the comprehensive examination (described later), you will be required to select your Dissertation Committee, which is independent in membership from the Doctoral Program Committee. Your program advisor will not necessarily be your dissertation advisor.

It is your responsibility to maintain positive working relationships with your Program Committee throughout your program of study. If you cannot find faculty members willing to serve on either the Program or Dissertation Committees at any time, you will be unable to pursue your degree.

Financial Assistance

Financial assistance is available from a variety of sources to defray the expenses of pursuing a doctoral degree. Admission to the doctoral program does not guarantee financial assistance. If you need financial assistance, you should make that clear in your application.

Financial assistance is available from the following sources:

- University fellowships
- Graduate assistantships

University Fellowships

The Graduate School administers several fellowship programs. In order to apply for these, you must be accepted to our program. You must then follow procedures described in the Graduate Catalog.

Graduate Assistantships

Graduate assistantships are available from several sources around the university. Most assistantships provide a stipend plus educational fees remission. Check the remuneration each offers. Most assistantships require 10 to 20 hours of relevant academic work per week.

GA Opportunities

- School of Information Science & Learning Technologies - SISLT funds a number of doctoral students. Upon admission to the program, an application for graduate assistantships will be included with your acceptance letter.
- MOREnet - MOREnet provides computer connectivity to schools and universities throughout Missouri. It regularly funds graduate students. You must apply directly to MOREnet for an assistantship.

- Information & Access Technology Services (IATS) of the University of Missouri - IATS regularly funds graduate students. You must apply directly to IATS for an assistantship.
- The MU College of Education hires teaching assistants to teach in the Teacher Development Program. You must apply directly to the Education Dean's office for these assistantships.

Several other organizations, *e.g.*, Health Management and Informatics, at the University of Missouri offer graduate assistantships. The SISLT Student Coordinator provides information about these positions as they become available.

Program of Study

During your first two academic semesters, you will work with your assigned advisor to select courses and identify Professional Immersion activities (described in the Residency section of this Handbook) that will successfully lead toward the completion of your degree. During this same time period, you should work to establish professional relationships with faculty in SISLT and your supporting field who you would like to include on your Program Committee.

Prior to the beginning of your second academic year of study, you must have identified your Program Committee and conducted a Program of Study meeting of your Program Committee. Prior to the meeting, you should distribute to the committee a draft Program of Study. This program should include:

- Proposed schedule of courses, including any relevant courses completed prior to being accepted into the Ph.D. program (a sample Doctoral Program Planning sheet is included in this Handbook)
- Residency Plan describing as explicitly as possible all of the Professional Immersion activities that you plan to complete outside of your coursework

You should collaborate with your advisor on the construction of your Program of Study. Your Program Committee will review your program and negotiate alternative or additional courses and activities that you should complete prior to the Comprehensive Examination.

Committee acceptance of your Program of Study is indicated by the signature of each member of your Program Committee on the Ph.D. Professional Immersion Residency Planning Form (a sample is included in this Handbook) and the Graduate School Program of Study form (available from the SISLT Student Coordinator).

Early approval of your Program of Study will enhance your academic experience in SISLT. This is a very important part of the degree planning process. Failure to receive approval of your Program of Study

prior to the second academic year may mean that courses or activities completed afterward may not count toward your degree.

| Enter doctoral program with... | Program of Study will consist of... |
|---|--|
| <p>A master's degree in Educational Technology, Library Science, or a related field</p> | <ul style="list-style-type: none"> ● Completion of ESC PS 7170 Introduction to Educational Statistics or equivalent ● Degree requirements as specified in the Handbook and by the Program Committee |
| <p>Professional experience in Educational Technology, Library Science, or a related field; and/or a few graduate level courses relevant to doctoral work in Information Science and Learning Technologies</p> | <ul style="list-style-type: none"> ● Completion of ESC PS 7170 Introduction to Educational Statistics or equivalent ● One to three master's-level conceptual courses in Educational Technology or Library Science prior to beginning doctoral work, providing the theoretical foundation needed for successful doctoral-level work ● Degree requirements as specified in the Handbook and by the Program Committee |
| <p>Little if any professional experience or graduate level coursework in Educational Technology, Library Science, or a related field</p> | <ul style="list-style-type: none"> ● Completion of ESC PS 7170 Introduction to Educational Statistics or equivalent ● Three to five master's-level conceptual courses in Educational Technology or Library Science prior to beginning doctoral work, providing the theoretical foundation needed for successful doctoral-level work ● Degree requirements as specified in the Handbook and by the Program Committee |

Degree Requirements

Prerequisite Courses

Doctoral study in IS< recognizes that students come to the program with diverse backgrounds. While this diversity adds to the richness of the doctoral community, it also creates challenges in terms of building on your knowledge, skills, and experiences. Doctoral advisors and program committees will use the guidelines in the table on this page to determine which, if any, prerequisite coursework will be included in your program of study.

Doctoral Seminar Courses (9 credit hours)

- Analyzing and Designing Systems (3 credit hours) (fulfills College of Education inquiry requirement)
- Research and Theory Seminars (6 credit hours)

Elective SISLT Coursework

- Minimum of 18 credit hours or more of IS< coursework beyond master's degree or prerequisites

Research Methodologies

- Minimum of 9 credit hours of research design courses with at least one course in qualitative research design and one course in quantitative research design

Support Field

- Nine credit hours or more of coordinated coursework related to an area of emphasis outside of IS< and research courses selected in consultation with your program committee

Residency

- See Residency section.

Comprehensive Examination

- See Comprehensive Examination section.

Dissertation

- 12 credit hours beyond all coursework

Internships

- Teaching – Independently teach a course or be a teaching assistant in a course
- Research – One or more publications ready for submission to a journal or refereed conference presentation

Use the Doctoral Program Planning Sheet (a sample is included in this Handbook) as the format for creating your program of study.

Residency

The Graduate School allows each program to determine its own residency requirements. The SISLT Ph.D. residency requirements consist of two parts:

- Course enrollment
- Professional immersion

Course Enrollment

The Course Enrollment Residency Requirement means that over some 12-month period during the interval between admission and completion of the Ph.D. program, you must complete at least two semesters enrolled in six credit hours of academic work at the Columbia campus. Thus, the completion of 12 credit hours in one academic year is the minimum requirement for fulfilling the course enrollment residency requirement. However, the minimum number of credit hours to be full time is nine per semester (fall and winter) according to the Graduate Catalog.

Professional Immersion

The Professional Immersion Residency Requirement describes your residency in terms of skills or competence that you must exhibit prior to completing your comprehensive examination. You should reflect on your skills and develop a coherent point of view about the major issues and problems in your field.

Residency is an opportunity to:

- Perform concentrated, uninterrupted work on your academic preparation through intense attention to coursework, projects, research, and active participation in academic life
- Become socialized in the values and norms of the profession
- Develop increasing levels of professional independence and responsibility
- Foster the transition from student to colleague
- Become involved in considerable out-of-class interaction with fellow

students and faculty on substantive issues

- Become considerably involved in professional activities of various kinds
- Develop considerable familiarity with what professional resources exist and knowledge of how to access and use them

The Professional Immersion Residency

Requirement is defined in terms of activities and accomplishments. Specifically, we require you, for a two-year period of time during your doctoral studies, to engage in some of the following activities. The specific combination of activities will be determined in consultation with your Program Committee.

Research and Writing

- Author/co-author a book review
- Contribute to a professional newsletter
- Conduct collaborative research with fellow students

- Conduct collaborative research with a faculty member
- Work as a research assistant
- Critique a colleague's research article draft
- Develop a grant proposal
- Produce a working paper for discussion
- Author/co-author a research article
- Author/co-author a practice article
- Present a paper at a state, regional, national, or international conference

Professional Service

- Edit a professional newsletter
- Serve in a graduate student organization
- Serve on department, college, university, or professional committees
- Serve in a professional elected or appointed office
- Organize a professional conference
- Serve as chair/discussant at a professional meeting
- Serve as a journal field reviewer
- Organize an invited speaker session
- Organize study groups, seminars, forums, or a lecture series

Teaching

- Work as a teaching assistant
- Teach a course
- Develop course instructional materials
- Develop instructional evaluation materials
- Proctor an exam
- Prepare instructional aids
- Serve as a mentor for junior students

System Development

- Serve as director or associate director of a project
- Participate in a consultation activity
- Prepare a consultation report for an actual client
- Develop specifications and products for instructional or informational applications
- Participate as a planner or designer on a project
- Participate as an evaluator on a project
- Serve as a field test subject for the formative evaluation of a project

Professional Participation

- Serve as a research subject
- Attend professional colloquia and seminars
- Attend state professional meetings
- Attend regional professional meetings
- Attend national professional meetings
- Attend relevant professional presentations on campus
- Host visitors to campus
- Participate in a professional seminar
- Observe colleagues in an innovative or exemplary program
- Participate in a study group or professional network
- Initiate and lead a seminar with faculty participation

Residency Plan

Prior to beginning the residency period, you must submit a Residency Plan to your Program Committee. This plan should be divided into the following categories:

- Research and Writing
- Professional Service
- Teaching
- System Development
- Professional Participation

Use the Ph.D. Professional Immersion Residency Planning form (available online) to indicate activities to be

completed during your residency. Your Program Committee will evaluate the residency plan. The following criteria will be used to evaluate the plan:

- Relevance to your professional goals
- Quality of participation
- Quantity of participation
- Variety of participation activities
- Demonstration of initiative
- Demonstration of collaboration
- Demonstration of independence
- Opportunity for written, oral, and electronic communication
- Evidence of reduction in full-time work load

Relationship of Residency Accomplishments to Comprehensive Examination

During your residency period, you will assemble many or most of the components of your portfolio. As described later, you must submit a professional portfolio as part of the comprehensive examination. You must submit the portfolio before completing any other portion of the examination. Your committee will use your portfolio to determine whether or not you are ready to complete the comprehensive examination. The portfolio is an indicator of your preparedness for concluding degree requirements.

MU's campus houses more than 120 facilities covering nearly 1,400 acres.



Comprehensive Examination

The comprehensive examination is an assessment of your comprehensive knowledge of information science and learning technologies. It is your responsibility to inform your committee members of your intent to complete your comprehensive exam prior to the beginning of the semester in which you plan to complete the exam.

The IS< examination consists of three parts:

- Portfolio
- Written component
- Oral component

Additionally, the comprehensive exam includes an assessment of your knowledge of your support field. This information describes the comprehensive examination process related to your major (IS<); the support field examination process varies from field to field.

Portfolio

You will assemble a portfolio of work completed in the program that demonstrates your mastery of skills and knowledge in the key domains listed below. You are to draw upon previously-completed work and showcase your accomplishments and learning achievements in the program. Work completed for course credit may be included; however, you should emphasize professional work that you have completed in non-course contexts.

The products in your portfolio should directly reflect your professional interests and development. The portfolio will be “open to the public” for approximately two weeks prior to the oral component of your exam.

The portfolio should be divided into the following sections:

Research and Writing

You need to show evidence you have had meaningful participation in a substantial research effort. Your knowledge and experience of research is shown through products you have developed on a research project. If you use collaborative projects to fulfill this requirement, you should clearly articulate your role on the collaborative effort and how your work contributed to the overall efforts.

Here are some examples:

- Submitted manuscript or published article
- Design of a study that may be a form of a dissertation or research prospectus
- Report about data collection methods you have implemented or data analysis work you have completed
- Paper accepted for presentation at a state, regional, national, or international conference

Professional Service

Immersion into a professional community should be evident in your portfolio.

Here are some examples:

- Professional newsletter or materials you have helped to develop
- Service in a graduate student or other professional organization, in a professional elected or appointed office, to a professional conference, as chair/discussant at a professional meeting, or as a journal field reviewer
- Membership on a departmental, college, university, or professional committee
- Organization of study groups, forums, seminars, and/or lecture series

Teaching

Teaching is an integral part of “the academy.” Your involvement in teaching

activities in higher education teaching is important to your professional development.

Here are some examples:

- Teaching activity descriptions
- Syllabi you have developed
- Presentations you have made in courses
- Instructional materials you have developed and tested with students

System Development

Appropriately apply a system development methodology to design and develop an information or learning system. Successfully complete the activities of analysis, design, and evaluation of your system.

Here are some examples:

- System design documentation, including evidence of analysis and a rationale for design decisions that draws upon current knowledge in the field, explaining how those analyses affected further design decisions
- Materials included in the information or learning system
- An evaluation report detailing the method, analysis, and findings of a formative and summative evaluation of your material

Professional Participation

You are expected to be an active, contributing member of your profession.

Here are some examples:

- Attendance at professional colloquia and seminars
- Attendance at professional meetings
- Host visitors to campus
- Professional seminar participation
- Observation of colleagues in an innovative or exemplary program
- Participation in a study group or professional network

Written Component

The comprehensive examination will be administered twice per year, fall and spring, with no summer examination.

At the beginning of the semester, two weeks during the middle of the semester will be designated as Comprehensive Examination weeks. All students who have stated their intention to complete the Comprehensive Examination prior to the beginning of the semester will complete their examination during this two-week period.

At least one month prior to that two-week period, the student must complete a web-based portfolio and make the URL available to the Program Committee faculty. Anytime prior to that two-week period, the Program Committee will review the portfolio with the student in a meeting. If the portfolio is approved (indicating comprehensive activity within the field and that you are ready for the written examination), the student is scheduled to complete the written portion of the examination. There are two examination questions. The student may take a full week to complete each question and submit their response to the Program Committee. This is a take-home exam.

During week one, you will address a question related to research. This question will likely state a situation in which research is needed, requiring you

to specify in a proposal how that research should be conducted.

During the second week, you will address a question related to system design. The question will likely state a situation in which an information or learning system is needed, requiring you to specify in a proposal how that system should be analyzed, designed, developed, implemented, and evaluated. Sample products may also be expected.

For both of these questions, you may use any resources at your disposal. The emphasis is on producing professional quality documents. If you are employed full-time during the semester in which your comprehensive examination is completed, you are encouraged to take some time off work during the two-week written portion of the examination in order to provide adequate time to yield the expected professional quality product.

Your Program Chair will forward a copy of your completed exam to your committee at least two weeks prior to the oral exam.

Oral Component

The oral component of the comprehensive examination will be completed within two weeks of the written component. It is a public meeting and may cover any or all of the following:

- Any part of your portfolio
- Any part of your written component of the comprehensive examination
- Your defense of a particular point of view or philosophy
- An evaluation of your experience and professional growth as a result of graduate work to date

The oral component of the examination will be scheduled for two hours and, during that time, members of your Program Committee will have an opportunity to ask any question they deem appropriate to judge your comprehensive knowledge and capability.

Other faculty, students, and staff may also attend your oral examination. It will be announced to the entire program at least one week prior to the scheduled examination time. These people will be excused while the Committee evaluates your performance.

Evaluation Criteria

During the oral examination, the members of your Committee will evaluate you. Each Committee member shall use the following criteria to evaluate the oral examination:

- Integration and synthesis of themes in the field
- Independent and original thought
- Clarity of your position
- Logic, cogency, and coherence of the reasoning and arguments

Results


The Program Committee will evaluate the comprehensive examination in total and render one of the following judgments:

- Pass, indicating that you are ready to begin the dissertation
- Pass with Distinction, indicating excellence in preparation and that you are ready to begin the dissertation
- Failure, indicating you have not demonstrated to the Committee adequate comprehensive knowledge of the field. You may petition to attempt the examination a second time. If the Program Committee approves, the Committee will prescribe an additional course of study intended to better prepare you. The second administration of the comprehensive examination cannot occur before at least six months have passed and you have provided evidence of extensive efforts to prepare for the examination. *There will be no third attempt allowed.*

Doctoral Research Skills

Throughout your Ph.D. program, you will develop and apply many research skills. All Ph.D. degree recipients in SISLT should be able to:

- Pose a research question/problem, demonstrating the knowledge, skills, and values needed to:
 - Define a research problem, questions, and/or hypothesis in both quantitative and qualitative language
 - Differentiate between research problems, questions, and hypotheses
 - Define the general body of literature relevant to the research
 - Critically review the literature with regard to design, analysis, and interpretation
 - Use the literature to define the conceptual framework and to delineate the problem
 - Use the library, including electronic means such as ERIC, PsychInfo, Social Science Citations Index, Education Index, NTIS and others to locate important documents or leads to articles, papers, conference proceedings, etc.
 - Examine the range of available modes of inquiry, including quantitative and qualitative
 - Identify the appropriate research mode(s) and procedure(s) complementary to the research question/problem
 - Define a sample population or qualitative research venue, including:
 - Describing the context, site, participants, population, and/or events on which the study is focused
 - Describing an appropriate sampling plan for various modes of inquiry
- Built in 1936, Townsend Hall was originally a K-12 laboratory school.


- Identify a data collection strategy (or strategies), including:
 - Describing ethical issues related to research, human subjects procedures, and researcher obligations
 - Proposing an appropriate quantitative or qualitative data collection technique
 - Specifying/describing the instrumentation required for research investigation, *e.g.*, tests, surveys, interview guides, participant observer, ethnography
 - Describing (when appropriate) procedures for constructing, piloting, and modifying methods/instruments to be used for investigations
 - Identifying issues related to quality of data, *e.g.*, bias, missing data, non-response, attrition
 - Describing different methods for establishing the quality of information gained from instruments and procedures, *e.g.*, reliability, validity, efficacy, triangulation
 - Analyze and interpret data, including:
 - Differentiating between primary and secondary analyses
 - Describing various methods of data analysis appropriate for the study, such as inferential, statistical, ethnomethodology, conversation analysis, etc.
 - Identifying relevant use of the computer for data analyses
 - Describing the limitations and assumptions required when doing different types of analyses
 - Draw conclusions from the data, including:
 - Discussing the meaningfulness/importance of the research findings
 - Crafting defensible conclusions/assertions relative to the data, theoretical framework, research background, etc.
 - Describing the limitations of the research
 - Communicating research results, including:
 - Writing in a coherent way so that the research process, results, and conclusions are all clearly communicated
 - Discussing a research effort with critical colleagues

Dissertation

You should become involved in research throughout your program so that, by the time the comprehensive examination is completed, you have a well-formulated topic for research. Research may include required coursework activities, collaborations with faculty, or an independent effort. Earlier research can serve to explore a dissertation topic, serve as a pilot study, or become part of a dissertation prospectus. However, formal approval of a dissertation prospectus by your Committee must precede the serious pursuit of the study.

Dissertation Committee

The Dissertation Committee is separate from your Program Committee. Following the completion of the comprehensive examination, the responsibility of the Program Committee is completed. You will then form a committee to direct your dissertation. This committee may, but does not have to, consist of the same members as the Program Committee. You are encouraged to include those faculty members who can best support your line of research as members of your Dissertation Committee. During your academic program, your interests may change and should be reflected in the Dissertation Committee membership.

The Dissertation Committee must consist of a minimum of three SISLT faculty members. The Dissertation Committee chair must be a member of the MU doctoral faculty. A faculty member or practitioner holding a terminal degree from outside of SISLT who has expertise in your research may be added as a special Committee member with program approval. At least one member must be from a program other than IS<, typically from your minor or supporting field.

It is your responsibility to maintain positive working relationships with faculty in order to form a Dissertation Committee and to continue to maintain that positive working relationship throughout the completion of your study. It is also your

responsibility to produce a viable proposal for the dissertation. *If you cannot find faculty members who accept your proposal and are willing to serve on your Dissertation Committee, you will be unable to pursue your degree.*

Dissertation Proposal Meeting

You will be required to schedule a dissertation proposal meeting prior to beginning your research. Your Dissertation Committee must approve your conceptualization and methodology prior to beginning any data collection. The proposal meeting is open to all faculty and students in the School. The proposal should include the first three chapters (Chapter 1: Rationale for the Study, Chapter 2: Literature Review, Chapter 3: Description of Methodology) of the dissertation unless your Committee has approved an alternative form.

Send a copy of your dissertation proposal to each committee member at least *three weeks* before the proposal meeting.

During the meeting, you will make a short presentation. The Committee will then discuss the relevance and efficacy of the arguments and methods stated. The Committee may approve the proposal for continuation or recommend revisions to be completed prior to approval.

When the Dissertation Committee has accepted your proposal, there is, in a

sense, a contract between you and the SISLT faculty. This contract would hold that if you complete a study according to the proposed outline to the standards necessary for acceptance, the faculty will accept the dissertation. Your Committee will sign an approved copy of the proposal, and it will be retained in your file as a record of that contract.

Human Subjects Review

If your dissertation research will involve the use of human subjects in any way, the Institutional Review Board in the Graduate School must complete a review of the procedures proposed to protect the rights of those human subjects prior to involving subjects in the study. This process requires the completion of an application form. It is best to allow at least two months for the review process.

Dissertation Credit Registration

You must continuously register for dissertation credit every semester following the completion of your comprehensive examination until the completion of the dissertation. See the Graduate School Catalog.

Dissertation Defense

After receiving your Dissertation Chair's approval, you may schedule your dissertation defense. A copy of your dissertation must be sent to each committee member at least three weeks prior to the defense meeting.

Meeting Protocol

During your doctoral program, you will have several important meetings, including Program of Study, Comprehensive Examination, Dissertation Proposal, and Dissertation Defense.

Please follow these guidelines:

- Refrain from bringing refreshments for the faculty and other audience members.
- Dress appropriately (business casual is just fine).

We also highly recommend that you use www.doodle.com to schedule your meetings. It is a free service with no required registration.

"I appreciated the highly approachable faculty and very supportive staff. The cutting-edge projects gave ample opportunity to complement innovative classes and collaborate with faculty and students alike."

*Johannes Strobel,
Ph.D., 2004*

"SISLT is unique in that our Ph.D. program serves as a bridge between diverse disciplines, backgrounds, knowledge and skills. The faculty have been remarkably supportive."

*Matthew Schmidt,
Ph.D. Candidate*

"SISLT's Ph.D. program combines the correct proportions of research and practice which prepares me for the pertinent challenges of today and the future."

*Camille Dickson-Deane,
Ph.D. Candidate*

SISLT Faculty

Our faculty are nationally and internationally recognized for their contributions to information science and learning technologies.

They are frequently recognized for the quality of their teaching, the significance of their research and development, and their commitment to professional service.

Note: Most SISLT faculty have "doctoral faculty status," meaning they can serve as chair of Program and Dissertation Committees. Your advisor will help you select a committee matching your professional goals.

Denice Adkins
Ph.D., University of Arizona

- Latino/Hispanic literacy practices
- Genre fiction readers and their motivations
- Public library outreach to underserved populations

John Budd
Ph.D., University of North Carolina-Chapel Hill

- Operations and economics of scholarly communications
- Social and epistemological aspects of knowledge transfer
- Politics of higher education and academic libraries

Julie Caplow
Ph.D., University of Iowa

- Informal curriculum in professional education
- Program-based learning
- Technology and post-secondary instruction

Hsin-Liang Chen
Ph.D., University of Pittsburgh

- Digital media design, management, and retrieval
- Digital libraries and museums
- Human information interaction

Kwangsu Cho
Ph.D., University of Pittsburgh

- Computational modeling of cognition

- Expert and novice
- Writing and Science & Engineering education

Sanda Erdelez
Ph.D., Syracuse University

- Business and competitive intelligence
- Legal informatics
- Users' information needs and uses in e-government, e-commerce and e-learning

Linda Esser
Ed.D., University of Kentucky

- Education reform impact on school library media specialists
- Effective networks as collaborative cultures in school settings
- Cultural construction of the work of women library media specialists

Gail Fitzgerald
Ph.D., University of Iowa

- Electronic performance support tools for students with disabilities
- Interactive, multimedia learning environments in teacher education
- Classroom observation methodology

Jane Howland
Ph.D., University of Missouri-Columbia

- Constructivist and collaborative learning in online environments
- Information technology use with K-12 learners
- Technology-enhanced student assessment

David Jonassen
Ed.D., Temple University

- Problem Solving
- Cognitive tools for learning
- Cognitive modeling/cognitive task analysis

Aimee Klimczak
Ph.D., University of Missouri-Columbia

- Online learning environments
- Portfolio development and assessment
- Protocol analysis

Tom Kochtanek

Ph.D., Case Western Reserve University

- Distributed learning environments
- Information retrieval systems
- Library information systems

Jim Laffey

Ph.D., University of Chicago

- Social computing
- Performance support systems
- Interface design and usability

Chris LeBeau

MLS, Long Island University; MBA, Creighton University

- Business information systems
- Managing electronic resources
- Copyright issues

Rose Marra

Ph.D., University of Colorado

- Assessment and evaluation of educational change
- Epistemological implications of learning technologies
- Gender equity in engineering and science education

Joi Moore

Ph.D., University of Georgia

- Electronic performance support systems

- Interactive learning environments
- Designing user-centered web applications (human-computer interaction)

Karen Robinson

MLS, Emporia State University

- Special libraries
- Library use instruction
- Reference sources and services

MaryEllen Sievert

Professor Emerita

Ph.D., University of Missouri-Columbia

- Health informatics
- Information retrieval
- Vocabulary for information retrieval in health care

John Wedman

Ph.D., University of Oklahoma

- Analogical problem solving
- Performance support systems
- Technology integration in teaching and learning

Useful Web Sites

Cashiers Office

cashiers.missouri.edu

Financial Support

gradschool.missouri.edu/financial
www.sfa.missouri.edu

Graduate School

gradschool.missouri.edu

Graduate School Catalog

gradschool.missouri.edu/policies/graduate-catalog/

Parking Information

parking.missouri.edu

Registrar

registrar.missouri.edu

Semester Schedules

myzou.missouri.edu

SISLT

sislt.missouri.edu

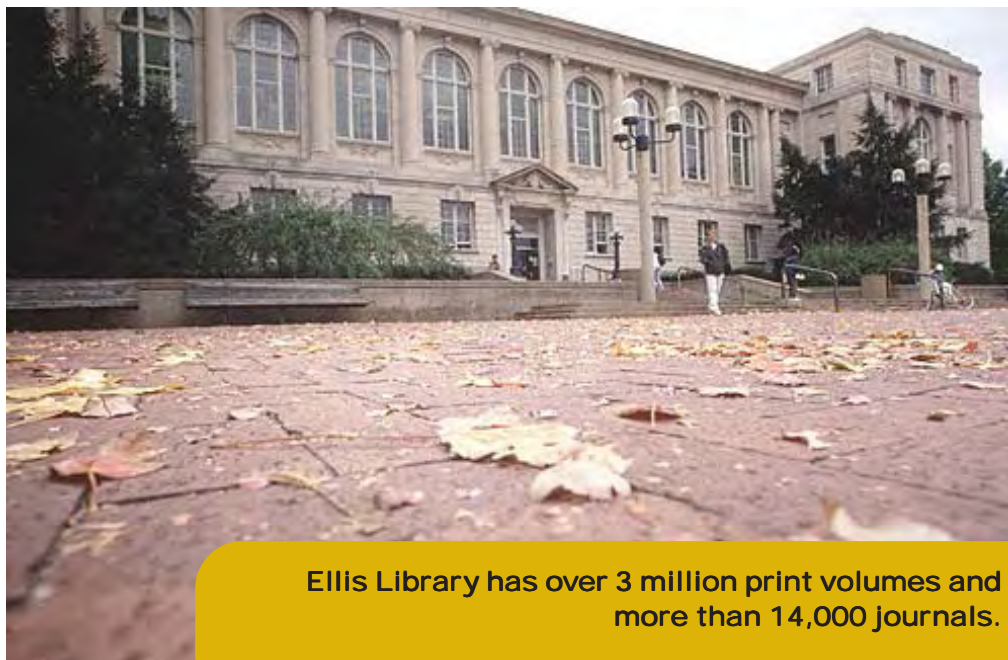
Transcript Request

Procedures

registrar.missouri.edu

MU International Center

international.missouri.edu



Ellis Library has over 3 million print volumes and more than 14,000 journals.

Contact Information

Mail

School of Information Science
& Learning Technologies
University of MO
303 Townsend Hall
Columbia, MO 65211

Phone

Office: (573) 884-2670

Toll-free: (877) 747-5868

Email

sislt@missouri.edu

Doctoral Program Planning Sheet

Committee: _____ Advisor: _____

Prerequisites (if applicable) _____

| Course # | Title | CrHr | Grade | IHE | Semester |
|----------|-------|------|-------|-----|----------|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Major: Information Science & Learning Technologies

| Course # | Title | CrHr | Grade | IHE | Semester |
|------------|----------------------|------|-------|-----|----------|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| IS< 9480 | Internship: Teaching | | | MU | |
| IS< 9480 | Internship: Research | | | MU | |
| IS< 9490 | Dissertation | 12 | | MU | |

Minor/Supporting Field (9 crhrs): _____

| Course # | Title | CrHr | Grade | IHE | Semester |
|----------|-------|------|-------|-----|----------|
| | | | | | |
| | | | | | |
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Research

| Course # | Title | CrHr | Grade | IHE | Semester |
|-------------|---|------|-------|-----|----------|
| ESC PS 7170 | Intro. to Ed. Statistics (prerequisite) | 3 | | | |
| | Qual Track or Quant Track | | | | |
| | ESC PS 8630 Qual I or ESC PS 8610 Quant I | 3 | | | |
| | ESC PS 9620 Qual II or ESC PS 8620 Quant II | 3 | | | |
| | | | | | |
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| | | | | | |
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Doctoral Seminars (Required)

| Course # | Title | CrHr | Grade | IHE | Semester |
|----------|-------|------|-------|-----|----------|
| | | | | | |
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| | |
|----------------------|--|
| Total Graduate Hours | |
|----------------------|--|

Ph.D. Professional Immersion Residency Planning Form

The SISLT Ph.D. residency requirements consist of two parts: Course Enrollment and Professional Immersion. Use this form to plan for the Professional Immersion portion. Professional Immersion activities occur during a two-year time period following admission to the program. Prior to beginning the residency period, you must submit a Residency Plan to your Program Committee. Using the categories below, describe the residency activities and accomplishments that will be evident in your professional development. Sample activities and accomplishments are on the next page, with guidelines for evaluating the residency plan.

| |
|----------------------|
| Research and Writing |
|----------------------|

| |
|----------|
| Teaching |
|----------|

| |
|--------------------|
| System Development |
|--------------------|

| |
|----------------------|
| Professional Service |
|----------------------|

| |
|----------------------------|
| Professional Participation |
|----------------------------|

Program Committee Approval

Date: _____

| | | |
|--------|--------|--------|
| Chair | Member | Member |
| Member | Member | Member |

Ph.D. Residency Planning: Sample Activities and Accomplishments

Research and Writing

- | | | |
|--|--|--|
| <input type="checkbox"/> Author/co-author a book review | <input type="checkbox"/> Work as a research assistant | <input type="checkbox"/> Author/co-author a research article |
| <input type="checkbox"/> Contribute to a professional newsletter | <input type="checkbox"/> Critique a colleague's research article draft | <input type="checkbox"/> Author/co-author a practice article |
| <input type="checkbox"/> Conduct research with fellow students | <input type="checkbox"/> Develop a grant proposal | <input type="checkbox"/> Present a paper at a conference |
| <input type="checkbox"/> Conduct research with a faculty member | <input type="checkbox"/> Produce a working paper for discussion | |
-

Professional Service

- | | | |
|---|--|---|
| <input type="checkbox"/> Edit a professional newsletter | <input type="checkbox"/> Serve in a professional office | <input type="checkbox"/> Serve as a journal field reviewer |
| <input type="checkbox"/> Serve in a graduate student organization | <input type="checkbox"/> Organize a professional conference | <input type="checkbox"/> Organize an invited speaker session |
| <input type="checkbox"/> Serve on department, college, university, or professional committees | <input type="checkbox"/> Serve as chair/discussant at a professional meeting | <input type="checkbox"/> Organize study groups, seminars, forums, and/or lecture series |
-

Teaching

- | | | |
|---|---|--|
| <input type="checkbox"/> Work as a teaching assistant | <input type="checkbox"/> Develop course instructional materials | <input type="checkbox"/> Prepare instructional aids |
| <input type="checkbox"/> Teach a course | <input type="checkbox"/> Develop instructional evaluation materials | <input type="checkbox"/> Serve as a mentor for junior students |
| <input type="checkbox"/> Guest lecture in a course | | |
| <input type="checkbox"/> Tutor fellow students | <input type="checkbox"/> Proctor an exam | |
-

System Development

- | | | |
|---|--|---|
| <input type="checkbox"/> Serve as a project director or associate director | <input type="checkbox"/> Develop specifications and products for instructional or informational applications | <input type="checkbox"/> Participate as evaluator on a project |
| <input type="checkbox"/> Participate in a consultation activity | <input type="checkbox"/> Participate as a planner or designer on a project | <input type="checkbox"/> Serve as a field test subject for the formative evaluation of instructional or informational project |
| <input type="checkbox"/> Prepare a consultation report for an actual client | | |
-

Professional Participation

- | | | |
|---|---|---|
| <input type="checkbox"/> Attend professional colloquia and seminars | <input type="checkbox"/> Attend relevant professional presentations on campus | <input type="checkbox"/> Participate in a professional seminar |
| <input type="checkbox"/> Attend state professional meetings | <input type="checkbox"/> Host visitors to campus | <input type="checkbox"/> Participate in a study group or professional network |
| <input type="checkbox"/> Attend regional professional meetings | <input type="checkbox"/> Observe colleagues in an innovative or exemplary program | <input type="checkbox"/> Initiate and lead a seminar with faculty participation |
| <input type="checkbox"/> Attend national professional meetings | | |
-

Residency Plan Evaluation

- | | | |
|--|---|--|
| ✓ Relevance to your professional goals | ✓ Demonstration of collaboration | ✓ Evidence of reduction in full-time work load |
| ✓ Quality of participation | ✓ Demonstration of independence | |
| ✓ Quantity of participation | ✓ Opportunity for written, oral, and electronic communication | |
| ✓ Variety of participation activities | | |
| ✓ Demonstration of initiative | | |