

Information Science and Learning Technologies

The PhD in Information Science and Learning Technologies prepares doctoral students for careers as researchers at the intersection of information and technology. As a doctoral student in the School of Information Science & Learning Technologies, you can follow interdisciplinary paths. Approaches to inquiry include technical, cognitive, epistemological, cultural, political, and economic aspects of informing and learning. Interest areas include:

- Engineering education
- Educational gaming and simulation
- Information organization, access, and dissemination
- Information seeking and use
- Interactive learning environments including VR, embodied and augmented learning
- Learner-centered design, interface design, instructional design
- Libraries, archives, museums, and other cultural heritage institutions
- Reading, gaming, and other immersive experiences
- User eXperience (UX) and Human computer interaction (HCI)

The completion of the program will prepare you for career tracks in higher education, public policy, public and private research in various fields including but not limited to interaction design, instructional design, and library and information science. The PhD can be completed either in-person or, in cooperation with your advisor and program of study committee, entirely online.

For questions, please contact the School of Information Science & Learning Technologies (the iSchool at the University of Missouri)
304 Townsend Hall
Columbia, MO 65211
Toll free phone: 877-747-5868
phone: 573-884-1391
email: [sislt@missouri.edu](mailto:sisl@missouri.edu)
website: <https://education.missouri.edu/information-science-learning-technologies/>

Faculty

Professor D. Adkins**, R. Marra**, J. Moore**

Associate Professor J. Bossaller**, S. Buchanan**, H. Moulaison-Sandy**, X. Xu**

Assistant Professor H. Cho**, N. Glaser**, D. Oprean**, L. Ridenour**, W. Shang*

Associate Teaching Professor J. Alston*, B. Brendler**, C. Dudenhoffer*

Assistant Teaching Professor K. Jones*

Professor Emeriti J. M. Budd, J. Caplow, S. Erdelez*, G. Fitzgerald, T. R. Kochtanek, J. Laffey**

* Graduate Faculty Member - membership is required to teach graduate-level courses, chair master's thesis committees, and serve on doctoral examination and dissertation committees.

** Doctoral Faculty Member - membership is required to chair doctoral examination or dissertation committees. Graduate faculty membership is a prerequisite for Doctoral faculty membership.

Undergraduate

The degree in information science and learning technologies is only at the PhD level. The University does offer baccalaureate opportunities in a number of related areas, both within the College of Education (specifically, the Bachelor of Educational Studies (<https://catalog.missouri.edu/collegeofeducation/educationalstudies/bes-educational-studies/>)), and in the other Schools and Colleges that make up the University. The catalog provides a complete list of these degree options (<https://catalog.missouri.edu/degreesanddegreeprograms/>).

Graduate

- PhD in Information Science and Learning Technologies (<https://catalog.missouri.edu/collegeofeducation/information-sciencelearningtechnologies/phd-information-science-learning-technologies/>)

About the PhD in Information Science & Learning Technologies

In January 1997, the School of Information Science & Learning Technologies (SISLT) became the home for MU's graduate programs in Library and Information Science and Educational Technologies as well as a new, interdisciplinary doctoral program in Information Science & Learning Technologies. For an historical look at SISLT theses and dissertations, consult the digital archive in MOspace: <https://mospace.umsystem.edu/xmlui/handle/10355/5240/>

SISLT is a proud member of the iSchools (<https://ischools.org/>), an international group of information schools in institutions of higher education dedicated to advancing the information field.

For more information, contact:

SISLT Student Services, 304 Townsend Hall
573-884-1391 or toll free 877-747-5868
<https://education.missouri.edu/information-science-learning-technologies/>

IS_LT 2222: Information Management and the Successful Scholar

This course will help students determine what information is needed for a project; access and critically evaluate information in the library and the internet; understand intellectual property, develop skills for lifelong learning, and learn to use a variety of technological tools that can help them succeed in college. Graded on A-F basis only.

Credit Hours: 3

IS_LT 2467: Inquiry into Empowering Learners with Technology

This course examines models and strategies for integrating technology into the teaching and learning process, with a focus on transformative, meaningful learning instead of passive technology use. Topics include digital citizenship, professional online presence, and designing and facilitating learning with technology. Graded on A-F basis only.

Credit Hours: 3

Prerequisites: Consent required (students must be admitted to College of Education's Teacher Education program)

IS_LT 3450: Introduction to Research in Educational Settings

(same as ED_LPA 3450). This course provides an introduction to quantitative, qualitative, and mixed methods research, with an emphasis on how various forms of data collection and prior research can inform and improve practice. Students will: (1) develop skills in locating research relevant to their professional interests; (2) understand multiple forms of data collection strategies; and (3) identify ethical considerations associated with research. Graded on A-F basis only.

Credit Hours: 3

IS_LT 4099: Making and Education

(cross-leveled with IS_LT 7099). This course discusses the importance of making and creative, participatory culture in educational environments. Students will learn about making and participatory creative culture, with an emphasis on inclusive STEAM experiences, while using virtual creative tools. Experience how these ideas can enhance your own personal education, while building practical skills in design thinking and project management. This course includes experience creating digital learning spaces and projects, builds 21st century career skills, and provides a chance to design and prototype educational manipulatives and aids. Graded on A-F basis only.

Credit Hours: 2

IS_LT 4308: Game Engine Skills

(cross-leveled with IS_LT 7308) This course - via hands-on activities and projects - will immerse you into learning to use the basic functionalities of a Game Engine (e.g. Unity or Unreal). This is a skills course. You will learn to use the game engine so you can prototype games on your own. Graded on A-F basis only.

Credit Hours: 2

IS_LT 4310: Seminar in Information Science and Learning Technologies

Discussion and critical study of current developments in the field of information science and learning technologies.

Credit Hour: 1-3

IS_LT 4355: Web Design and Development

(cross-leveled with IS_LT 7355). Learn how to make websites or customize existing ones using HTML5 and CSS3 (cascading style sheets). This course teaches you how to set-up, design and create a website, learn design principles of text, color, media, and how to design web sites for different layouts. You will develop a fully functional website

ready to use or one ready for more advanced web languages to be integrated. Graded on A-F basis only.

Credit Hours: 3

IS_LT 4356: Interactive Web Design

(cross-leveled with IS_LT 7356). Attain skills in designing/developing interactive web sites/applications using JavaScript, JavaScript libraries, AJAX, plugins, widgets, Bootstrap, and user interface themes. Add effects, animations to photo galleries, slide shows, carousels to support instruction. Embed dynamic data visualizations using multiple open sources and modify web pages based on user actions to fit interactive instructional needs. Graded on A-F basis only.

Credit Hours: 3

Prerequisites: IS_LT 4355

IS_LT 4361: Introduction to Digital Media

(cross-leveled with IS_LT 7361). Hands-on approach to multimedia production techniques. Develops understanding of technical and conceptual tools for the basics of digital media, video editing, still image and audio file manipulation. Students create web portfolio to present their digital products. Graded on A-F basis only.

Credit Hours: 3

IS_LT 4366: Technology Leadership

(cross-leveled with IS_LT 7366). Develop skills, knowledge, and values needed to provide technology leadership in diverse environments. Analyze characteristics of effective leaders, with a focus on staff development, project management, and leading innovation. Explore technology integration, policy planning and reform, and current issues across various settings, including schools, libraries, community organizations, and online platforms. Graded on A-F basis.

Credit Hours: 3

IS_LT 4373: Exploring Moodle

(cross-leveled with IS_LT 7373). This course will prepare students to work within the Moodle Learning Management System (LMS) to set up and manage an online course. Students in the course will investigate and manipulate components of Moodle from an instructor's perspective. Graded on A-F basis only.

Credit Hour: 1

IS_LT 4374: Exploring Canvas

(cross-leveled with IS_LT 7374). This course will prepare students to work within the Canvas Learning Management System (LMS) to set up and manage an online course. Students will investigate and manipulate

components of Canvas from an instructor's perspective. Graded on A-F basis only.

Credit Hour: 1

IS_LT 4375: Mobile Learning and Application Design

(cross-leveled with IS_LT 7375). Mobile devices such as smartphones and tablets have exploded in popularity over the past decade. Students are using their mobile devices to access learning materials at an ever-increasing rate. This course embraces the mobile revolution and provides a perspective of learning that is available 24/7 and from anywhere in the world. To this end, the course provides a brief history of mobile learning (mLearning), an overview of mobile learning hardware, and a specific focus on the software (known as apps) that is used on mobile hardware. Learners identify learning needs, review apps based on those needs, and evaluate those apps. Learners then design and develop functional prototypes of mobile learning apps with user-friendly app development tools. Graded on A-F basis only. Recommended: Students must be able to hand code: html, Styling and positioning web pages using CSS & JavaScript, and JavaScript basic functions.

Credit Hours: 3

IS_LT 4383: Rapid Development Tools for Online Learning

(cross-leveled with IS_LT 7383). Students will apply principles of rapid development and use rapid development tools to create a prototype of an e-learning module that uses technology features that can enhance learning (e.g. learner interactions). Specific competencies include: Storyboard and "rapidly" develop an e-learning module using software designed to support this process; Use software tools that develop specific elements of e-learning (e.g. video, animation, gaming), and incorporate those elements into an e-learning module; Evaluate rapidly developed e-learning products; Compare and contrast features of rapid development software packages. Graded on A-F basis only.

Credit Hours: 3

IS_LT 4384: Designing Games for Learning

(cross-leveled with IS_LT 7384). Learn why games can be useful in learning and how to design them. Play some exemplary games that will help you understand the mechanics of game design and work incrementally towards designing and developing your own educational game prototype via game modifications ("mods"), engaging in gaming communities, evaluating existing games, building learning plans using games and learning the basics of a simple gaming shell language. Graded on A-F basis only.

Credit Hours: 3

Prerequisites or Corequisites: IS_LT 4310 must be taken as a prerequisite or concurrently with IS_LT 4384

Prerequisites: Junior or senior standing required

IS_LT 4385: Designing Games for Learning II

Learn to apply knowledge of serious game design to a real-world problem within the learning community. Acknowledge and identify the differences in educational games and simulations by playing and researching actual educational games and simulations. Work with a real client to incrementally design either a game or simulation with a working prototype to pitch to Adroit Studios gaming lab. Gain experience with gaming and simulation engines and understand how game development aligns with game design. Test the designed prototype idea to evaluate the success of learning. Graded on A-F basis only.

Credit Hours: 3

Prerequisites: IS_LT 4384, instructor's consent

IS_LT 4386: Microlearning

(cross-leveled with IS_LT 7386). Microlearning involves just-in-time delivery of small, targeted "nuggets" of specific content. This course introduces basic concepts, process, strategies, and resources for designing microlearning experiences. Students utilize step-by-step guides and instruction to create a microlearning project. Graded on A-F basis only.

Credit Hour: 1

IS_LT 4473: Introduction to Project Management

Knowledge and tools for major phases of project management life cycle: project initiation, planning, execution, and closure. Integrated online discussions focus on application and resources. Includes discussions of Lean Project Management techniques and the role of Project Managers. Graded on A-F basis only.

Credit Hours: 3

IS_LT 4500: Educational Studies Game Design Senior Capstone

In this culminating course for the Bachelor of Educational Studies degree, emphasis in Educational Games and Simulation Design, students design and prototype a simple educational game or simulation, or a significant component of a larger educational game or simulation design. Once developed, you must conduct play-tests. The Capstone is used as the culminating assessment at the end of the program of study. Graded on S/U basis only.

Credit Hours: 3

Prerequisites: Instructor consent. Must be taken during last semester of student's program

IS_LT 4500W: Educational Studies Game Design Senior Capstone

In this culminating course for the Bachelor of Educational Studies degree, emphasis in Educational Games and Simulation Design, students design and prototype a simple educational game or simulation, or a significant component of a larger educational game or simulation design. Once developed, you must conduct play-tests. The Capstone is used as the

culminating assessment at the end of the program of study. Graded on S/U basis only.

Credit Hours: 3

Prerequisites: Instructor consent. Must be taken during last semester of student's program

IS_LT 4888: Intro to VR-enabled Instructional Design

(cross-leveled with IS_LT 7888). This course concentrates on establishing your own virtual reality instructional environment applying instructional design theories and hands-on technical skills including 3D modeling and simple scripting in VR. Graded on A-F basis only.

Credit Hours: 3

IS_LT 7099: Making and Education

(cross-leveled with IS_LT 4099). This course discusses the importance of making and creative, participatory culture in educational environments. Students will learn about making and participatory creative culture, with an emphasis on inclusive STEAM experiences, while using virtual creative tools. Experience how these ideas can enhance your own personal education, while building practical skills in design thinking and project management. This course includes experience creating digital learning spaces and projects, builds 21st century career skills, and provides a chance to design and prototype educational manipulatives and aids. Graded on A-F basis only.

Credit Hours: 2

IS_LT 7301: Library and Information Technology

The nature of library and information technologies in the institutional setting; covers the culture of information in society, standards for information processing and transfer, and networking in communications perspectives of information-providing agencies such as libraries and archives. Graded on A-F basis only.

Credit Hours: 3

IS_LT 7302: Organization of Information

In order to retrieve and use information, that information must first be organized. This course investigates systems and structures for organizing information in a variety of contexts.

Credit Hours: 3

IS_LT 7305: Foundations of Library and Information Science

An introduction to the background, contexts, organizations, issues, ethics, values, and terms of information science, the information professions, and the library as an idea, space, institution, and repository of the cultural record.

Credit Hours: 3

IS_LT 7306: School Library Early Field Experience

30-50 clock hours of early field experience in K-12 school libraries. Students will observe an experienced school librarian and have limited interactions with students. Emphasis to include professional library skills in program management and administration (e.g., managing collections and technology) and working with the school community. Graded on S/U basis only.

Credit Hour: 1

Prerequisites: Instructor permission and enrollment in the school library media specialist emphasis area

IS_LT 7307: School Library Mid-Level Field Experience

45-60 clock hours of mid-level field experience in K-12 school libraries. Students will observe an experienced school librarian and have structured interactions with students. Emphasis to include professional library skills in information and knowledge (e.g., preparing and leading instruction, classroom management) and teaching for learning (e.g., collaborating with the school community). Graded on S/U basis only.

Credit Hour: 1

Prerequisites: Instructor permission and enrollment in the school library media specialist emphasis area. Enrollment in or successful completion of IS_LT 7306

IS_LT 7308: Game Engine Skills

(cross-leveled with IS_LT 4308). This course - via hands-on activities and projects - will immerse you into learning to use the basic functionalities of a Game Engine (e.g. Unity or Unreal). This is a skills course. You will learn to use the game engine so you can prototype games on your own. Graded on A-F basis only.

Credit Hours: 2

IS_LT 7310: Seminar in Information Science and Learning Technology

Discussion and critical study of current developments in the field of information science and learning technologies.

Credit Hour: 1-3

IS_LT 7312: Principles of Cataloging and Classification

Theory and practice of cataloging and classification of library materials using current standards and tools. Principles, developments, and trends in cataloging and access to library data.

Credit Hours: 3

Prerequisites: IS_LT 7305

IS_LT 7313: Collection and Access Management

Selection of materials for libraries and information agencies, policies for collection management, freedom and diversity of information, access to information and evaluation of collections and access.

Credit Hours: 3

IS_LT 7314: Reference Sources and Services

Principles, developments and trends in reference services, reference service organization, and general and specialized print and online sources. Overview of information needs and searching. Graded on A-F basis only.

Credit Hours: 3

IS_LT 7315: Management of Information Agencies

Concepts of management applied to libraries and information systems; management tools, programming, models and simulation in an environment of an information producing or disseminating agency.

Credit Hours: 3

IS_LT 7320: Emerging Technologies in Libraries

Critically examines web technologies, devices, and methods used to access collections and services, promote social interaction, and facilitate communication. Focuses on new and emerging software, resources, and communication methods including their discovery and implementation. Graded on A-F basis only.

Credit Hours: 3

IS_LT 7325: Principles of Multimedia and Message Design

This course explores fundamental design theory and message design principles essential for effective communication across fields. Students will learn to analyze, critique, and create visually compelling content using design concepts, from typography to color theory, as well as adapt these skills to new and emerging technologies. The course will focus on visual and digital literacy and its importance in design. Graded on A-F basis only.

Credit Hours: 2

IS_LT 7351: Digital Modeling for Serious Games

Through a series of hands-on activities and projects, this course will provide you with the skills and confidence to start creating environments and objects using Blender or a similar modeling program. You will learn to use this modeling program with the intention of using your models for a video game project. Graded on A-F basis only.

Credit Hours: 3

IS_LT 7355: Web Design and Development

(cross-leveled with IS_LT 4355). Learn how to make websites or customize existing ones using HTML5 and CSS3 (cascading style sheets). This course teaches you how to set-up, design and create a website, learn design principles of text, color, media, and how to design web sites for different layouts. You will develop a fully functional website ready to use or one ready for more advanced web languages to be integrated. Graded on A-F basis only.

Credit Hours: 3

IS_LT 7356: Interactive Web Design

(cross-leveled with IS_LT 4356). Attain skills in designing/developing interactive web sites/applications using JavaScript, JavaScript libraries, AJAX, plugins, widgets, Bootstrap, and user interface themes. Add effects, animations to photo galleries, slide shows, carousels to support instruction. Embed dynamic data visualizations using multiple open sources and modify web pages based on user actions to fit interactive instructional needs. Graded on A-F basis only.

Credit Hours: 3

Prerequisites: IS_LT 4355 or IS_LT 7355

IS_LT 7361: Introduction to Digital Media

(cross-leveled with IS_LT 4361). Hands-on approach to multimedia production techniques. Develops understanding of technical and conceptual tools for the basics of digital media, video editing, still image and audio file manipulation. Students create web portfolio to present their digital products. Graded on A-F basis only.

Credit Hours: 3

IS_LT 7366: Technology Leadership

(cross-leveled with IS_LT 4366). Develop skills, knowledge, and values needed to provide technology leadership in diverse environments. Analyze characteristics of effective leaders, with a focus on staff development, project management, and leading innovation. Explore technology integration, policy planning and reform, and current issues across various settings, including schools, libraries, community organizations, and online platforms. Graded on A-F basis.

Credit Hours: 3

IS_LT 7373: Exploring Moodle

(cross-leveled with IS_LT 4373). This course will prepare you to work within the Moodle Learning Management System (LMS) to set up and manage an online course. As a student in this course, you will investigate and manipulate components of Moodle from an instructor's perspective. Graded on A-F basis only.

Credit Hour: 1

IS_LT 7374: Exploring Canvas

(cross-leveled with IS_LT 4374). This course will prepare students to work within the Canvas Learning Management System (LMS) to set up and manage an online course. Students will investigate and manipulate components of Canvas from an instructor's perspective. Graded on A-F basis only.

Credit Hour: 1

IS_LT 7375: Mobile Learning and Application Design

(cross-leveled with IS_LT 4375). Mobile devices such as smartphones and tablets have exploded in popularity over the past decade. Students are using their mobile devices to access learning materials at an ever-increasing rate. This course embraces the mobile revolution and provides a perspective of learning that is available 24/7 and from anywhere in the world. To this end, the course provides a brief history of mobile learning (mLearning), an overview of mobile learning hardware, and a specific focus on the software (known as apps) that is used on mobile hardware. Learners identify learning needs, review apps based on those needs, and evaluate those apps. Learners then design and develop functional prototypes of mobile learning apps with user-friendly app development tools. Graded on A-F basis only. Recommended: Students must be able to hand code: html, Styling and positioning web pages using CSS & JavaScript, and JavaScript basic functions.

Credit Hours: 3

IS_LT 7378: Technology in Schools and Learning Technology Portfolio Development

This course supports students in the Technology in Schools emphasis area, and the Learning Technologies and Design masters to develop portfolios to document their achievements of the competencies for their programs. TiS students will demonstrate mastery of the ISTE Standards and commitment to ongoing learning. For Learning Technologies and Design students, they will develop portfolios that demonstrate attainment of the degree competencies documented on the SISLT web site. Web development skills are required. Graded on A-F basis only.

Credit Hour: 1

Prerequisites: Restricted to students admitted into the Technology in Schools emphasis, and students in the Learning Technologies and Design program who have completed 21 hours in their programs

IS_LT 7380: School Library Practicum

Directed, project-based experience in school libraries. Graded on S/U basis only.

Credit Hour: 1-3

Prerequisites: admission to MA, initial certification or 24 completed LIS credit hours taken at MU; instructor's consent

IS_LT 7381: Practicum in Information Agencies

Provides a supervised work experience for master's degree students in a public, academic, or special library. Graded on S/U basis only.

Credit Hour: 2-3

Prerequisites: IS_LT 7301, IS_LT 7302 or IS_LT 7312, IS_LT 7314, IS_LT 7315

IS_LT 7383: Rapid Development Tools for Online Learning

(cross-leveled with IS_LT 4383). Students will apply principles of rapid development and use rapid development tools to create a prototype of an e-learning module that uses technology features that can enhance learning (e.g. learner interactions). Specific competencies include: Storyboard and "rapidly" develop an e-learning module using software designed to support this process; Use software tools that develop specific elements of e-learning (e.g. video, animation, gaming), and incorporate those elements into an e-learning module; Evaluate rapidly developed e-learning products; Compare and contrast features of rapid development software packages. Graded on A-F basis only.

Credit Hours: 3

IS_LT 7384: Designing Games for Learning

(cross-leveled with IS_LT 4384). Learn why games can be useful in learning and how to design them. Play some exemplary games that will help you understand the mechanics of game design and work incrementally towards designing and developing your own educational game prototype via game modifications ("mods"), engaging in gaming communities, evaluating existing games, building learning plans using games and learning the basics of a simple gaming shell language. Graded on A-F basis only.

Credit Hours: 3

Prerequisites or Corequisites: IS_LT 7310

IS_LT 7386: Microlearning

(cross-leveled with IS_LT 4386). Microlearning involves just-in-time delivery of small, targeted "nuggets" of specific content. This course introduces basic concepts, process, strategies, and resources for designing microlearning experiences. Students utilize step-by-step guides and instruction to create a microlearning project. Graded on A-F basis only.

Credit Hour: 1

IS_LT 7888: Intro to VR-enabled Instructional Design

(cross-leveled with IS_LT 4888). This course concentrates on establishing your own virtual reality instructional environment applying instructional design theories and hands-on technical skills including 3D modeling and simple scripting in VR. Graded on A-F basis only.

Credit Hours: 3

IS_LT 9012: Public Library Community Partnerships

Students will respond to community needs through grant-writing, documentation, and budgeting for partnerships. Graded on A-F basis only.

Credit Hours: 3

IS_LT 9013: Public Library Administration

This class covers three main components: planning, human resources, and budgeting, focusing on public libraries.

Credit Hours: 3

Prerequisites: IS_LT 7305

Recommended: IS_LT 9444

IS_LT 9014: Budgeting in Libraries

Budgeting in Libraries covers topics including basic budgeting principles, the legal context, sources of income, standards, developing budgets, types of budgets, fund accounting, cost concepts, risk, internal controls and budget presentation. Graded on A-F basis only.

Credit Hours: 3

IS_LT 9085: Problems in Information Science and Learning Technology

Independent, directed study on a topic in the areas of information science and learning technologies.

Credit Hour: 1-99

Prerequisites: departmental consent

IS_LT 9090: Dissertation Research in Information Science and Learning Technologies

Dissertation research. Graded on S/U basis only.

Credit Hour: 1-99

Prerequisites: Doctoral Committee Chair's consent

IS_LT 9334: Library Information Systems

Focuses on the automated library systems marketplace. Covers integrated online library systems from the systems, functional and user perspective. Includes management approaches for procurement and operation of such systems. Graded on A-F basis only.

Credit Hours: 3

Prerequisites: IS_LT 7302 or IS_LT 7312, and IS_LT 7301 or IS_LT 7320

IS_LT 9403: Gender Construction in Children's/Adolescent Literature and Media

This course will cover some of the theoretical concepts about the construction of gender in our culture and how that construction is enabled by literature and media for children and adolescents. Graded on A-F basis only.

Credit Hours: 3

IS_LT 9404: School Library Administration

Emphasizes school library administration: program development, implementation, evaluation; planning cycle; budget process; services for diverse school constituencies. Effects of national, state, district guidelines, standards and policies on library media programs.

Credit Hours: 3

IS_LT 9405: Sociocultural Aspects of Literacy

This course will cover sociocultural and social constructionist theory as they relate to literacy. Sociocultural theory, in terms of literacy, looks at how both social elements and cultural elements interact to impact literacy behaviors and outcomes. Graded on A-F basis only.

Credit Hours: 3

IS_LT 9406: Curriculum and the School Library

Focuses on the library media specialist as teacher and instructional partner. Emphasizes negotiating instructional partnerships, integrating information problem-solving models into the curriculum, curriculum mapping, and resource-based learning models.

Credit Hours: 3

IS_LT 9407: Intellectual Freedom and Its Discontents

The course examines principles and contradictions of intellectual freedom and their relation to librarianship. The nature of free speech, the First Amendment, sources of censorship, and professional disputes about intellectual freedom practice in libraries will be important topics. Graded on A-F basis only.

Credit Hours: 3

IS_LT 9408: Information Policy

Examination of the roles of private and public sectors in information policy formation. Includes consideration of social, economic, political and technological issues.

Credit Hours: 3

IS_LT 9409: Seminar in Digital Libraries

This course is a project-based learning environment that combines Instructor-prepared content, group-based student projects, and threaded asynchronous discussions on selected topics relating to the design, development, and implementation of practical digital libraries. Research directives within the broad domain of digital library development are also covered. Graded on A-F basis only.

Credit Hours: 3

Prerequisites: IS_LT 7301, IS_LT 7305, IS_LT 7302/IS_LT 7312

IS_LT 9410: Seminar in Information Science and Learning Technology

Discussion and critical study of current developments in information science and learning technologies.

Credit Hour: 1-3

IS_LT 9411: Doctoral Seminar in Information Science and Learning Technologies

Discussion and critical study of current developments in information science and learning technologies. Graded on A-F basis only.

Credit Hour: 1-3

IS_LT 9413: Electronic Resource Management

This course explores electronic resources (primarily subscription journals and databases) in terms of products, pricing, in-house management of resources, both technical and organizational, licensing, configuring databases and organizing websites for the end user, statistical reporting, and future trends.

Credit Hours: 3

IS_LT 9416: Health and Medical Information and Services in Libraries

This class explores health information, services, and programs in all types of libraries and covers trending and relevant topics in the health and medical fields using articles, recordings, and other resources and hands-on assignments to demonstrate how health and medical information plays a role in librarianship. Graded on A/F basis only

Credit Hours: 3

IS_LT 9417: Action Research

Study of concepts associated with action research; and the processes and procedures for conducting action research. Culminating project is the development of an action research project.

Credit Hours: 3

Prerequisites: 12 credit hours completed prior to enrolling

IS_LT 9419: American Library History

Students in this course will learn about the history of libraries in America, reading about and analyzing the political, cultural, and social roles of particular libraries and the library as an institution. Graded on A-F basis only.

Credit Hours: 3

IS_LT 9420: Scholarly Communication

Exploration of the production and communication of information and knowledge in the disciplines.

Credit Hours: 3

IS_LT 9421: Usability of Information Systems and Services

Introduction to concepts and methods of usability testing and research and user-centered design strategy. Course takes a process approach to define target audiences and usability problems, create and administer investigative procedures, analyze results, and report findings effectively. Graded on A-F basis only.

Credit Hours: 3

IS_LT 9423: Ethics, Data, and Information

Critical inquiry into perennial and emerging issues in the ethics of data and information.

Credit Hour: 1-3

IS_LT 9426: Diversity in the Information Professions

Leadership to promote employment, organizational, collection and program diversity within libraries and information agencies in the U.S. This course includes management and diversity theories, discussions of workplace climate, and discussions of discrimination and hostility issues. Graded on A-F basis only.

Credit Hours: 3

IS_LT 9427: The Information Society

This class critically examines the control, dissemination, and effects of information on the modern world. We will study the complex relationship

between information and society, looking at how each is a reflection and shaper of the other. The relationship of libraries and other information agencies to the state, and the role of information professionals in the political and cultural spheres are central themes in the course. Graded on A-F basis only.

Credit Hours: 3

IS_LT 9428: History of Books and Media

Examines the history and philosophy of books and media from the beginnings of writing to the Internet, emphasizing the effects of changes in communication and information technologies. The focus is on the social, cultural, intellectual, scientific, and religious impacts of shifts in the media for preserving and transmitting information. Graded on A-F basis only.

Credit Hours: 3

IS_LT 9429: Metadata

The contacts in your phone, the embedded GPS information in the photo you took on vacation, and the information that allows you to track down an article in a database are all metadata. Today more than ever, metadata is at the heart of what information professionals do as we organize, teach about, search for, and analyze information. This class explores a variety of kinds of metadata, and the tools and systems for working with it, from the point of view of the information professional. Graded on A-F basis only.

Credit Hours: 3

Prerequisites: IS_LT 7302 or IS_LT 7312

IS_LT 9431: Children's Library Materials

Evaluation and selection of materials for children birth-age 13 (Grade 6). Early literacy, emergent readers, reader response theory; social, cultural contexts of readers and reading, trends in publishing.

Credit Hours: 3

IS_LT 9433: Youth Services in Libraries

Examines physical, mental, and emotional development of youth birth through high school. Emphasis on community analysis, outreach services, program design and techniques. Graded on A-F basis only.

Credit Hours: 3

IS_LT 9434: Teen Library Materials

Evaluation, selection of print, alternate formats for teens, 13-18 (Grades 7-12). Personal, social, popular culture contexts of teen readers and texts; emphasizes reader response; challenges common assumptions about teens and reading.

Credit Hours: 3

IS_LT 9435: Adult Services in Libraries

Library services to adults, including special populations. Emphasis on information needs of adults, organization and management of adult services.

Credit Hours: 3

IS_LT 9436: Legal Bibliography and Reference

This course provides a broad introduction to the methods and resources for conducting legal research, the collection needs for a law collection, and the needs of legal reference patrons. Graded on A-F basis only.

Credit Hours: 3

IS_LT 9437: Reader Advisory Services

Examination of value and role of leisure reading and leisure reading materials. Coverage of reader advisory techniques, support processes, and resources for providing reader advisory services to various audiences. Graded on A-F basis only.

Credit Hours: 3

IS_LT 9438: Marketing and Libraries

This course provides an introduction to marketing - concepts, planning, strategies and evaluation - as related to libraries and information agencies. Graded on A-F basis only.

Credit Hours: 3

IS_LT 9439: Digital Humanities and Information

This course on history, philosophy, and methods in the emerging field of 'digital humanities' focuses on topics at the nexus of information, the humanities disciplines, technology, and culture, as well as the contexts of the academy, libraries/archives, museums, and media. Graded on A-F basis only.

Credit Hours: 3

IS_LT 9443: The Academic Library

Development, objectives, organization and structure, nature of the collections and responsibility for their development, philosophy of library services, measurement and standards of library effectiveness.

Credit Hours: 3

IS_LT 9444: The Public Library

An overview of public library history, missions, and societal roles. Includes public library funding, organization, and management.

Credit Hours: 3

IS_LT 9445: Special Libraries and Information Centers

Introduction to the organization, management, collections, services, challenges and terminology of special libraries and information centers. Addresses the goals and competencies of special librarianship including information provision and functions as performed in special information centers. Graded on A-F basis only.

Credit Hours: 3

IS_LT 9446: International and Comparative Librarianship

International libraries, intercultural information concerns, how information agencies differ between nations and global information issues. Course presents various countries, their information infrastructures and the influence of information and communication technologies.

Credit Hours: 3

IS_LT 9447: Human Centered Design

Provides an overview of iterative design and project management methodologies that develop solutions to interactive systems and tools. Students will learn how to implement rapid prototyping and evaluation techniques by focusing on the user and task needs, along with human factors. The methods and techniques in this course will enhance understanding of task performance, user satisfaction, and design research. Graded on A-F basis only.

Credit Hours: 3

IS_LT 9448: International Libraries in Context

Study Abroad course. Visit and study international libraries and related institutions. Covers the political, cultural, social, and economic context in which they operate.

Credit Hours: 3

IS_LT 9449: Services for Business Communities and Entrepreneurs

The course covers the introduction to and application of basic concepts of business information in academic, public and special library environments, and the information searching techniques used for specific business information needs (finding company information, industry information, investment information, statistical information, marketing information, etc.) Course includes service to entrepreneurs. Content covers company, investment, industry, statistical and marketing information and includes use of GIS systems.

Credit Hours: 3

IS_LT 9450: Research Methods in Information Science and Learning Technologies

Research methods and ethics of research in the social sciences, focusing on the information professions and learning technologies.

Credit Hours: 3

IS_LT 9452: Information Literacy Instruction

This course is designed to prepare Library Science students/Information professionals for the variety of teaching situations they will encounter in library and information agency settings. Students will consider learning theory applicable to library instruction, learning styles, teaching methods, and appropriate evaluation of library instruction. Students will also learn strategies for incorporating library instruction into the institutional curriculum. Graded on A-F basis only.

Credit Hours: 3

IS_LT 9453: Planning and Evaluation of Information Services

The course focuses on the complexity of the planning process in libraries and other information agencies, including the influence of external environments (upper administrations, user communities, information producers) on planning. Internal elements of the organization (staffing, services, finances) are discussed, as are external elements (requirements of a parent organization, legal constraints, etc.). The role of evaluation of personnel, budgets, facilities, access to information, and services is integrated into the process of providing service.

Credit Hours: 3

IS_LT 9454: Copyright in Libraries

An introductory and practical course covering the foundations of copyright, fair use, e-reserves, related laws including DMCA and TEACH and managing copyright in the public and school environments.

Credit Hours: 3

IS_LT 9455: Design Thinking and Evaluation

Through the use of readings, examples, exercises, and discussions. the course will provide an introduction to the basic principles of the design thinking process, formative and summative evaluation, and other evaluation methods as they apply to learning systems. The course will explore the implementation of evaluation processes in emerging technologies to support learning. Graded on A-F basis only.

Credit Hours: 3

IS_LT 9458: Technology and Assessment

Learn how to assess specific types of knowledge, using technology to enhance the process. Topics include use of tools/strategies for data collection to guide instructional decision-making and investigating technologies to improve assessment of student learning. Emphasis on aligning learning objectives, activities, and assessments and developing performance assessments to measure higher-order thinking. Graded on A-F basis only.

Credit Hours: 3

IS_LT 9460: Human Computer Interaction Research and Analysis

Human Computer Interaction (HCI) is a discipline concerned with the design, evaluation, and implementation of interactive computing systems for human use and with the study of major phenomena surrounding these systems. This course provides an overview of the interdisciplinary HCI field while focusing on the theories and research. Students will apply principles and research methods to a range of interface design problems that impact learning, information retrieval, and performance tools. Graded on A-F basis only.

Credit Hours: 3

IS_LT 9461: Interaction Design

Students will learn the basic concepts of interaction design, then focus on usability engineering and prototyping principles to support the design process for learning and performance based technologies.

Credit Hours: 3

IS_LT 9466: Learning Analytics

Learn how to discover, interpret, and communicate meaningful data patterns in this introductory course. Explore models and applications of learning analytics, as well as privacy and ethical considerations related to the collection and dissemination of learning data. Gain hands-on experience with analytics technologies (e.g., Tableau or Python) that can be used to prepare, visualize, and share data pertaining to learning. Graded on A-F basis only. Note: No programming background required for Tableau option.

Credit Hours: 3

IS_LT 9467: Technology to Enhance Learning

This course explores the integration of technology to foster meaningful learning in virtual, blended, and face-to-face environments. Students will evaluate and apply technologies to support evidence-based instruction and to foster higher order thinking. With a focus on learning theories, digital literacy, and technology integration frameworks, the course prepares students to design effective, technology-enhanced learning experiences across various educational and professional settings. Graded on A-F basis only.

Credit Hours: 3

IS_LT 9470: Computer Science for Educators

In this 8-week course we will examine practices and concepts central to computer science education at the secondary level. We will introduce algorithms, programming, the structure of a computing system, networks and the Internet, and data analysis. Our hands-on work will use the JavaScript programming language. The course integrates instructional strategies, practices of computational thinking, and the central ideas from the AP Computer Science Principles Curriculum. Graded on A-F basis only.

Credit Hours: 3

IS_LT 9471: Instructional Systems Design

Develop knowledge and skills related to the systematic design of instruction. Learn to analyze, design, develop, implement, and evaluate learning systems and instruction. Identify appropriate technologies to support learning and explore alternative models of instructional design.

Credit Hours: 3

IS_LT 9473: Project Management

This course introduces the learner to the necessary and practical project management concepts and skills that lead to reductions in project cycle time while maintaining control over budget, resources, risk, and delivered value. This course proposes to integrate practical project management skills within the project management lifecycle (i.e., initiating, planning, executing, controlling, and closing).

Credit Hours: 3

IS_LT 9474: Front End Analysis of Systems

Develop skills for systematically analyzing learning, or other types of systems, that need to be improved. Develop data collection instruments (e.g. surveys, observation protocols, interviews); analyze secondary data; analyze tasks or activities in the system, and interpret data to make recommendations for system improvement. Skills will be learned by doing and applying to real systems that need improvement.

Credit Hours: 3

IS_LT 9480: Internship in Information Science and Learning Technologies

Provides internship experience under supervision in advanced levels of practical experience in Information Science and Learning Technology Research and Teaching. Graded on S/U basis only.

Credit Hour: 1-99

Prerequisites: School director's consent

IS_LT 9481: School Library Internship

12 weeks of guided practice in K-12 school libraries. Strengthens, extends effective professional skills, attitudes, dispositions, essential to supporting student learning and achievement. Graded on S/U basis only.

Credit Hour: 1-8

Prerequisites: Instructor permission and enrollment in library media specialist emphasis area; satisfactory completion of IS_LT 7306 and IS_LT 7307

IS_LT 9483: Capstone: Online Education Emphasis Area

Culminating course for Online Education emphasis area in Information Science and Learning Technologies graduate degree. Design/develop/evaluate an online course or rework existing course. Analyze evaluation data from two external reviewers (novice/expert). Write paper describing results and modifications. To be taken during last semester of student's program. Graded on S/U basis only.

Credit Hour: 1

IS_LT 9484: Teaching Online Courses

Learn to be an effective online instructor! Examine issues in teaching and learning online; instructor and student roles; instructional strategies for supporting diverse learners; methods of student assessment; online communication; classroom management; characteristics of online learning management systems. Projects put you in the role of instructor to practice what you learn.

Credit Hours: 3

IS_LT 9485: Designing Online Learning

This course uses hands-on, project-based activities for you to practice developing effective online learning that helps your learners to master the skills and knowledge you are targeting. You will learn how to leverage software tools, including emerging technologies such as gaming and AI, to design and develop online learning activities that are grounded in sound learning principles. The skills you develop in this course can be applied to learning in any setting (e.g. industry, military, government, K-12 or higher education, non-profits). The course will focus on developing online learning for complex learning outcomes such as problem solving, analysis, synthesis and creation. Graded on A-F basis only.

Credit Hours: 3

Prerequisites: IS_LT 9471. Instructors consent required

IS_LT 9486: Advanced Designing Games for Learning

Apply knowledge of serious game design to real-world problems in the learning community by working with a real client. Incrementally design a game prototype to pitch to Adroit Studios gaming lab. Evaluate the success of learning in game design using instructional frameworks. Graded on A-F basis only.

Credit Hours: 3

Prerequisites: IS_LT 7384 or instructor consent

IS_LT 9489: Cultural Heritage

Cultural heritage has many definitions but deals largely with the overarching legacy formed among a culture of people through such things as oral tradition and folklore, artifacts, monuments, architecture, and literature. The Seminar in Cultural Heritage course will introduce students to cultural heritage concepts and explore pressing contemporary topics on cultural heritage such as the importance and value of heritage tourism, why cultural heritage is historically a target for military attacks, and who merits commemoration in the public square. Graded on A-F basis only.

Credit Hours: 3

IS_LT 9490: Archival Practice

Students address evidence, memory, and power dynamics while defining the archival profession, principles, and core archival knowledge guiding professional practice. Explore the archival profession through original research centered on the social responsibilities of archivists. Graded on A-F basis only.

Credit Hours: 3

IS_LT 9491: Appraisal and Archival Systems

Students discuss appraisal theory, documentation strategies, and microappraisal applications. Learn strategies for collection preservation and access using ArchivesSpace, and relate the records continuum and lifecycle theories to the archival mission. Graded on A-F basis only.

Credit Hours: 3

IS_LT 9492: Data and Records Management

Examine societal recordkeeping and professional work to identify, manage, preserve, and provide multimedia records access for evidential, legal, leisure, and informational purposes. Study trust and transparency in records, and apply archival ethics through project-based learning. Graded on A-F basis only.

Credit Hours: 3

IS_LT 9499: Library and Information Science ePortfolio

Provides structured feedback to students developing the ePortfolio. Focuses on writing, reflection, and career preparedness. Restricted to students in final semester of MLIS program. Graded on A-F basis only.

Credit Hour: 1

Prerequisites: IS_LT 7305 and instructor consent

IS_LT 9910: Design and Analysis of Research in Information Science and Learning Technologies

Design and analysis of academic research in the domains of library and information science, learning science, and learning technologies. Students will analyze published literature in their fields, write a systematic literature review, research question, and research proposal, as well as engaging in extensive peer review. Graded on A-F basis only.

Credit Hours: 3

Recommended: Course is restricted to doctoral students only, except by permission of instructor

IS_LT 9920: Culture, Information, and Technology

This course explores the intersections of information, culture, and technology. Students will examine the social, political, and economic implications of information systems historically and in contemporary society, and the ways in which cultural norms and values shape technological development. Graded on A-F basis only.

Credit Hours: 3
