

SCHOOL OF INFORMATION AND LIBRARY SCIENCE

Contact Information

School of Information and Library Science
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Introduction

The School of Information and Library Science (SILS) was founded in 1931 and is one of the most highly regarded programs of its kind in the nation. The school first offered a minor in information systems in 1997 and initiated a major in information science in 2003. UNC–Chapel Hill is the only university in the state offering a bachelor's degree in information science and is one of only a small number of schools nationwide offering such a program.

Information science is the study of cognitive, social, technological, and organizational roles of information in all its forms. It rests on three foundational pillars:

1. content: the substance of the information being created, communicated, stored, and/or transformed;
2. people who interact with the content as creators of information, recipients of information, or intermediaries in the communication process; and
3. technology used to support the creation, communication, storage, or transformation of the content.

The bachelor of science in information science is designed to prepare its graduates for a variety of careers in the information industry, including information architecture, database design and implementation, Web design and implementation, business systems analyst, and information consulting, as well as for graduate study. The minor in information systems provides students with an understanding of computing, multimedia, electronic information resources, and the Internet that complements their major field of study. Students concentrate their studies in the junior and senior years.

Advising

All majors are assigned a faculty advisor upon admission to SILS. Students are strongly encouraged to meet regularly with their advisor and review their Tar Heel Tracker each semester. The department's director of undergraduate studies and undergraduate student services coordinator work with current and prospective majors by appointment. Further information on courses, undergraduate research opportunities, the honors program, careers, and graduate schools may be obtained from the SILS Web site.

Students who are double majoring are encouraged to meet periodically with an academic advisor in the College of Arts and Sciences. It is the

student's responsibility to make sure he or she is making good progress toward completing a second major outside of SILS. Information systems minors are not assigned a faculty advisor from SILS but should continue to meet with their assigned advisor in their major department.

Career Opportunities

Career Services at SILS assists individuals in all aspects of career development, including assessing strengths and skill sets, developing a job search strategy, and connecting students and alumni with information professionals in their field.

SILS also works closely with University Career Services and its programs and services, including on-campus recruiting for both summer internships and professional positions. Students are encouraged to take advantage of both the offerings from Handshake as well as targeted events for SILS students.

Preparing for the Major in Information Science

Students are subject to the requirements in place when they are admitted as a degree-seeking student to the University; consequently, the School of Information and Library Science requirements described in this catalog particularly apply to students admitted to the University during the 2018–2019 academic year.

First-year students and sophomores who plan to apply for the B.S.I.S. must complete the following prerequisites.

Code	Title	Hours
INLS 161	Tools for Information Literacy	3
PSYC 101	General Psychology	3
INLS 201	Foundations of Information Science	3
COMP 110 or COMP 116	Introduction to Programming ^H Introduction to Scientific Programming	3

^H Honors version available. An honors course fulfills the same requirements as the nonhonors version of that course. Enrollment and GPA restrictions may apply.

Undergraduate students who have completed all prerequisite courses may apply for admission to the major program. Participation is limited, and admission is competitive. Criteria for admission include the candidate's academic record, work and extracurricular experience, and substantive thinking about the role of information in society (and, for applicants to the minor, in their major field). Candidates from a variety of disciplinary backgrounds are sought for the minor. Prior computer experience is not a criterion for admission to the minor.

Admission

To apply for admission, students must "Apply for Change of Major" in ConnectCarolina. Information regarding the application process is available on the school's Web site (<http://sils.unc.edu/programs/undergraduate/admissions>). Applicants are asked to provide the following materials:

- A current résumé, including information about work experience and/or extracurricular activities
- A brief essay (100–300 words), discussing the role of information (its creation, communication, storage, and/or transmission) in a

particular application area or in society at large, and the candidate's reason(s) for pursuing the major in information science

Applications for the spring semester are available September 1 through October 1. Applications for the fall semester are available February 1 through March 1. Applications are accepted only during the application windows. No paper applications are accepted.

Questions can be addressed to the Undergraduate Student Services Coordinator, School of Information and Library Science, CB# 3360, 107 Manning Hall; or by sending e-mail to sils-ug@ils.unc.edu; or by calling (919) 962-0208.

Major

- Information Science Major, B.S. (<http://catalog.unc.edu/undergraduate/programs-study/information-science-major-bs>)

Minor

- Information Systems Minor (<http://catalog.unc.edu/undergraduate/programs-study/information-systems-minor>)

Graduate Programs

- M.S.I.S. in Information Science (<http://catalog.unc.edu/graduate/schools-departments/information-library-science>)
- M.S.L.S. in Library Science (<http://catalog.unc.edu/graduate/schools-departments/information-library-science>)
- P.S.M. in Digital Curation (<http://catalog.unc.edu/graduate/schools-departments/information-library-science>)
- P.S.M. in Biomedical and Health Informatics (<http://catalog.unc.edu/graduate/schools-departments/information-library-science>)
- Ph.D. in Information and Library Science (<http://catalog.unc.edu/graduate/schools-departments/information-library-science>)

Professors

Stephanie W. Haas, Sandra Hughes-Hassell, Christopher (Cal) Lee, Robert M. Losee, Gary Marchionini (Cary C. Boshamer Distinguished Professor), Javed Mostafa, Arcot Rajasekar, Helen R. Tibbo (Alumni Distinguished Professor).

Associate Professors

Jaime Arguello, Robert Caora, Melanie Feinberg, Claudia Gollop, David Gotz, Bradley M. Hemminger, Brian W. Sturm, Ryan B. Shaw, Zeynep Tufekci.

Assistant Professors

Mary Grace Flaherty, Amelia Gibson, Mohammad Hossein Jarrahi, Lukasz Mazur, Fei Yu.

Clinical Professor

Paul Jones (Director, *ibiblio*).

Clinical Associate Professor

Cliff Missen (Director, *WiderNet* Project).

Clinical Assistant Professor

Ronald Bergquist (Associate Dean for Academic Affairs).

Lecturers

Denise Anthony.

INLS—Information and Library Science Undergraduate-level

INLS 73. First-Year Seminar: Smart Cities. 3 Credits.

Topics and trends in sustainable and smart cities. Role of information in the design of network resources and impact on urban design, development, and urban living will be explored.

Grading status: Letter grade.

INLS 89. First-Year Seminar: Special Topics. 3 Credits.

Special topics course; content will vary each semester.

Repeat rules: May be repeated for credit; may be repeated in the same term for different topics; 6 total credits. 2 total completions.

Grading status: Letter grade.

INLS 151. Retrieving and Analyzing Information. 3 Credits.

Introduction to and application of the processes that can be used in seeking information, evaluating the quality of the information retrieved, and synthesizing the information into a useful form.

Gen Ed: SS.

Grading status: Letter grade.

INLS 161. Tools for Information Literacy. 3 Credits.

Tools and concepts for information literacy. Includes software use and maintenance, computer applications, and networked information systems.

Grading status: Letter grade.

INLS 201. Foundations of Information Science. 3 Credits.

Examines the evolution of information science; information representation, organization and management; search and retrieval; human information seeking and interaction; organizational behavior and communication; policy, ethics and scholarly communication.

Gen Ed: SS.

Grading status: Letter grade.

INLS 202. Retrieval and Organizing Systems. 3 Credits.

Introduction to foundational core concepts and core techniques in information organization, information retrieval, and data mining.

Requisites: Prerequisite, INLS 201.

Grading status: Letter grade.

INLS 203. Human Information Behavior. 3 Credits.

Introduces key areas and concepts in information science, to include task modeling, information-seeking behavior, search behavior, human-computer interaction, usability, user interfaces, social media, and social media analysis.

Requisites: Prerequisite, INLS 201.

Grading status: Letter grade.

INLS 318. Human Computer Interaction. 3 Credits.

Design, implementation, and evaluation of interfaces for computer systems. User-based techniques, usability issues, and human factors.

Requisites: Prerequisite, INLS 382.

Grading status: Letter grade.

INLS 382. Information Systems Analysis and Design. 3 Credits.

Analysis of organizational problems and how information systems can be designed to solve those problems. Application of database and interface design principles to the implementation of information systems.

Requisites: Pre- or corequisite, INLS 161.

Grading status: Letter grade.

INLS 384. Information and Computer Ethics. 3 Credits.

Overview of ethical reasoning, followed by examination of ethical issues relevant to information science, including access to information and technology, societal impacts of technology, information privacy, surveillance and security, intellectual property, and professional ethics.

Requisites: Prerequisite, INLS 201.

Gen Ed: PH, CI.

Grading status: Letter grade.

INLS 385. Information Use for Organizational Effectiveness. 3 Credits.

Basic concepts in the way that information, people, and technology interact to influence organizational effectiveness. Principles of problem solving, teamwork, leadership, and organizational change/innovation.

Grading status: Letter grade.

INLS 393. Information Science Internship. 3 Credits.

Permission of the school. Supervised observation and practice in information science. The internship typically takes place in an information agency or an information technology company. Faculty-led seminars and a paper enhance the experience. Pass/Fail only.

Gen Ed: EE- Academic Internship.

Grading status: Pass/Fail.

INLS 396. Independent Study in Information Systems. 1-3 Credits.

Study by an individual student on a special topic under the direction of a specific faculty member. A prospectus/plan for the work is required in advance of registration.

Repeat rules: May be repeated for credit. 6 total credits. 2 total completions.

Grading status: Letter grade.

Advanced Undergraduate and Graduate-level**INLS 418. Human Factors in System Design. 3 Credits.**

Design, implementation, and evaluation of interfaces for computer systems. User-based techniques, usability issues, and human factors.

Requisites: Prerequisite, INLS 382.

Grading status: Letter grade.

INLS 465. Understanding Information Technology for Managing Digital Collections. 3 Credits.

Prepares students to be conversant with information technologies that underlie digital collections in order to evaluate the work of developers, delegate tasks, write requests for proposals, and establish policies and procedures. Teaches students how to think about information technology systems and recognize and manage interdependencies between parts of the systems.

Grading status: Letter grade.

INLS 490. Selected Topics. 1-3 Credits.

Exploration of an introductory-level special topic not otherwise covered in the curriculum. Previous offerings of these courses do not predict their future availability; new courses may replace these.

Repeat rules: May be repeated for credit; may be repeated in the same term for different topics; 9 total credits. 3 total completions.

Grading status: Letter grade.

INLS 500. Human Information Interactions. 3 Credits.

The behavioral and cognitive activities of those who interact with information, with emphasis on the role of information mediators. How information needs are recognized and resolved; use and dissemination of information.

Requisites: Prerequisite, INLS 203 or graduate standing.

Grading status: Letter grade.

INLS 501. Information Resources and Services. 3 Credits.

Analysis, use, and evaluation of information and reference systems, services, and tools for both printed and electronic delivery. Provides a foundation in electronic information search techniques, question negotiation, interviewing, and instruction.

Grading status: Letter grade.

INLS 502. User Education. 3 Credits.

Examines the history and context of LIS training programs. Pedagogy, teaching skills, methods of evaluation are addressed. Students may tailor learning projects to their own interests.

Requisites: Prerequisite, INLS 501; permission of the instructor for students lacking the prerequisite.

Grading status: Letter grade.

INLS 503. Communication Skills for Information Professionals. 3 Credits.

Through individual presentations, group exercises, and performance-centered feedback, this course seeks to improve students' ability to communicate their ideas clearly and present themselves positively in a professional setting.

Grading status: Letter grade.

INLS 509. Information Retrieval. 3 Credits.

Study of information retrieval and question answering techniques, including document classification, retrieval and evaluation techniques, handling of large data collections, and the use of feedback.

Grading status: Letter grade

Same as: COMP 487.

INLS 512. Applications of Natural Language Processing. 3 Credits.

Study of applications of natural language processing techniques and the representations and processes needed to support them. Topics include interfaces, text retrieval, machine translation, speech processing, and text generation.

Requisites: Prerequisite, COMP 110, 116, or 410.

Grading status: Letter grade

Same as: COMP 486.

INLS 513. Resource Selection and Evaluation. 3 Credits.

Identification, provision, and evaluation of resources to meet primary needs of clientele in different institutional environments.

Grading status: Letter grade.

INLS 515. Consumer Health Information. 3 Credits.

Examines concepts of health, health conditions, policy, and information collections and services from social and cultural perspectives. Analysis and design for provision and access to consumer health information services.

Grading status: Letter grade.

INLS 520. Organization of Information. 3 Credits.

Introduction to the problems and methods of organizing information, including information structures, knowledge schemata, data structures, terminological control, index language functions, and implications for searching.

Grading status: Letter grade.

INLS 523. Introduction to Database Concepts and Applications. 3 Credits.

Design and implementation of basic database systems. Semantic modeling, relational database theory, including normalization, indexing, and query construction, SQL.

Requisites: Pre- or corequisite, INLS 161.

Grading status: Letter grade.

INLS 525. Electronic Records Management. 3 Credits.

Explores relationships between new information and communication technologies and organizational efforts to define, identify, control, manage, and preserve records. Considers the importance of organizational, institutional and technological factors in determining appropriate recordkeeping strategies.

Grading status: Letter grade.

INLS 530. Young Adult Literature and Related Materials. 3 Credits.

A survey of print and nonprint library materials particularly suited to the needs of adolescents.

Grading status: Letter grade.

INLS 534. Youth and Technology in Libraries. 3 Credits.

This course encourages students to explore the array of technologies available to children and adolescents, the issues surrounding the use of technology, the role of care givers, and potential impacts on development.

Grading status: Letter grade.

INLS 539. Going the Last Mile: Information Access for Underserved Populations. 3 Credits.

In this course we investigate the special challenges of providing information services to marginalized populations in an increasingly digital world.

Grading status: Letter grade.

INLS 540. Building a Personal Digital Library. 3 Credits.

Students will implement a personal digital LifeTime Library. Topics include creation of a personal digital library, organization of the material, creation of descriptive metadata, management, and sharing of the collection.

Grading status: Letter grade.

INLS 541. Information Visualization. 3 Credits.

An introduction to information visualization through reading current literature and studying exemplars. The course reviews information visualization techniques, provides a framework for identifying the need for information visualization, and emphasizes interactive electronic visualizations that use freely available tools. Students will construct several visualizations. No programming skills are required.

Grading status: Letter grade.

INLS 550. History of the Book and Other Information Formats. 3 Credits.

The history of the origin and development of the book in all its formats: clay tablets to electronic. Coverage includes scientific and other scholarly publications, religious works, popular literature, periodicals, and newspapers.

Grading status: Letter grade.

INLS 551. History of Libraries and Other Information-Related Cultural Institutions. 3 Credits.

The history of cultural institutions related to information from earliest times to the present day. Includes specific institutions, trends in service and facilities, and individuals important in the development of these institutions.

Grading status: Letter grade.

INLS 554. Cultural Institutions. 3 Credits.

This course will explore cultural institutions—libraries, museums, parks, zoological and botanical gardens, reconstructions and other settings—as lifelong educational environments.

Grading status: Letter grade.

INLS 556. Introduction to Archives and Records Management. 3 Credits.

Survey of the principles, techniques, and issues in the acquisition, management, and administration of records, manuscripts, archives, and other cultural and documentary resources in paper, electronic, and other media formats.

Grading status: Letter grade.

INLS 558. Principles and Techniques of Storytelling. 3 Credits.

An overview of storytelling, its historical development, and the presentation and administration of storytelling programs. The class focuses on performance skills merged with theoretical issues.

Grading status: Letter grade.

INLS 560. Programming for Information Science. 3 Credits.

Introduction to programming and computational concepts. Students will learn to write programs using constructs such as iteration, flow control, variables, functions, and error handling. No programming experience required.

Grading status: Letter grade.

INLS 561. Digital Forensics for Curation of Digital Collections. 3 Credits.

Students will learn about hardware, software, principles, and methods for capturing and curating digital data that have been stored on removable media (i.e., hard drives, floppy disks, USB memory sticks).

Grading status: Letter grade.

INLS 572. Web Development I. 1.5 Credit.

Introduction to Internet history, architecture, and applications. Introduces design principles for creating usable and accessible Web sites. Develops technical skills and understanding of standards.

Requisites: Prerequisite, INLS 161.

Grading status: Letter grade.

INLS 573. Mobile Web Development. 1.5 Credit.

An introduction to techniques and technologies for the development of mobile Web sites and their applications.

Requisites: Prerequisite, INLS 161.

Grading status: Letter grade.

INLS 576. Distributed Systems and Administration. 3 Credits.

Distributed and client/server-based computing. Includes operating system basics, security concerns, and issues and trends in network administration.

Requisites: Prerequisite, INLS 161 or 461.

Grading status: Letter grade.

INLS 578. Protocols and Network Management. 3 Credits.

Network protocols and protocol stacks. Included are discussions of protocol classes, packet filtering, address filtering, network management, and hardware such as protocol analyzers, repeaters, routers, and bridges.

Requisites: Prerequisite, INLS 161 or 461.

Grading status: Letter grade.

INLS 581. Research Methods Overview. 3 Credits.

An introduction to research methods used in information and library science, exploring the design, interpretation, analysis, and application of published research.

Grading status: Letter grade.

INLS 582. Systems Analysis. 3 Credits.

Introduction to the systems approach to the design and development of information systems. Methods and tools for the analysis and modeling of system functionality (e.g., structured analysis) and data represented in the system (e.g., object-oriented analysis) are studied.

Requisites: Prerequisite, INLS 382 or graduate standing.

Grading status: Letter grade.

INLS 584. Information Ethics. 3 Credits.

An overview of ethical reasoning, followed by discussion of issues most salient to information professionals, e.g., intellectual property, privacy, access/censorship, effects of computerization, and ethical codes of conduct.

Grading status: Letter grade.

INLS 585. Management for Information Professionals. 3 Credits.

Introduction to management principles and practices for information professionals working in all types of organizations. Topics include planning, budgeting, organizational theory, staffing, leadership, organizational change and evaluation, and decision making.

Grading status: Letter grade.

INLS 586. Project Management. 1.5 Credit.

Strategies and skills needed to effectively manage projects, integrating project management theory with best practices in different organizational perspectives. Individual and team assignments include readings and case studies.

Grading status: Letter grade.

INLS 609. Experimental Information Retrieval. 3 Credits.

This course takes an in-depth look at experimental information retrieval systems that focus on different search tasks and are evaluated in community-wide evaluation forums such as TREC and INEX.

Requisites: Prerequisite, INLS 509.

Grading status: Letter grade.

INLS 613. Text Mining. 3 Credits.

This course will allow the student to develop a general understanding of knowledge discovery and gain a specific understanding of text mining. Students will become familiar with both the theoretical and practical aspects of text mining and develop a proficiency with data modeling text.

Grading status: Letter grade.

INLS 620. Web Information Organization. 3 Credits.

Similar programming background needed. Understand the Web as a platform for information organizing systems. Learn how the Web has been designed to be a service platform, data publishing platform, and application platform.

Requisites: Prerequisites, INLS 520 or 560.

Grading status: Letter grade.

INLS 621. Personal Information Management. 3 Credits.

This course focuses on issues in personal information management research and practice, including information organization, human cognition and memory, task continuity across devices, preservation, and the role of technology in personal information management.

Grading status: Letter grade.

INLS 623. Database Systems II: Intermediate Databases. 3 Credits.

Intermediate-level design and implementation of database systems, building on topics studied in INLS 523. Additional topics include MySQL, indexing, XML, and nontext databases.

Requisites: Prerequisites, INLS 382 or 582, and 523.

Grading status: Letter grade.

INLS 624. Policy-Based Data Management. 3 Credits.

Students will develop policies for managing digital repositories and persistent archives. The rules will be implemented in the integrated Rule-Oriented Data System (iRODS), which organizes and distributes data into shareable collections.

Requisites: Prerequisite, INLS 461 or COMP 110 or 116.

Grading status: Letter grade.

INLS 625. Information Analytics. 3 Credits.

This course introduces analytical techniques to deal with very large data sets. Students will become familiar with predictive modeling, clustering, data mining, and paradigms such as map resource.

Requisites: Prerequisite, INLS 560; permission of the instructor for students lacking the prerequisite.

Grading status: Letter grade.

INLS 626. Introduction to Big Data and NoSQL. 1.5 Credit.

Information is being generated at an exponential scale in many areas, from astronomy to social networking and e-marketing. Processes for handling these data are data intensive, require heavy read/write workloads, and do not need the stringent ACID properties of relational databases. Several specific systems will be studied as examples.

Requisites: Prerequisite, INLS 523.

Grading status: Letter grade.

INLS 641. Visual Analytics. 3 Credits.

This project-based course provides an overview of visual analytics. Material includes foundational concepts and theories, seminal and recent research in the field, and hands-on experience with commonly used technologies. Programming experience strongly recommended.

Grading status: Letter grade.

INLS 651. Audio-Visual Archives Management. 1.5 Credit.

An introduction to the management of audio, film, and video archives with an emphasis on the history of recording, best practices for preservation and access, and copyright. Through selected readings, lecture, class discussion, assignment, and hands-on demonstration, students will gain an understanding of the history of recording, format identification, storage and handling, philosophy of media preservation, and copyright.

Grading status: Letter grade.

INLS 660. Social Media and Society: A Theoretical and Empirical Overview. 3 Credits.

Explores the evolution, implications, and complications of social media in multiple spheres of life including sociality, community, politics, power and inequality, education, and information from theoretical and empirical perspectives.

Grading status: Letter grade.

INLS 672. Web Development II. 3 Credits.

Study of design and implementation of applications using both client and server side configuration and programming. Example topics include PHP, ruby on Rails, and Javascript.

Requisites: Prerequisite, INLS 572.

Grading status: Letter grade.

INLS 690. Intermediate Selected Topics. 1-3 Credits.

Exploration of a special topic not otherwise covered in the curriculum, at an intermediate level. Previous offering of this course does not predict future availability; new courses may replace these. Topic varies by instructor.

Repeat rules: May be repeated for credit; may be repeated in the same term for different topics; 9 total credits. 3 total completions.

Grading status: Letter grade.

INLS 691H. Research Methods in Information Science. 3 Credits.

Senior standing and permission of the instructor. Restricted to information science majors. An introduction to research methods used in information science. Includes the writing of a research proposal.

Gen Ed: CI, EE- Mentored Research.

Grading status: Letter grade.

INLS 692H. Honors Thesis in Information Science. 3 Credits.

Senior standing and permission of the instructor. Restricted to information science majors. Students in the SILS undergraduate honors program engage in independent research and write an honors thesis reporting the research under the supervision of a faculty member.

Gen Ed: EE- Mentored Research.

Grading status: Letter grade.

INLS 696. Study in Information and Library Science. 1-3 Credits.

Study by an individual student on a special topic under the direction of a specific faculty member. Six credit maximum for master's students. Graduate faculty.

Requisites: Prerequisite, permission of the instructor.

Repeat rules: May be repeated for credit; may be repeated in the same term for different topics; 6 total credits. 2 total completions.

Grading status: Letter grade.

INLS 697. Information Science Capstone. 3 Credits.

Senior standing required. Information science major or minor. Contemporary topics of information science, information systems, information technology, information design, and information management. Assessment of future impact of new developments.

Grading status: Letter grade.