SCHOOL OF INFORMATION AND LIBRARY SCIENCE

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 one of two universities 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

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 website (https://sils.unc.edu/).

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 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 2024–2025 academic year.

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

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tr>
<td>INLS 161</td>
<td>Tools for Information Literacy</td>
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<td>INLS 201</td>
<td>Foundations of Information Science</td>
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<tr>
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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 website (https://sils.unc.edu/bsis/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) on why you want to pursue an information science (IS) major/minor. More specifically, 1) what experiences led you to realize you would benefit from further education in IS, and 2) how will pursing an education in IS enable you to achieve your future plans?

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 late or paper applications are accepted.

Questions can be addressed to the Assistant Director of Undergraduate Advising and Programs, School of Information and Library Science, CB# 3360, 107 Manning Hall; by sending email to silsinfo@ils.unc.edu; or by calling (919) 962-0208.

Major

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

Minor
Dual Bachelor’s–Graduate Degree Programs

- B.S.I.S in Information Science to M.S.I.S or M.S.L.S (https://silis.unc.edu/programs-bs-ms/)
- B.A. in Environmental Studies to M.S.I.S (https://catalog.unc.edu/undergraduate/programs-study/environmental-studies-major-ba/)
- B.S. in Environmental Science to M.S.I.S (https://catalog.unc.edu/undergraduate/programs-study/environmental-science-bs/)

Graduate Programs

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

Professors
Jaime Arguello, Jeffrey Bardzell, Robert Capra, Melanie Feinberg, David Gotz, Sandra Hughes-Hassell, Daniel Kreiss, Christopher (Cal) Lee, Gary Marchionini (Cary C. Boshamer Distinguished Professor), Arcot Rajasekar, Brian W. Sturm, Helen R. Tibbo (Alumni Distinguished Professor).

Associate Professors
Tressie McMillan Cottom, Bradley M. Hemminger, Mohammad Hossein Jarrahi (McColl Term Professor), Lukasz Mazur, Ryan Shaw.

Assistant Professors

Professors of the Practice
Ericka Patillo (Associate Dean for Academic Affairs), Matt Perault.

Research Assistant Professor
Anita Crescenzi.

Teaching Associate Professor
Ronald Bergquist.

Teaching Assistant Professors
Michael Fox, Elliott Kuecker, Casey H. Rawson, Megan A. Winget.
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.

Rules & Requirements
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.

Rules & Requirements
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.

Rules & Requirements
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.

Rules & Requirements
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.

Rules & Requirements
IDEAs in Action Gen Ed: HI-INTERN.
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.

Rules & Requirements
Repeat Rules: May be repeated for credit. 6 total credits. 6 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.

Rules & Requirements
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.

Rules & Requirements
Grading Status: Letter grade.

INLS 467. Introduction to Information Security. 3 Credits.
Study of the current issues facing businesses as well as how to prevent and discuss these issues and controls in depth. Focus will be placed upon preventing loss of information and protecting networks. Students should be able to understand any security control, describe its usage and rationale, as well as test and verify these controls are working as expected.

Rules & Requirements
Requisites: Prerequisite, INLS 161.
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.

Rules & Requirements
Repeat Rules: May be repeated for credit. 6 total credits. 6 total completions.
Grading Status: Letter grade.

INLS 493. Professional Field Experience. 1 Credit.
Second field experience course to be offered to coincide with the student’s information science project in a local organization. Enrollment restricted to IS majors and minors; Instructor permission required.

Rules & Requirements
Requisites: Prerequisite, INLS 393.
Grading Status: Pass/Fail.
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.

Rules & Requirements
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.

Rules & Requirements
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.

Rules & Requirements
Grading Status: Letter grade.

INLS 512. Applications of Natural Language Processing. 3 Credits.
Natural language processing (NLP) uses mathematics, machine learning, linguistics, and computer science to make language computationally accessible and analyzeable. In this course, you will learn to do essential NLP tasks using Python and survey a selection of NLP applications to describe the problems or tasks each addresses, the materials and methods used, and how the applications are evaluated. At least a semester of Python or equivalent practical experience is highly recommended.

Rules & Requirements
Grading Status: Letter grade.

INLS 513. Resource Selection and Evaluation. 3 Credits.
Identification, provision, and evaluation of resources to meet primary needs of clientele in different institutional environments.

Rules & Requirements
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.

Rules & Requirements
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.

Rules & Requirements
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.

Rules & Requirements
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.

Rules & Requirements
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.

Rules & Requirements
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.

Rules & Requirements
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.

Rules & Requirements
Grading Status: Letter grade.

INLS 550. History of the Book and Other Information Formats. 3 Credits.
The history of the book and other information formats: clay tablets to electronic. Coverage includes scientific and other scholarly publications, religious works, popular literature, periodicals, and newspapers.

Rules & Requirements
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.

Rules & Requirements
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.

Rules & Requirements
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.

Rules & Requirements
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.

Rules & Requirements
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).

Rules & Requirements
Grading Status: Letter grade.

INLS 560. Fundamentals of Programming Information Applications. 3 Credits.
Intermediate programming concepts in information processing and data analysis. Students will learn object-oriented programming, data structures, data analysis methods, and information processing techniques in the context of information science topics.

Rules & Requirements
Requisites: Prerequisite, INLS 560 or equivalent.
Grading Status: Letter grade.

INLS 572. Web Development I. 3 Credits.
Introduction to current technologies, standards, and best practices for front-end web development using HTML, CSS, and JavaScript. Includes coverage of responsive design techniques for the development of websites that render and perform well on various devices.

Rules & Requirements
Grading Status: Letter grade.

INLS 573. Mobile Web Development. 1.5 Credits.
An introduction to techniques and technologies for the development of mobile Web sites and their applications.

Rules & Requirements
Requisites: Prerequisite, INLS 161.
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.

Rules & Requirements
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.

Rules & Requirements
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.

Rules & Requirements
Grading Status: Letter grade.

INLS 586. Project Management. 1.5 Credits.
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.

Rules & Requirements
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.

Rules & Requirements
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.

Rules & Requirements
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.

Rules & Requirements
Requisites: Prerequisites, INLS 520 or 560.
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.

Rules & Requirements
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.

Rules & Requirements
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.

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

Rules & Requirements
Grading Status: Letter grade.

INLS 642. Data Mining. 3 Credits.
Recent years have witnessed explosive growth of heterogeneous and large-scale data sets. With a focus on practical applications, this course will survey methods for discovering knowledge from different modalities of data: item sets, matrix, text, image, time series, sequence, network, and more. Students will learn through lectures, seminar discussions, shared tasks, and a course project. Prior experience in data-oriented programming languages (e.g., Python or R) is strongly recommended.

Rules & Requirements
Grading Status: Letter grade.

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

Rules & Requirements
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.

Rules & Requirements
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.

Rules & Requirements
Requisites: Prerequisite, INLS 572.
Grading Status: Letter grade.

INLS 685. Project Management: Strategy and Applications. 3 Credits.
This course is a broad introduction to project management principles, tools, and strategies intended for use in a variety of applications. Key topics include project planning tools, project process groups, risk assessment, budgeting/cost estimation, and team management. Through the use of readings, videos, assignments, and forum discussions, students will have the opportunity to demonstrate knowledge and understanding of the strategy behind successful project management and problem resolution.

Rules & Requirements
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.

Rules & Requirements
Repeat Rules: May be repeated for credit; may be repeated in the same term for different topics; 9 total credits. 9 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.

Rules & Requirements
IDEAs in Action Gen Ed: RESEARCH.
Grading Status: Letter grade.

INLS 692H. Honors Thesis in Information Science. 3 Credits.
Senior standing and permission of the instructor. 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. Restricted to information science majors.

Rules & Requirements
IDEAs in Action Gen Ed: 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.

Rules & Requirements  
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. 6 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.

Rules & Requirements  
Grading Status: Letter grade.

CHIP–Carolina Health Information Program

Advanced Undergraduate and Graduate-level

CHIP 400. Digital Health Innovations and Impact. 1.5 Credits.  
In this course, students will be introduced to patient engagement, population health, digital therapies; learn about interoperability standards driving data sharing; review the regulatory bodies defining standards of care, along with understanding the privacy and security laws governing the use of health care data. The course includes a project prototyping and pitching a digital health solution. We will hear from industry experts who will participate as guest lecturers with opportunities for students to ask questions.

Rules & Requirements  
Grading Status: Letter grade.

CHIP 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.

Rules & Requirements  
Repeat Rules: May be repeated for credit. 9 total credits. 9 total completions.  
Grading Status: Letter grade.

CHIP 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.

Rules & Requirements  
Repeat Rules: May be repeated for credit. 9 total credits. 9 total completions.  
Grading Status: Letter grade.