INFORMATION SCIENCE MAJOR, B.S.

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 information science major integrates the study of the creation and management of information content, the characteristics and needs of the people who create and use information, and the technologies used to support the creation and manipulation of information. Graduating students will

- Understand the many ways in which information can be created, communicated, stored, and/or transformed in order to benefit individuals, organizations, and society
- Possess practical skills for analyzing, processing, and managing information and for developing and managing information systems in our knowledge-based society. They will possess problem-solving and decision-making skills, be able to use information tools effectively, and be able to take a leadership role in our information economy
- Comprehend the value of information and information tools, and their role in society and the economy
- Be prepared to evaluate the role of information in a variety of industries, in different organizational settings, for different populations, and for different purposes
- Maintain a strong sense of the role of information in society, including historical and future roles

Admission (https://catalog.unc.edu/undergraduate/schools-college/information-library-science/#admissiontext) to the program is required.

Student Learning Outcomes

Upon completion of the information science program, students should be able to:

- Demonstrate knowledge of the many ways in which information can be created, communicated, stored, and/or transformed, in order to benefit individuals, organizations, and society
- Demonstrate practical skills in analyzing, processing, and managing information and developing and managing information systems in a knowledge-based society
- Apply problem-solving and decision-making skills
- Effectively utilize information tools in preparation to taking a leadership role in the information economy
- Recognize the value of information and information tools, and their role in society and the economy
- Evaluate the role of information in a variety of industries, in different organizational settings, for different populations, and for different purposes

Requirements

In addition to the program requirements, students must

- earn a minimum final cumulative GPA of 2.000
- complete a minimum of 45 academic credit hours earned from UNC–Chapel Hill courses
- take at least half of their major core requirements (courses and credit hours) at UNC–Chapel Hill
- earn a minimum cumulative GPA of 2.000 in the major core requirements. Some programs may require higher standards for major or specific courses.

For more information, please consult the degree requirements section of the catalog (https://catalog.unc.edu/undergraduate/degree-requirements/).

Code	Title	Hours
Core Requirements		
INLS 560	Programming for Information Science	3
or COMP 110	Introduction to Programming and Data Science	
or COMP 116	Introduction to Scientific Programming	
INLS 382	Information Systems Analysis and Design	3
INLS 385	Information Use for Organizational Effectiveness	3
INLS 523	Introduction to Database Concepts and Applications	3
INLS 697	Information Science Capstone (taken in the senior year)	3
A coherent set of five or more electives, selected from the list below, equaling 15 credit hours [1]		15
Total Hours		**30**

[1] Electives should meet the student's objectives/interests/career goals.

Approved Electives

Code	Title	Hours
INLS ---	Any INLS course above level 200 that is not a core requirement or prerequisite	3
APPL 101	Exploring Engineering	3
BIOS 511	Introduction to Statistical Computing and Data Management	4
BUSI 410	Business Analytics	3
BUSI 520	Advanced Spreadsheet Modeling for Business	3
COMM 140	Introduction to Media History, Theory, and Criticism [H, F]	3
COMM 150	Introduction to New Media	3
COMM 431	Advanced Audio Production	3
COMM 450	Media and Popular Culture	3
COMM 636	Interactive Media	3
COMP 126	Practical Web Design and Development for Everyone	3
COMP 210	Data Structures and Analysis	3
COMP 211	Systems Fundamentals	3
COMP 283	Discrete Structures [H]	3
COMP 301	Foundations of Programming	3
COMP 311	Computer Organization	3
COMP 380	Technology, Ethics, & Culture [H]	3

COMP 426	Modern Web Programming	3
COMP 431	Internet Services and Protocols	3
ECON 400	Introduction to Data Science and Econometrics [H]	4
ECON 470	Econometrics [H]	3
ENGL 117	Arguing on the Internet: Rhetoric in the Age of Social Media	3
ENGL 482	Metadata, Mark-up, and Mapping: Understanding the Rhetoric of Digital Humanities	3
GEOG 215	Introduction to Spatial Data Science	3
GEOG 370	Introduction to Geographic Information	3
GEOG 477	Introduction to Remote Sensing of the Environment	3
GEOG 491	Introduction to GIS	3
GEOG 591	Applied Issues in Geographic Information Systems	3
MATH 381	Discrete Mathematics [H]	3
MEJO 182	Foundations of Graphic Design	3
MEJO 187	Foundations of Interactive Media	3
MEJO 433	UX Strategy and Design	3
MEJO 445	Media Effects on Audiences	3
MEJO 482	Media Design	3
MEJO 484	Information Graphics	3
MEJO 487	Intermediate Interactive Media	3
MEJO 581	User Experience Design and Usability	3
MEJO 582	Advanced Documentary Video Storytelling	3
MEJO 583	Advanced Interactive Media	3
MEJO 585	3D Design Studio	3
MUSC 239	Introduction to Music Technology	3
PHIL 143	AI and the Future of Humanity: Philosophical Issues about Technology and Human Survival [H]	3
PHYS 633	Scientific Programming	3
PLCY 460	Quantitative Analysis for Public Policy [H]	4
POLI 281	Data in Politics I: An Introduction	3
PSYC 180	Social Media, Technology, and the Adolescent Brain	3
PSYC 210	Statistical Principles of Psychological Research [H]	3
PSYC 230	Cognitive Psychology [H]	3
PSYC 330	Introduction to Cognitive Science	3
SOCI 318	Computational Sociology	3
STOR 120	Foundations of Statistics and Data Science [F]	4
STOR 151	Introduction to Data Analysis	3
STOR 155	Introduction to Data Models and Inference [F]	3
STOR 215	Foundations of Decision Sciences	3
STOR 305	Introduction to Decision Analytics	3
STOR 320	Introduction to Data Science	4
STOR 435	Introduction to Probability	3
STOR 455	Methods of Data Analysis	3
STOR 565	Machine Learning	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.

F FY-Launch class sections may be available. A FY-Launch section fulfills the same requirements as a standard section of that course, but also fulfills the FY-SEMINAR/FY-LAUNCH First-Year Foundations requirement. Students can search for FY-Launch sections in ConnectCarolina using the FY-LAUNCH attribute.

B.S.I.S. students may take additional INLS electives but are encouraged to acquire a broad education in the liberal arts and sciences.

Special Opportunities in SILS

Dual Bachelor's–Master's Degree Program

The dual bachelor's–master's program is intended to enable information science majors to obtain both their bachelor's and master's degrees by early planning of an undergraduate program that integrates well with the graduate degree requirements for either a master's in information science (M.S.I.S.) or a master's in library science (M.S.L.S).

Applying to the dual-degree program occurs in two steps. First, the student must apply to the B.S.I.S. program with intent to pursue the dual degree. The student must apply to the master's program in the seventh semester of undergraduate study for admission for the following fall. The curriculum for the dual degree can be found on the SILS website (http://sils.unc.edu/programs/bs-ms/curriculum/).

Up to 12 credits hours for information science coursework taken while an undergraduate can be double counted between the B.S.I.S the M.S.L.S or the M.S.I.S. The requirements for the master's degree can be found in the *Graduate Catalog*.

Students interested in the dual-degree program are strongly advised to consult the director of undergraduate studies or the assistant director of undergraduate advising and programs at SILS in their sophomore year to discuss eligibility and an appropriate plan of study.

Honors in Information Science

An honors program is available to information science majors who have demonstrated the ability to perform distinguished work. The honors thesis allows exceptional students in the undergraduate major to demonstrate the ability to treat a problem in a substantial and scholarly way. Students write an honors thesis on a topic related to information science and defend it before a faculty committee. They may graduate with honors or highest honors.

The honors program consists of two courses: INLS 691H and INLS 692H. INLS 691H will be taken in the fall of the senior year. In this course, each student selects a research topic of interest, learns about research methods, and writes a research proposal. Assuming satisfactory completion of INLS 691H, students register for INLS 692H in the spring of their senior year. The student and advisor meet regularly to discuss the student's research and writing. The second reader for the thesis, identified jointly by the student and advisor, is chosen by the end of January. The director of the SILS honors program is the third reader. Refer to Honors Carolina for official due dates. The final approved thesis must be submitted electronically via the Carolina Digital Repository (CDR).

Students may apply for the honors program in the spring of their junior year. The requirements for conducting an honors thesis in information science include having taken at least four INLS courses, including two numbered above 299, and having a total INLS grade point average of at least 3.5. The student should have an overall grade point average of at least 3.3. Enrolling in INLS 692H is contingent on completing INLS 691H with a grade of A- or higher.

Students who complete a high-quality thesis will graduate with honors; those whose thesis is exceptional will graduate with highest honors.

Facilities/Resources

SILS maintains a combined specialized library and computer laboratory with ample seating for student collaborative work. The SILS Library is part of the UNC–Chapel Hill Academic Affairs Library System, and its collections are available for use in the library by all interested persons. The current collection consists of over 100,000 volumes and several hundred serials titles. The SILS computer laboratory is located in the school's Information Technology and Resource Center in Manning Hall and is available to students enrolled in SILS courses and programs. More than 40 PCs are available for student use, with space for use of student laptops in a wireless environment. A large selection of software is available, including data management, word processing, publishing, statistical analysis, Internet tools, graphics, development tools, multimedia, etc. Student assistants staff the help desk and are available to check out equipment and to answer questions.

SILS students also have access to a small student lounge in Manning Hall.

Field Experience

As a professional school at UNC–Chapel Hill, we encourage students to use the technical and theoretical knowledge they gain in the classroom in professional settings. Many SILS students participate in field experiences (INLS 393) whereby they gain experience in a setting of the student's choosing.

Students must spend 135 hours with the site, attend field experience seminars, and produce a short paper for their field experience faculty advisor. Students are eligible for field experiences once they have junior status and three INLS courses: INLS 161, INLS 201, and INLS 382. Field experiences can be taken in any semester, including the summer, and can be in any information setting.

Student Involvement

Undergraduate students are encouraged to participate in ILSSA (Information and Library Science Student Association). All of the school's standing committees have student representation. In addition, students may participate in professional associations in information and library science, including the student chapters of the Association for Information Science and Technology (ASIS&T), the Student Chapter of the American Library Association (SCALA), Special Libraries Association (SLA), the Art and Museum Library and Information Student Society (AMLISS), the Student Chapter of the Society of American Archivists (SCOSAA), and Checked Out: SILS Diversity.

Study Abroad

SILS has formal study abroad agreements with seven information schools in the Czech Republic, Singapore, Denmark, South Korea, Chile, Spain, and Ireland. Students can spend a summer, semester, or year studying abroad to earn course credit toward their information science major or information systems minor. The exchanges are administered through the UNC Study Abroad Office but are managed by SILS. Credit transfer should be confirmed with SILS before beginning the exchange. In addition, UNC–Chapel Hill has formal university ties with approximately 75 other universities — many of them with library and information science schools. SILS also offers short-term summer seminars in various locations. These programs are two weeks in length and offer an in-depth view on information science. Students who wish to enjoy an international experience while studying at SILS are encouraged to talk with the SILS international programs coordinator.

Undergraduate Awards

Two scholarships of $1,000 each are awarded to newly admitted undergraduates in the spring and fall. Undergraduates completing an honors thesis are eligible to apply for a Carnegie Grant. This award of up to $200 may be used to offset any costs that might occur during their research.

Undergraduate Research

Undergraduates enrolled in the honors program conduct research as part of the completion of their honors thesis. Students not in the honors program may also take advantage of a number of opportunities to participate in research with faculty members.

Department Programs

Major

- Information Science Major, B.S. (p. 1)

Minor

- Information Systems Mino (https://catalog.unc.edu/undergraduate/programs-study/information-systems-minor/)r

Dual Bachelor's–Graduate Degree Programs

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

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