INFORMATION SCIENCE, BA

Information Science (iSci) majors study concepts and examine issues at the nexus of people, data, information, and computing. Majors gain the knowledge and skills to create data-driven technologies and to make them work for real communities. Information Science focuses on the ethical, cultural, and social factors in design and use of information technology-based and data-driven systems. Majors become adept in the creation, management, retrieval, and curation of data and information. The major emphasizes designing systems that foster well-being and support the public good.

HOW TO GET IN

HOW TO GET IN

Students must have a 2.000 GPA on coursework counting in the major, and a 2.000 GPA on any upper-level work in the major completed prior to declaration. No specific coursework must be completed to declare. For students below a 2.000 GPA, please contact iSciadvising@ischool.wisc.edu to discuss options and a path to declaring the Information Science major.

It is recommended that students declare the major as early as possible to plan for required coursework. First semester students without a calculated GPA are eligible to declare. For instructions on declaring the Information Science major, please see the I (https://ischool.wisc.edu/programs/undergraduates/)nformation Science webpage (https://ischool.wisc.edu/programs/information-science-major/).

REQUIREMENTS

UNIVERSITY GENERAL EDUCATION REQUIREMENTS

All undergraduate students at the University of Wisconsin–Madison are required to fulfill a minimum set of common university general education requirements to ensure that every graduate acquires the essential core of an undergraduate education. This core establishes a foundation for living a productive life, being a citizen of the world, appreciating aesthetic values, and engaging in lifelong learning in a continually changing world. Various schools and colleges will have requirements in addition to the requirements listed below. Consult your advisor for assistance, as needed. For additional information, see the university Undergraduate General Education Requirements (http://guide.wisc.edu/undergraduate/#requirementsforundergraduatestudytext) section of the *Guide*.

General Education	• Breadth—Humanities/Literature/Arts: 6 credits • Breadth—Natural Science: 4 to 6 credits, consisting of one 4- or 5-credit course with a laboratory component; or two courses providing a total of 6 credits • Breadth—Social Studies: 3 credits • Communication Part A & Part B * • Ethnic Studies * • Quantitative Reasoning Part A & Part B *

* The mortarboard symbol appears before the title of any course that fulfills one of the Communication Part A or Part B, Ethnic Studies, or Quantitative Reasoning Part A or Part B requirements.

COLLEGE OF LETTERS & SCIENCE DEGREE REQUIREMENTS: BACHELOR OF ARTS (BA)

Students pursuing a bachelor of arts degree in the College of Letters & Science must complete all of the requirements below. The College of Letters & Science allows this major to be paired with either a bachelor of arts or a bachelor of science curriculum.

BACHELOR OF ARTS DEGREE REQUIREMENTS

Mathematics	Complete the University General Education Requirements for Quantitative Reasoning A (QR-A) and Quantitative Reasoning B (QR-B) coursework.
Language	• Complete the fourth unit of a language other than English; OR • Complete the third unit of a language and the second unit of an additional language other than English.
L&S Breadth	• 12 credits of Humanities, which must include 6 credits of literature; and • 12 credits of Social Science; and • 12 credits of Natural Science, which must include one 3+ credit Biological Science course and one 3+ credit Physical Science course.
Liberal Arts and Science Coursework	Complete at least 108 credits.
Depth of Intermediate/Advanced work	Complete at least 60 credits at the intermediate or advanced level.
Major	Declare and complete at least one major.
Total Credits	Complete at least 120 credits.
UW-Madison Experience	• 30 credits in residence, overall; and • 30 credits in residence after the 86th credit.

Quality of Work	• 2.000 in all coursework at UW–Madison • 2.000 in Intermediate/Advanced level coursework at UW–Madison

NON–L&S STUDENTS PURSUING AN L&S MAJOR

Non–L&S students who have permission from their school/college to pursue an additional major within L&S only need to fulfill the major requirements. They do not need to complete the L&S Degree Requirements above.

REQUIREMENTS FOR THE MAJOR

Students must complete a minimum of 30 total credits as detailed below.

CORE INFORMATION SCIENCE COURSEWORK

Complete 21 credits of Core Information Science Coursework from these options:

- L I S courses in the Breadth Coursework lists (counts for both Core and Breadth)
- Additional Core L I S Coursework
- COMP SCI 570 (counts for both Core and Breadth)

Breadth Coursework

Complete one course and at least 3 credits from each category. Non-L I S courses completed in each category satisfy breadth and count towards the Approved Electives.

Ethics, Computing & Society

Code	Title	Credits
L I S 201	The Information Society	4
L I S 202	Informational Divides and Differences in a Multicultural Society	3
L I S 220	Digital Footprints: Privacy and Technology	3
L I S 461	Data and Algorithms: Ethics and Policy	3-4
L I S/LEGAL ST 460	Surveillance, Privacy, and Police Powers	3
L I S 500	Code and Power	3
L I S/LEGAL ST 663	Introduction to Cyberlaw	3

Computational Techniques and Tools

Code	Title	Credits
L I S 351	Introduction to Digital Information	3
L I S 472		
L I S 501	Introduction to Text Mining	3
COMP SCI/L I S 102	Introduction to Computing	3
COMP SCI 220	Data Science Programming I	4
COMP SCI 200	Programming I	3
COMP SCI 300	Programming II	3
COMP SCI 368	Learning a Programming Language	1
STAT 433	Data Science with R (Complete one course & at least 3 credits)	3

Principles of Information and Data Science

Code	Title	Credits
L I S 440	Navigating the Data Revolution: Concepts of Data & Information Science	3
L I S 464	Applied Database Design	3
STAT 240	Data Science Modeling I	4

Designing for Human Computer Interaction

Code	Title	Credits
L I S 470	Interaction Design Studio	3
COMP SCI 570	Introduction to Human-Computer Interaction	4
I SY E/PSYCH 349	Introduction to Human Factors	3
L I S 646	Introduction to Info Architecture and Interaction Design for the Web	3

Communicating Digitally

Code	Title	Credits
L I S 407	Data Storytelling with Visualization	3
L I S 350	History and Future of Books	3
COM ARTS 200	Introduction to Digital Communication	3

Additional Core L I S Coursework

Code	Title	Credits
L I S 301	Information Literacies in Online Spaces	3
L I S 340	Topics in Information Studies - Social Aspects	3
L I S 341	Topics in Information Studies - Technological Aspects	1-3
L I S/AFRICAN/ COM ARTS 444	Technology and Development in Africa and Beyond	3
L I S 510	Human Factors in Information Security	3
L I S/NURSING/ OCC THER 517	Digital Health: Information and Technologies Supporting Consumers and Patients	3
L I S/LEGAL ST 645	Intellectual Freedom	3

CAREER/COMMUNITY/INTERNSHIP COURSEWORK

Complete 1-6 credits in a hands-on learning course. No more than 6 credits may be counted towards this requirement. Some courses may have additional requisites to enroll.

Code	Title	Credits
INTER-LS 210	L&S Career Development: Taking Initiative	1
INTER-LS 215	Communicating About Careers	3
INTER-LS/INTER-AG 250	Undergraduate Research Experience	1-3
INTER-LS 260	Internship in the Liberal Arts and Sciences	1
DS 601	Internship	1-8

INTL ST 322	Washington DC Semester in International Affairs Internship Seminar	4
INTL ST 523	International Internship	1-3
INTL ST 622	Washington DC Sem in International Affairs Seminar	4
L I S 399	Independent Reading and Research	1-4
LSC 399	Coordinative Internship/ Cooperative Education	1-8
POLI SCI 402	Wisconsin in Washington Internship Course	4
PUB AFFR 327	Administrative Internship	3
COM ARTS 605	Digital Studies Capstone	1
COMP SCI/ STAT 403	Internship Course in Comp Sci and Data Science	1
GEN BUS 450	Professional Experience in Business	1
JOURN 697	Internship	1-3
INTER-HE 202	SoHE Career & Leadership Development	1

APPROVED ELECTIVES

Complete additional coursework to reach 30 credits in the major from the following list, all Breadth Coursework, or Additional Core L I S Coursework list.

Code	Title	Credits
ACT SCI 652	Fundamentals of Short-Term Actuarial Modeling	3
COM ARTS 155	Introduction to Digital Media Production	4
COM ARTS 345	Online Communication and Personal Relationships	3
COM ARTS 346	Critical Internet Studies	3
COM ARTS 478	Rhetoric and Power on the Internet	3
COM ARTS 509	Digital Media and Political Communication	3
COM ARTS 577	Dynamics of Online Relationships	3
CNSR SCI 257	Introduction to Retail	2
CNSR SCI 301	Consumer Analytics	3
COMP SCI/ E C E 252	Introduction to Computer Engineering	3
COMP SCI 304	WES-CS Group Meeting	1
COMP SCI 310	Problem Solving Using Computers	3
COMP SCI/ E C E 354	Machine Organization and Programming	3
COMP SCI 407	Foundations of Mobile Systems and Applications	3
COMP SCI 400	Programming III	3
COMP SCI 402	Introducing Computer Science to K-12 Students	2
COMP SCI/ E C E 506	Software Engineering	3
COMP SCI 542	Introduction to Software Security	3
COMP SCI 564	Database Management Systems: Design and Implementation	4
DS 120	Design: Fundamentals I	3
DS 140	Visual Thinking - Form and Space	3
DS 221	Person and Environment Interactions	3
DS 321	Problem-definition: Design Programming	3
DS 341	Design Thinking for Transformation	3
DS 451	Color Theory and Technology	3
DS/COMP SCI 579	Virtual Reality	3
DS 679	Research Methods in Design	3
GEN BUS 306	Business Analytics I	3
GEN BUS 307	Business Analytics II	3
GEN BUS 656	Machine Learning for Business Analytics	3
INFO SYS 322	Introduction to Databases	3
INFO SYS 371	Technology of Computer-Based Business Systems	3
INFO SYS 424	Systems Analysis and Design	3
I SY E 348	Introduction to Human Factors Engineering Laboratory	1
I SY E 350	Industrial Engineering Design I	3
I SY E 450	Industrial Engineering Design II	3
I SY E/COMP SCI/ DS 518	Wearable Technology	3
LSC 350	Visualizing Science and Technology	3
LSC 432	Social Media for the Life Sciences	3
LSC 440	Digital Media and Science Communication	3
LSC 532	Web Design for the Sciences	3
LSC/COM ARTS/ JOURN 617	Health Communication in the Information Age	3
JOURN 175	Media Fluency for the Digital Age	3
JOURN 411	Multimedia Design	4
JOURN/COM ARTS/ LSC 617	Health Communication in the Information Age	3
JOURN 622	The Impact of Emerging Media	3
JOURN 463	Digital Media Strategies	4
MARKETNG 355	Marketing in a Digital Age	3
MARKETNG/ OTM 427	Information Technology in Supply Chains	3
MARKETNG 445	Digital Marketing Analytics	3
OTM/ MARKETNG 427	Information Technology in Supply Chains	3
OTM 453	Operations Analytics	3
R M I 670	Cyber Risk & Regulations	2-3
STAT 433	Data Science with R	3
PUB AFFR 281	Discovering What Works in Health Policy	3
PUB AFFR 380	Analytic Tools for Public Policy	3
PUB AFFR 523	Policy, Privacy, and Personal Identity in the Postgenomics Era	3
HIST SCI 150	The Digital Age	3

LSC 340	Misinformation, Fake News, and Correcting False Beliefs about Science	3
LSC 460	Social Media Analytics	3

UNIVERSITY DEGREE REQUIREMENTS

Total Degree	To receive a bachelor's degree from UW–Madison, students must earn a minimum of 120 degree credits. The requirements for some programs may exceed 120 degree credits. Students should consult with their college or department advisor for information on specific credit requirements.
Residency	Degree candidates are required to earn a minimum of 30 credits in residence at UW–Madison. "In residence" means on the UW–Madison campus with an undergraduate degree classification. "In residence" credit also includes UW–Madison courses offered in distance or online formats and credits earned in UW–Madison Study Abroad/Study Away programs.
Quality of Work	Undergraduate students must maintain the minimum grade point average specified by the school, college, or academic program to remain in good academic standing. Students whose academic performance drops below these minimum thresholds will be placed on academic probation.

LEARNING OUTCOMES

LEARNING OUTCOMES

1. Demonstrate understanding of ways in which the policies, ethics, and values associated with information systems can affect society
2. Demonstrate understanding of the relationships between information, cognition, and human social activity
3. Apply design principles and information science concepts to improve information systems and solve problems
4. Apply introductory data analysis and data quality management approaches and communicate results
5. Apply computational tools to accomplish goals and meet human needs
6. Communicate well in oral, written, and visual forms

FOUR-YEAR PLAN

SAMPLE FOUR-YEAR PLAN

This Sample Four-Year Plan is a tool to assist students and their advisor(s). Students should use it—along with their DARS report, the Degree Planner, and Course Search & Enroll tools—to make their own four-year plan based on their placement scores, credit for transferred courses and approved examinations, and individual interests. As students become involved in athletics, honors, research, student organizations, study abroad, volunteer experiences, and/or work, they might adjust the order of their courses to accommodate these experiences. Students will likely revise their own four-year plan several times during college.

Freshman

Fall	Credits	Spring	Credits
Communications A	3	L I S 201, 350, or 461 (Meets Communications B Requirement)	3
L I S/COMP SCI 102	3	Literature Breadth	3
Foreign Language (if needed)	3	Humanities or Social Sciences Breadth	5
Humanities or Social Sciences Breadth	5	Electives	3
	14		**14**

Sophomore

Fall	Credits	Spring	Credits
L I S 440 (meets Quantitative Reasoning B)	3	L I S 202 (Meets Ethnic Studies Requirement)	3
Biological Science Breadth	3	INTER-LS 210 (Meets Career/Community/ Internship Requirement)	1
Humanities or Social Sciences Breadth	3	Literature Breadth	3
Elective	6	Biological Sciences Breadth (if needed)	3
		Intermediate/Advanced COMPSCI, MATH or STAT (if BS) or Elective (if BA)	3
		Electives	2
	15		**15**

Junior

Fall	Credits	Spring	Credits
Communicating Digitally course	3	Ethics, Computing & Society course	3
Human Computer Interaction course	3	Career/Community/ Internship course (if needed) or other Intermediate or Advanced Electives	3
Physical Sciences Breadth	3	Humanities or Social Sciences Breadth if needed	3
Intermediate/Advanced COMPSCI, MATH or STAT (if BS) or Intermediate or Advanced elective (if BA)	3	Sciences Breadth if needed	3
Humanities or Social Sciences Breadth	3	Elective	3
	15		**15**

Senior

Fall	Credits	Spring	Credits
Information and Data Science course	3	Computational Techniques and Tools course	3

Complete Core Information Science coursework or other Intermediate or Advanced Electives	10	Complete Information Science Coursework Requirement or other Intermediate or Advanced Electives	10
Humanities or Social Sciences Breadth (if needed)	3	Humanities or Social Sciences Breadth (if needed)	3
	16		**16**

Total Credits 120

ADVISING AND CAREERS

ADVISING AND CAREERS

Looking for Information Science advising?

Students who are interested in information science academic advising for the major should visit the Information School website (https://ischool.wisc.edu/programs/undergraduates/) or contact the advisor by email at iSciAdvising@ischool.wisc.edu.

L&S CAREER RESOURCES

Every L&S major opens a world of possibilities. SuccessWorks (https://successworks.wisc.edu/) at the College of Letters & Science helps students turn the academic skills learned in their major, certificates, and other coursework into fulfilling lives after graduation, whether that means jobs, public service, graduate school or other career pursuits.

In addition to providing basic support like resume reviews and interview practice, SuccessWorks offers ways to explore interests and build career skills from their very first semester/term at UW all the way through graduation and beyond.

Students can explore careers in one-on-one advising, try out different career paths, complete internships, prepare for the job search and/or graduate school applications, and connect with supportive alumni and even employers in the fields that inspire them.

- SuccessWorks (https://careers.ls.wisc.edu/)
- Set up a career advising appointment (https://successworks.wisc.edu/make-an-appointment/)
- Enroll in a Career Course (https://successworks.wisc.edu/career-courses/) - a great idea for first- and second-year students:
  - INTER-LS 210 L&S Career Development: Taking Initiative (1 credit)
  - INTER-LS 215 Communicating About Careers (3 credits, fulfills Comm B General Education Requirement)
- Learn about internships and internship funding (https://successworks.wisc.edu/finding-a-job-or-internship/)
  - INTER-LS 260 Internship in the Liberal Arts and Sciences
- Activate your Handshake account (https://successworks.wisc.edu/handshake/) to apply for jobs and internships from 200,000+ employers recruiting UW-Madison students
- Learn about the impact SuccessWorks has on students' lives (https://successworks.wisc.edu/about/mission/)

PEOPLE

PEOPLE

Please visit the iSchool Website for a complete list of faculty, instructional, and academic staff.

RESOURCES AND SCHOLARSHIPS

RESOURCES AND SCHOLARSHIPS

Visit Scholarships@UW–Madison (https://scholarships.wisc.edu/Scholarships/) to find UW–Madison scholarships and apply online.

Visit the scholarships page on the Information School website for a compendium of opportunities available to students studying information sciences.