

## INFORMATION SCIENCE

Making the most of information technology—ensuring that it serves the goals and needs of users, clients, and society—is a tremendous challenge, one that requires a unique blend of knowledge and skills. The field of information science (IS) focuses on the relationship between computers, the people who use them, and the contexts in which they operate. IS seeks to further our understanding of: (1) information itself: where it comes from, how it is organized, and how it is used; (2) the design of computer applications that are usable, socially acceptable, and achieve the goals for which they were created; (3) the impact of information technology (IT) on human life and work; and (4) how the nature of the information, the goals of the users, and the relevant social policies and laws both influence and are influenced by the technical aspects of computer systems.

Information science majors have an opportunity to acquire a strong technical foundation by taking classes in mathematics, logic, and computer science and to acquire a strong foundation in behavioral science by taking classes in cognitive psychology, economics, and statistics. A course in the principles of information science introduces students to important intellectual frameworks such as decision theory, general systems theory, and social informatics, and to topics of current importance such as digital copyright, trusted systems, and Internet privacy policy. Building on these foundations, the IS core develops expertise in the design, management, and evaluation of information technology-based resources and systems. Elective courses cover topics such as text/hypertext retrieval, artificial intelligence, information security, e-commerce, and data mining.

### BSIS—Bachelor of Science in Information Science

#### COMPUTER SCIENCE COURSES

##### *Computer Science Overview*

Freshmen or freshmen transfers complete the following two courses:

CS 1200	Computer/Information Science Overview 1	1 SH
CS 1210	Computer/Information Science Overview 2	1 SH

Upper-level transfer students complete the following course:

CS 1220	Computer/Information Science Co-op Preparation	1 SH
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##### *Computer Science Fundamental Courses*

Complete the following four courses, with corresponding labs, as indicated. A grade of C– or higher is required in each course:

CS 1800	Discrete Structures	4 SH
CS 2500	Fundamentals of Computer Science 1	4 SH
with CS 2501	Lab for CS 2500	1 SH
CS 2510	Fundamentals of Computer Science 2	4 SH
with CS 2511	Lab for CS 2510	1 SH
CS 2800	Logic and Computation	4 SH
with CS 2801	Lab for CS 2800	1 SH

##### *Computer Science Required Courses*

Complete the following four courses:

CS 2600	Computer Organization	4 SH
CS 3200	Database Design	4 SH
CS 3500	Object-Oriented Design	4 SH
CS 3600	Systems and Networks	4 SH

#### INFORMATION SCIENCE COURSES

##### *Required Courses in Information Science*

Complete the following five courses:

IS 2000	Principles of Information Science	4 SH
IS 3500	Information System Design and Development	4 SH
IS 4300	Human Computer Interaction	4 SH
IS 4800	Empirical Research Methods	4 SH
IS 4900	Information Science Senior Project	5 SH

##### *Managing Information*

Complete the following course:

MISM 3305	Information Resource Management	4 SH
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##### *Computers and Society*

Complete the following course:

SOCL 4528	Computers and Society	4 SH
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##### *Information Science Electives*

Complete two courses from the following list:

IS 2990 to IS 4993		
CS 2600	Computer Organization	4 SH
CS 3200 to CS 4993		
ACCT 1209	Financial Accounting and Reporting	4 SH
ACCT 3403	Accounting Information Systems	4 SH
COMM 1231	Principles of Organizational Communication	4 SH
COMM 2531	Application of Organizational Communication	4 SH
COMM 3532	Theories of Conflict and Negotiation	4 SH
ECON 3560	Applied Econometrics	4 SH
LING 3450	Syntax	4 SH
LING 3452	Semantics	4 SH
MISM 3408	Knowledge Management	4 SH
MISM 4501	Business Systems Integration	4 SH
MISM 4512	Special Topics in Information Technology Management	4 SH
POLS 2390	Science, Technology, and Public Policy	4 SH
PSYC 3450	Learning and Motivation	4 SH
PSYC 3452	Sensation and Perception	4 SH
PSYC 3458	Psychobiology	4 SH
PSYC 3464	Psychology of Language	4 SH
PSYC 4520	Language and the Brain	4 SH
PSYC 4604	Laboratory in Learning and Motivation	4 SH
PSYC 4606	Laboratory in Psychobiology	4 SH
PSYC 4610	Laboratory in Psycholinguistics	4 SH

PSYC 4612	Laboratory in Cognition	4 SH
PSYC 4622	Laboratory in Sensation and Perception	4 SH

### **MATHEMATICS REQUIREMENTS**

#### *Calculus*

Complete the following course with a grade of C– or higher:

MATH 1341	Calculus 1 for Science and Engineering	4 SH
or MATH 1340	Intensive Calculus for Engineers	6 SH

#### *Statistics*

Complete the following course:

ECON 2350	Statistics	4 SH
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### **BEHAVIORAL SCIENCE FOUNDATIONS**

#### *Economics*

Complete the following course:

ECON 1116	Principles of Microeconomics	4 SH
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#### *Psychology*

Complete the following two courses:

PSYC 1101	Foundations of Psychology	4 SH
PSYC 3466	Cognition	4 SH

#### *Organizational Behavior*

Complete the following course:

ORGB 3209	Organizational Behavior	4 SH
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### **REQUIRED GENERAL ELECTIVES**

#### *Science Electives*

One general elective must be a science course chosen from the NU Core science/technology level 1 domain. This course may not be a technology course. Corresponding lab must be taken with lecture where applicable. *Note:* For this requirement, a science course is defined to be any course in the NU Core science/technology level 1 domain that is not in the College of Computer and Information Science or in the College of Engineering.

#### *Additional General Electives*

Complete six additional general electives. One of these electives must be used to satisfy the NU Core arts/humanities level 1 requirement. If the NU Core comparative study of cultures requirement is to be satisfied by taking a course, then it must also be one of the general electives.

### **MAJOR GPA REQUIREMENT**

Minimum 2.000 GPA required in all CS and IS courses

### **INFORMATION SCIENCE MAJOR CREDIT REQUIREMENT**

Complete 73 semester hours in CS and IS for the major.

### **NU CORE REQUIREMENTS**

See page 26 for requirement list.

### **GENERAL ELECTIVES**

Additional courses taken beyond college and major course requirements to satisfy graduation credit requirements.

### **COOPERATIVE EDUCATION**

### **UNIVERSITY-WIDE REQUIREMENTS**

133 total semester hours required

Minimum 2.000 GPA required

### **Minor in Information Science**

The requirements for the minor in information science are shown below. Students who wish to take a particular course must have taken its prerequisites listed in the catalog.

### **REQUIRED COURSES**

Complete the following three courses with corresponding labs, where indicated. A grade of C– or higher is required in CS 2500 and CS 2510:

CS 2500	Fundamentals of Computer Science 1	4 SH
with CS 2501	Lab for CS 2500	1 SH
CS 2510	Fundamentals of Computer Science 2	4 SH
with CS 2511	Lab for CS 2510	1 SH
IS 2000	Principles of Information Science	4 SH

### **INFORMATION SCIENCE ELECTIVES**

Complete two courses from the following list:

CS 3200	Database Design	4 SH
IS 2000 to IS 4989		

### **GPA REQUIREMENT**

2.000 GPA required in the minor