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. They also require 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 U221 Computer/Information Science 1 SH
CS U222 Computer/Information Science 1 SH

Upper-level transfer students complete the following course:
CS U223 Computer/Information Science 1 SH

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 U200 Discrete Structures 4 SH
CS U211 Fundamentals of Computer Science 1 4 SH
with CS U212 Lab for CS U211 1 SH
CS U213 Fundamentals of Computer Science 2 4 SH
with CS U214 Lab for CS U213 1 SH

Computer Science Required Courses
Complete the following four courses:
CS U370 Object-Oriented Design 4 SH
CS U380 Computer Organization 4 SH
CS U430 Database Design 4 SH
CS U480 Systems and Networks 4 SH

INFORMATION SCIENCE COURSES

Required Courses in Information Science
Complete the following five courses:
IS U300 Principles of Information Science 4 SH
IS U470 Information System Design and Development 4 SH
IS U570 Human Computer Interaction 4 SH
IS U580 Empirical Research Methods 4 SH
IS U692 Information Science Senior Project 5 SH

Managing Information
Complete the following course:
MIS U305 Information Resource Management 4 SH

Computers and Society
Complete the following course:
SOC U528 Computers and Society 4 SH

Information Science Electives
Complete two courses from the following list:
CS U300 to CS U999
IS U301 to IS U999
ACC U209 Financial Accounting and Reporting 4 SH
ACC U403 Accounting Information Systems 4 SH
CMN U231 Principles of Organizational Communication 4 SH
CMN U531 Advanced Organizational Communication 4 SH
CMN U532 Theories of Conflict and Negotiation 4 SH
ECN U560 Applied Econometrics 4 SH
ENG U450 Syntax 4 SH
ENG U452 Semantics 4 SH
LIN U450 Syntax 4 SH
LIN U452 Semantics 4 SH
LIN U464 Psychology of Language 4 SH
LIN U520 Language and the Brain 4 SH
LIN U610 Laboratory in Psycholinguistics 4 SH
MIS U408 Knowledge Management 4 SH
MIS U501 Business Systems Integration 4 SH
POL U390 Science, Technology, and Public Policy 4 SH
PSY U450 Learning and Motivation 4 SH
PSY U452 Sensation and Perception 4 SH
PSY U458 Psychobiology 4 SH
PSY U464 Psychology of Language 4 SH
PSY U520 Language and the Brain 4 SH
PSY U604 Laboratory in Learning and Motivation 4 SH
PSY U606 Laboratory in Psychobiology 4 SH
PSY U610 Laboratory in Psycholinguistics 4 SH

INFORMATION SCIENCE

CS U290 Logic and Computation 4 SH
with CS U291 Lab for CS U290 1 SH
PSY U612 Laboratory in Cognition 4 SH
PSY U622 Laboratory in Sensation and Perception 4 SH

MATHEMATICS REQUIREMENTS

Calculus
Complete the following course with a grade of C– or higher:
MTH U241 Calculus 1 for Science and Engineering 4 SH

Statistics
Complete the following course:
ECN U350 Statistics 4 SH

BEHAVIORAL SCIENCE FOUNDATIONS

Economics
Complete the following course:
ECN U116 Principles of Microeconomics 4 SH

Psychology
Complete the following two courses:
PSY U101 Foundations of Psychology 4 SH
PSY U466 Cognition 4 SH

Organizational Behavior
Complete the following course:
HRM U209 Organizational Behavior 4 SH

REQUIRED GENERAL ELECTIVES

Science Elective
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 nor 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 courses for the major.

NU CORE REQUIREMENTS
See page 42 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 applicable. A grade of C– or higher is required in CS U211 and CS U213:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>SH</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS U211</td>
<td>Fundamentals of Computer Science 1</td>
<td>4</td>
</tr>
<tr>
<td>with</td>
<td>Lab for CS U211</td>
<td>1</td>
</tr>
<tr>
<td>CS U213</td>
<td>Fundamentals of Computer Science 2</td>
<td>4</td>
</tr>
<tr>
<td>with</td>
<td>Lab for CS U213</td>
<td>1</td>
</tr>
<tr>
<td>IS U300</td>
<td>Principles of Information Science</td>
<td>4</td>
</tr>
</tbody>
</table>

INFORMATION SCIENCE ELECTIVES
Complete two courses from the following list:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>SH</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS U300</td>
<td>Database Design</td>
<td>4</td>
</tr>
</tbody>
</table>

GPA REQUIREMENT
2.000 GPA required in the minor