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

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

Computers and Society
Complete the following course:
SOCL 4528 Computers and Society 4 SH

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

BEHAVIORAL SCIENCE FOUNDATIONS

Economics
Complete the following course:
ECON 1116 Principles of Microeconomics 4 SH

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

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.