

Management Information Systems

Department Information

- **Department Web Site:**
www.ndsu.edu/business/ (<http://www.ndsu.edu/business/>)
- **Credential Offered:**
B.S.; Minor
- **Official Program Curriculum:**
catalog.ndsu.edu/undergraduate/program-curriculum/management-information-systems/ (<http://catalog.ndsu.edu/undergraduate/program-curriculum/management-information-systems/>)

The management information systems (MIS) program is designed for those students who wish to prepare themselves for professional careers in information processing or information systems in business and government. The program develops technical skills and administrative insights required for the design, analysis, development, implementation, maintenance, and management of organizational information systems.

Background Information

MIS emphasizes the collection, organization, analysis, and dissemination of information for the planning and control of organizational operations. The program prepares graduates to manage various forms of information technology that are used at all levels of operations. The student learns how to analyze, design, implement, and manage information technology and computer systems in innovative ways to increase the effectiveness and efficiency of an organization.

Another objective of the program is to provide students with both theoretical knowledge and hands-on experience. The program requires a practicum. Practical experience enables graduates to become productive in any setting more quickly. Further, hands-on experience provides excellent motivation and concrete models for advanced course work. Graduates of the program find employment in a wide variety of settings.

The Program

North Dakota State University's MIS program is a unique collaborative effort by the faculty of two distinct disciplines: business administration and computer science. The Bachelor of Science degree provides sufficient background and skills to support a successful career in technical computing (e.g., as a programmer, systems analyst, systems designer, etc.), systems or network administration, database administration, information technology management, sales or technical sales support.

Selective Admission

Students who wish to study MIS at NDSU enroll as pre-MIS majors in the College of Business for the first semester of their freshman year. Pre-MIS majors are then admitted into the major after completing the pre-major courses (i.e., ENGL 120, COMM 110, MATH 144, ECON 201 or ECON 202, and PSYC 111 or SOC 110) with at least a C or higher and earning a cumulative GPA of at least 2.50. Transfer students with appropriate course work may be admitted directly into the major. Contact a professional advisor in the College of Business for more information.

Computing Facilities

The computer facilities at NDSU are among the best in the country. The Quentin Burdick Building (QBB) houses the academic host server for the North Dakota University System's 11 colleges and universities and their 48,000 students. Faculty, staff and students may use a variety of computing systems ranging from multi-user host systems to microcomputers, all connected on a 100 MB, full-duplex, fiber-optic high-speed campus network, a high-speed statewide network and then onto the Internet. The campus network is the largest network in the state, consisting of over 6,500 data ports in 35 buildings. Wireless access is available in most campus buildings, including residence halls, and in two outdoor green spaces.

Open access microcomputer labs are located in 26 buildings on the campus. These labs house 495 PCs and 65 Macintosh computers along with printers and scanners. Some of these labs are open 24 hours a day. The computers are equipped with the most commonly used software, e.g., Microsoft Office, Adobe Photoshop, AutoCad, SPSS, etc. Students can use these computers as stand-alone workstations, to access host systems, or to communicate via the Internet with other students and professionals throughout the world. These labs are open to all students at NDSU. All residence halls are wired to the campus network, making it easy for students with computers to access remote information for course work and various investigations.

In addition to the open access microcomputer labs, the MIS program and the computer science department maintain two special-purpose labs housing approximately 170 computers for use by the students in their respective programs. These labs include a computer structures and networking laboratory, and a network and server laboratory.

NDSU has assumed a leadership role in computer networking as part of a six-state consortium for extremely high-level networking in the Upper Midwest and connectivity to the National Science Foundation supercomputer centers. NDSU is a charter member of Internet 2 and has connectivity with the national vBNS research network.

NDSU also houses a Center for High Performance Computing (CHPC) that provides access to secure, advanced scientific computing resources. The CHPC is a member of the Coalition of Academic Scientific Computation, a nonprofit organization of supercomputing centers and research universities that offer leading edge hardware, software, and expertise in high performance computing resources.

Career Opportunities

MIS professionals play a key role in an organization by managing various types of technology and information systems to increase the effectiveness and efficiency of the organization. As an MIS specialist, one might choose a job in business, education, research, agriculture, or government. This work may be in the technology-oriented areas such as systems analysis, database management, telecommunications/networks, and design and development of new computer systems, or in the business analytics areas such as data science and business data analysis. The Federal Bureau of Labor Statistics expects job opportunities in information systems to be a very attractive career path in the foreseeable future.

High School Preparation

It is recommended that high school students interested in studying MIS at the university level take the maximum number of math courses offered at the high school level. High school electives in the social sciences, English and communication also would be of benefit. Please speak with a professional advisor in the College of Business for more information.

Sample Program Guide

IMPORTANT DISCLAIMER: This guide is not an official curriculum. This guide is a sample four-year degree plan of how students might plan this major with other degree requirements to complete their education in four years. Student plans will vary from this sample due to a variety of factors, such as, but not limited to, start year, education goals, transfer credit, and course availability. To ensure proper degree completion, enrolled students should utilize Degree Map (<https://www.ndsu.edu/registrar/degree-map/>) and Schedule Planner (<https://www.ndsu.edu/onestop/degree-map-and-planning/>) in Campus Connection and consult regularly with academic advisors to ensure graduation requirements are being met.

Freshman					
Fall	Credits	Spring	Credits		
ENGL 110		3 COMM 110	3		
TL 116		3 ENGL 120	3		
Gen Ed Hum & Fine Arts/Cult Div		3 PSYC 111 or SOC 110	3		
Free Electives		6 MATH 144	4		
		Free Elective	3		
		15	16		
Sophomore					
Fall	Credits	Spring	Credits		
ACCT 200		3 ACCT 201	3		
ECON 201		3 ECON 202	3		
STAT 330		3 PHIL 216	3		
Gen Ed Science & Tech		3 STAT 331	2		
Gen Ed Wellness		2 Gen Ed Science & Technology w/Lab	4		
		14	15		
Junior					
Fall	Credits	Spring	Credits	Summer	Credits
MGMT 320		3 BUSN 430	3	MIS Practicum ¹	3
MRKT 320		3 ENGL 320	3		
MIS 320		3 FIN 320	3		
MIS 315		3 MIS 450	3		
BA Track Programming Elective		3 MIS 375	3		
		15	15		3

Senior			
Fall	Credits	Spring	Credits
MIS 340		3 SCM 460	3
BUSN 380		3 MIS 376	3
BUSN 489		3 MIS 470	3
300-400 Level CoB Electives		6 MIS 479	3
	15		12

Total Credits: 120

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Students must complete one of the following options: MIS 397 Cooperative Education, UNIV 492 Study Abroad, MIS 413 Service Internship, CSCI 445 Software Projects Capstone, MGMT 470 Entrepreneurship/Small Business Management or AGECE 371 Export Management. Requires MIS 320 as a pre-requisite and faculty advisor's prior approval.

Sample Program Guide

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Freshman			
Fall	Credits	Spring	Credits
ENGL 110		3 COMM 110	3
TL 116		3 ENGL 120	3
Gen Ed Humanities & Fine Arts/Cult Diversity		3 PSYC 111 or SOC 110	3
Free Electives		6 MATH 144	4
		Free Elective	3
	15		16

Sophomore			
Fall	Credits	Spring	Credits
ACCT 200		3 ACCT 201	3
ECON 201		3 ECON 202	3
STAT 330		3 PHIL 216	3
Gen Ed Science & Tech		3 STAT 331	2
Gen Ed Wellness		2 Gen Ed Science & Technology (w/lab)	4
	14		15

Junior					
Fall	Credits	Spring	Credits	Summer	Credits
MGMT 320		3 BUSN 430		3 MIS Practicum ³	3
MRKT 320		3 ENGL 320		3	
MIS 320		3 FIN 320		3	
MIS 315		3 MIS 450		3	
IT Track Programming Elective ¹		3 IT Track Programming Elective ²		3	
	15		15		3

Senior			
Fall	Credits	Spring	Credits
CSCI 312		3 SCM 460	3
BUSN 489		3 MIS 376	3
IT Track Technology Electives		6 MIS 470	3
300-400 Level Business Elective		3 MIS 375	3
	15		12

Total Credits: 120

1

Recommended Programming Elective course: CSCI 227 or CSCI 160

2

Recommended Programming Elective course: CSCI 228 or CSCI 161

3

Students must complete one of the following options: MIS 397 Cooperative Education, UNIV 492 Study Abroad, MIS 413 Service Internship, CSCI 445 Software Projects Capstone, MGMT 470 Entrepreneurship/Small Business Management or AGE 371 Export Management. Requires MIS 320 as a pre-requisite and faculty advisor's prior approval.