

Management Information Systems

Management Information Systems Major

Management Information Systems concerns the collection, organization, analysis, and dissemination of information for the planning and control of business/organizational operations. The Management Information Systems (MIS) program is designed for students who wish to prepare for professional careers in information processing or information systems in business and government. The program is designed to develop technical skills and administrative insights required for design, development, implementation, maintenance, and management of organizational information systems.

The MIS program at NDSU is a collaborative effort by the faculty of two disciplines: Management Information Systems and Computer Science. The objective is to provide students with both theoretical knowledge and hands-on experience. In addition to the required courses in management information systems and computer science, majors must complete a practicum in the management information systems area. Students pursuing an MIS major typically earn a Computer Science minor.

The Bachelor of Science (B.S.) degree provides sufficient background and skills to support a successful career in technical computing (for example, programmer, systems analyst, or systems designer), systems or network administration, database administration, information technology management, sales, or technical sales support.

Management Information Systems Minor

The Management Information Systems minor is intended for students who are planning careers that involve more active roles as computer users and evaluators, designers, and/or builders of information systems. The minor will provide exposure to issues relevant to the management of information technologies and the means to achieve organizational goals.

Contact the Department of Accounting, Finance, and Information Systems for specific course and minimum grade point average requirements. A minor approval form is required and can be found on the College of Business (<https://www.ndsu.edu/business>) website.

Major Requirements

Major: Management Information Systems

Degree Type: B.S.

Minimum Credits Required for Degree: 127

General Education Requirements for Baccalaureate Degree

- A list of approved general education courses is available here (<http://bulletin.ndsu.edu/past-bulletin-archive/2017-18/academic-policies/undergraduate-policies/general-education/#genedcoursestext>).
- General education courses may be used to satisfy requirements for both general education and the major, minor, and program emphases, where applicable. Students should carefully review the major, minor, and program emphases requirements for minimum grade restrictions, should they apply.

Code	Title	Credits
Communication (C)		12
ENGL 110	College Composition I	
ENGL 120	College Composition II	
COMM 110	Fundamentals of Public Speaking	
Upper Division Writing [†]		
Quantitative Reasoning (R) [†]		3
Science and Technology (S) [†]		10
Humanities and Fine Arts (A) [†]		6
Social and Behavioral Sciences (B) [†]		6
Wellness (W) [†]		2
Cultural Diversity (D) ^{*†}		
Global Perspectives (G) ^{*†}		
Total Credits		39

* May be satisfied by completing courses in another General Education category.

† May be satisfied with courses required in the major. Review major requirements to determine if a specific upper division writing course is required.

Major Requirements

Code	Title	Credits
Pre-College of Business Requirements		
ACCT 200	Elements of Accounting I *	3
ACCT 201	Elements of Accounting II *	3
COMM 110	Fundamentals of Public Speaking (May satisfy general education category C) *	3
ECON 201	Principles of Microeconomics (May satisfy general education category B and G) *	3
ECON 202	Principles of Macroeconomics (May satisfy general education category B and G) *	3
ENGL 110	College Composition I (May satisfy general education category C) *	4
MIS 116	Business Use of Computers (May satisfy general education category S)	3
ENGL 120	College Composition II (May satisfy general education category C) *	3
PHIL 216	Business Ethics (May satisfy general education category A) *	3
PSYC 111 or SOC 110	Introduction to Psychology (May satisfy general education category B) * Introduction to Sociology	3
STAT 330	Introductory Statistics (May satisfy general education category R) *	3
STAT 331	Regression Analysis *	2
MATH 144	Mathematics for Business *	4
Pre-MIS Requirements		
CSCI 227	Computing Fundamentals I (Fall) *	3
CSCI 228	Computing Fundamentals II (Spring) *	3
Management Information Systems Major Requirements **		
BUSN 301	Organizational Citizen	0
ENGL 320	Business and Professional Writing (May satisfy general education category C)	3
FIN 320	Principles of Finance ¹	3
MGMT 320	Foundations of Management ¹	3
MGMT 360	Operations Management	3
MRKT 320	Foundations of Marketing ¹	3
BUSN 430	Legal and Social Environment of Business ¹	3
BUSN 489	Strategic Management (Capstone Course) ¹	4
MIS 320	Management Information Systems ¹	3
MIS 315	System Analysis and Design (requires a grade of C or better)	3
MIS 350	Enterprise Systems	3
MIS 375	Database Design for Business Application (S)	3
MIS 376	Data and Telecommunications Administration (F)	3
MIS 470	Information Systems (S)	3
CSCI 312	Survey of Programming Languages (F)	3
CSCI 489	Social Implications of Computers (F)	3
Management Information Systems Practicum		
Select one of the following:		3
MIS 397	Fe/Coop Ed/Internship	
UNIV 492	Study Abroad	
MIS 413	MIS Service Internship	
CSCI 445	Software Projects Capstone	
AGEC 371	Export Management	
Elective Requirements for MIS Major. Complete 3 credits in each of the three areas below: **		
1) Technology Elective I: Select one course from the following:		3
CSCI 125	Beginning COBOL	
CSCI 172	Intermediate Visual BASIC	

CSCI 213	Modern Software Development	
CSCI 222	Discrete Mathematics	
CSCI 277 or MIS 277	Introduction to UNIX Introduction to UNIX	
CSCI 299 or MIS 299	Special Topics Special Topics	
CSCI 336	Theoretical Computer Science	
ECE 173	Introduction to Computing	
ECE 275	Digital Design	
Any 300-400 level CSCI or MIS course not used to satisfy another MIS major requirement		
2) Technology Elective II:		3
Any 300-400 level CSCI or MIS course not used to satisfy another MIS major requirement		
3) Business Elective:		3
Any 300-400 level CoB course not used to satisfy other requirements, or CSCI 473, or ECON 324; includes courses cross-listed with CoB courses; excludes internships, study abroad, LEAD courses & MIS 371		
*	Pre-college and pre-management information systems major courses. A grade of 'C' or better for pre-college and pre-management information systems major courses is required for admission into the Management Information Systems major.	
**	Students must earn a 'C' or better, and have a minimum 2.5 cumulative GPA, in ALL courses included in the professional program (i.e., all required courses, elective requirements, and additional 300-400 level CoB electives or breadth electives). The only exception is BUSN 301, which is a P/F course.	
¹	Denotes Common Body of Knowledge (CBK) course.	

Degree Requirements and Notes

- Students follow the published curricula for management information systems program of study from the semester/year of entrance in the College of Business to graduation provided enrollment at NDSU has not been discontinued for more than one year. Students who change their major are subject to meeting the curricular requirements in effect at the time the new major is declared.
- Business courses from programs that do not hold AACSB International accreditation cannot be used for major or minor requirements in the College of Business (CoB); such courses may be eligible for use as free electives.
- The CoB accepts a maximum of nine credits of non-NDSU 300-400 level business courses from AACSB programs with approval of the department.
- Admission into the MIS Major: Students must earn a 'C' or better in the pre-college and pre-MIS courses that are indicated with an asterisk (*), achieve junior standing (60 credits), and earn a 2.50 institutional cumulative grade point average. Students must submit an online application to the CoB.
- Admission to the MIS major is required to enroll in the advanced 300 or 400 level courses in the CoB.
- A grade of 'C' or better is required in transfer courses accepted for ACCT 200 Elements of Accounting I and ACCT 201 Elements of Accounting II and all 300-400 level accounting, business administration, finance, management, management information systems, and marketing courses.
- A letter grade must be earned in any course that fulfills a major requirement (with the exception of some practicum options and BUSN 301).
- Requirements for graduation are those in existence at the time of admission to the MIS major.
- A 2.50 cumulative grade point average is required to enroll in 300-400 level CoB courses.
- Students must earn a 2.50 institutional GPA to graduate.
- Of the credits completed in residence at least 30 credits must be in 300-400 level CoB courses.
- Students must be accepted to the MIS major prior to the completion of the last 30 credits in 300 and 400 level CoB courses.
- A Business Administration minor is NOT offered with this major.
- For multiple majors within the CoB, at least 15 unique credits of 300-400 level CoB courses must exist between the majors.
- Prerequisite for Management Information Systems Practicum: MIS 315 with a grade of C or better.
- Students should refer to www.ndsu.edu/business for current and complete listing of the major requirements.

Minor Requirements

Management Information Systems Minor

Minor Requirements

Required Credits: 21

Students should refer to www.ndsu.edu/business for information on declaring the minor with the CoB.

Code	Title	Credits
Requirements		
MGMT 320	Foundations of Management	3
MIS 315	System Analysis and Design	3
MIS 375	Database Design for Business Application *	3
or CSCI 366	Database Systems	
MIS 376	Data and Telecommunications Administration *	3
or CSCI 459	Foundations of Computer Networks	
CSCI 227	Computing Fundamentals I **	3-4
or CSCI 160	Computer Science I	
Select one of the following:		3
ACCT 420	Accounting Information Systems	
MIS 470	Information Systems	
Or an MIS advisor-approved CoB course that is MIS related		
Select one of the following:		3
An MIS adviser approved 300-400 level CSCI course		
Or one of the following:		
CSCI 122	Visual BASIC	
CSCI 161	Computer Science II	
CSCI 172	Intermediate Visual BASIC	
CSCI 228	Computing Fundamentals II **	
Total Credits		21-22

* Students who take CSCI 366 Database Systems & CSCI 459 Foundations of Computer Networks, must select an additional MIS advisor-approved CoB course.

** It is strongly recommended that students who take CSCI 227 select CSCI 228 as their elective in preparation for MIS 315.

Minor Requirements and Notes

- A minimum of 9 credits must be completed in the CoB.
- Approval forms must be submitted after completed CSCI 227 Computing Fundamentals I or CSCI 160 Computer Science I.
- To be accepted into the minor program, students must have a 2.50 institutional cumulative GPA and at least junior standing (60 credits). To complete a minor, students must earn at least a 2.50 GPA that is based on the courses used to satisfy the minor requirements. Courses may not be taken pass/fail.
- If the cumulative GPA falls below the 2.50 after acceptance into the program, the student will not be allowed to register for the CoB courses until the cumulative GPA returns to 2.50 or above.
- Students are subject to the minor requirements in effect during the year in which the minor was approved.
- Minors must satisfy all course prerequisites.
- Approval for a minor does not guarantee enrollment in specific courses.
- Graduation with a minor in Management Information Systems requires a grade of 'C' or better in all courses required for the minor.

Plan of Study

Freshman		
Fall	Credits Spring	Credits
ENGL 110	4 COMM 110	3
MIS 116	3 ENGL 120	3
Cultural Diversity Elective	3 PSYC 111 or SOC 110	3
Non-Major Elective	3 MATH 144	4
Humanities/Fine Arts Elective	3 Non-Major Elective	3

Sophomore			
Fall	Credits	Spring	Credits
ACCT 200	3	ACCT 201	3
CSCI 227	3	CSCI 228	3
ECON 201	3	ECON 202	3
STAT 330	3	PHIL 216	3
Science & Technology Elective (w/lab)	4	STAT 331	2
		Wellness	2
	16		16

Junior					
Fall	Credits	Spring	Credits	Summer	Credits
MGMT 320	3	BUSN 430	3	MIS 397 ²	3
MRKT 320	3	ENGL 320	3		
MIS 320	3	FIN 320	3		
MIS 315	3	MIS 350	3		
Programming Language Elective	3	MIS 375	3		
	15		15		3

Senior			
Fall	Credits	Spring	Credits
CSCI 312	3	BUSN 489	4
CSCI 489	3	MGMT 360	3
MIS 376	3	MIS 470	3
Technology Elective I	3	Science & Technology Elective	2
300-400 Level Business Elective	3	Technology Elective II	3
	15		15

Total Credits: 127

¹ At some time prior to graduation, all College of Business students must register for and successfully complete BUSN 301 (0 credits).

² 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, or AGECE 371 Export Management. Requires MIS 320 as a pre-requisite and faculty advisor's prior approval.

NOTE: This is only a sample curriculum; actual schedules will depend on course availability and individual choices. Students are encouraged to meet with their academic advisor on a regular basis to review their plan of study.