

MANAGEMENT INFORMATION SYSTEMS, MS

The Master of Science in management information systems (MIS) degree is designed to give students the skills and background needed to develop and manage an organization's information resources, technology, and infrastructure with a focus on the practical application of these skills. The program prepares graduates to excel in workplaces transformed by machine learning and data analytics. It will serve as a source of added knowledge and experience for MIS graduates and practitioners interested in obtaining an advanced degree. It will also provide career growth opportunities for the non-MIS and non-business degree holders who find that their careers demand graduate level MIS education.

The MS in MIS prepares students for a variety of high-demand positions, including applications and web-site developer, computer network manager, business system analyst/manager, consultant, technology manager, as well as roles in artificial intelligence, cloud computing, and data analysis. Graduates gain competencies that can be applied in diverse industries including agriculture, healthcare, finance, banking, and retail. MS in MIS alumni have secured internships and positions at leading regional and national organizations, reflecting the program's robust industry connections and the breadth of career pathways it supports.

The MS in MIS also prepares students for admission to doctoral programs in information systems. A community advisory committee helps keep the program current with the needs of the business community. The MS in MIS program is a STEM designated program (CIP code: 11.0401)

Program Related Information

Program Contact

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Program Website (<http://www.unomaha.edu/college-of-information-science-and-technology/information-systems-and-quantitative-analysis/graduate/>)

Fast Track

The Department of Information Systems and Quantitative Analysis has developed a Fast Track program for highly qualified and motivated students providing the opportunity to complete a bachelor's degree and a master's degree in an accelerated time frame. With Fast Track, students may count up to nine (9) graduate hours toward the completion of their undergraduate program as well as the graduate degree program. Students will work with both undergraduate and graduate advisors to ensure graduate classes selected will count toward both programs, should a student wish to earn a graduate degree in a separate College of Information Science & Technology (CIST) area than their undergraduate degree.

Program Specifics:

- This program is available for undergraduate students pursuing any of the following:
 - Students pursuing a CIST undergraduate degree desiring to pursue an MS in either the same or a related CIST field

- Students pursuing a Bachelor of Multidisciplinary Studies who wish to pursue the MS in MIS.
- Students must have completed no less than 60 undergraduate hours and within at least 24 undergraduate credits yet to complete.
- Students must have a minimum undergraduate GPA of 3.0.
- Students must complete the Fast Track Approval form, obtain all signatures and submit it to the Office of Graduate Studies prior to first enrollment in a graduate course.
- Students will work with their undergraduate advisor to register for the graduate courses.
- A minimum cumulative GPA of 3.0 is required to remain in good standing.
- Students remain undergraduates until they meet all the requirements for the undergraduate degree and are eligible for all rights and privileges granted undergraduate status including financial aid.
- Near the end of the undergraduate program, formal application to the graduate program is required. All applicants will need to meet any other admission requirements established for the MS in selected CIST program. The application fee will be waived if the applicant contacts the Office of Graduate Studies for a fee waiver code prior to submitting the MS application.
 - Admission to Fast Track does NOT guarantee admission to the graduate program.
 - The admit term must be after the completion term of the undergraduate degree.

International Dual Degree

The College of IS&T, in conjunction with the Management Center Innsbruck (Austria) (MCI) and the Technical University of Braunschweig (Germany) (TUB), offers a small number of interested students the opportunity to receive both the MS in MIS (UNO) degree and the MA in Management, Communications and Information Technology (MCiT) (MCI) or the Masters in MIS (TUB) degree in a two-year, full-time equivalent period. This is implemented as an international dual degree track within the MS in MIS degree with courses that transfer in both directions. The international dual degree track, like the traditional MS in MIS program, requires the equivalent of 36 U.S. credit hours of course work beyond any foundation requirements. Students who wish to pursue this option will work closely with an advisor to develop a detailed plan of study.

Admissions

General Application Requirements and Admission Criteria (<http://catalog.unomaha.edu/graduate/admission/>)

Application Deadlines

- Spring 2026: December 1
- Summer 2026: April 1
- Fall 2026: July 1

Other Requirements

- The minimum undergraduate grade point average (GPA) requirement for the MS in MIS program is 3.0 or equivalent score on a 4.0 scale. Applicants should have the equivalent of a four year undergraduate degree.
- **Entrance Exam:** Although not required, submitting GMAT or GRE scores may strengthen your application.
- **English Language-Proficiency:** Applicants are required to have a command of oral and written English. Those who do not hold a baccalaureate or other advanced degree from the United States, **OR** a baccalaureate or other advanced degree from a predetermined country on the waiver list (<https://www.unomaha.edu/office-of-graduate-studies/admissions/entrance-exams.php>), must meet the minimum language proficiency score requirement in order to be considered for admission.

- Internet-based TOEFL: 80, IELTS: 6.5, PTE: 53, Duolingo: 110
- **Statement of Purpose:** Applicants are required to submit a statement of purpose (500-750 words) addressing the following. The statement must be written in the applicant's own words, reflecting their goals and aspirations. Plagiarism in the statement may result in the rejection of the entire application.
 - Motivations for pursuing graduate education
 - Relevant qualifications or work experience that demonstrate potential for success in the graduate program
 - Career goals
 - Why you want to study at UNO
- **Resume:** Submit a detailed resume indicating your work experience and background.
- **OPTIONAL:** One letter of recommendation from a reference who can evaluate your work and/or academic achievements.
- **OPTIONAL:** Application for Graduate Assistant Position

The MS in MIS program hires departmental graduate assistants (GA) after successful completion of at least a semester in the program. However, a few research positions may be available to incoming students. If you are interested in applying for one of those positions, please submit a letter stating your research area interests and why you feel you would make a good GA. Please note that GA positions will be considered after admission and program admission is not a guarantee of receiving a GA position.

Students interested in taking courses without admission to the MS in MIS degree program may do so with permission of the graduate program committee. Contact mgreiner@unomaha.edu.

Requirements

Foundation Courses

Foundation courses ensure that all students in the MS management information systems (MIS) program have a strong foundation on which to build the rest of the program. These courses not only provide essential prerequisite knowledge and skills for other courses in the program, but they also contain a distinct body of knowledge that is an important part of the MIS professional's education. All foundation courses are required for all students. Students who have obtained an undergraduate MIS degree will typically have this foundation. Other students, including computer science or engineering majors, will usually have to take one or more foundation courses. Occasionally, a student's work experience may be sufficient to waive one or more foundation courses.

Waivers for foundation courses are granted by the chair of the graduate program committee upon the recommendation of the faculty member who is responsible for an individual foundation course. Students requesting a waiver for a particular course should be prepared to meet with a faculty member and answer questions in the area of the course. They should bring to the meeting any relevant transcripts, course syllabi, course material, or evidence of practical experience. Some foundation courses may have an option for testing out. Results of a test out are not appealable or repeatable.

Foundation courses cannot be used to satisfy the 36 semester hours required for the MS in MIS degree. Students who have not completed all the foundation course requirements may be admitted on provisional status until those requirements have satisfactorily been completed. **Students are required to finish foundation courses within their first 18 credit hours.**

Code	Title	Credits
CIST 1600	INTRODUCTION TO PROGRAMMING USING PRACTICAL SCRIPTING (or equivalent)	3
ISQA 3900	WEB APPLICATION DEVELOPMENT	3

ISQA 8030	FOUNDATIONS OF INFORMATION SYSTEMS	3
Select one of the following:		3-6
ISQA 8040	AN OVERVIEW OF SYSTEMS DEVELOPMENT	
ISQA 4110 & ISQA 4120 & ISQA 3310	INFORMATION SYSTEMS ANALYSIS and SYSTEM DESIGN AND IMPLEMENTATION and MANAGING THE DATABASE ENVIRONMENT	
Total Credits		12-15

Degree Requirements

Complete ISQA 8310 as early as possible in your program. Students should meet with the program's graduate advisor in order to formulate a plan of study.

Earn a total of 36 credit hours with a number 8000 or above (excluding foundation courses listed in the admissions requirements. The 36 credit hours may be earned in two ways:

- Capstone option: 18 hours core classes (6 courses) + 15 hours electives (5 courses) + 3 hours capstone (ISQA 8950)
- Thesis option: 18 hours core classes (6 courses) + 9 hours electives (3 courses) + 3 hours research methods (ISQA 8060) + 6 hours thesis (ISQA 8990)

Capstone Option

Code	Title	Credits
Required Courses		
ISQA 8210	MANAGEMENT OF SOFTWARE DEVELOPMENT	3
ISQA 8220	ADVANCED SYSTEMS ANALYSIS AND DESIGN	3
ISQA 8310	IT INFRASTRUCTURE & CLOUD COMPUTING	3
ISQA 8380	ENTERPRISE ARCHITECTURE AND SYSTEMS INTEGRATION	3
ISQA 8410	DATA MANAGEMENT	3
ISQA 8420	MANAGING THE I.S. FUNCTION	3
Electives		
Select 15 credits from the following, with a minimum of 3 credits from ISQA electives:		15
MIS Concentrations (see Concentrations)		
Approved electives are all graduate course offered by the College of IS&T, not counted elsewhere in the plan of study, including ISQA, BMI, CIST, CSCI, CYBR, and HCC 8xx0 and 8xx6 level courses. Graduate level courses from other departments or colleges need approval by the Graduate Program Chair.		
ISQA 8950	CAPSTONE MANAGEMENT INFORMATION SYSTEMS ¹	3
Total Credits		36

¹ See Exit Requirements below for additional details.

Thesis Option

Code	Title	Credits
Required Courses		
ISQA 8210	MANAGEMENT OF SOFTWARE DEVELOPMENT	3

ISQA 8220	ADVANCED SYSTEMS ANALYSIS AND DESIGN	3
ISQA 8310	IT INFRASTRUCTURE & CLOUD COMPUTING	3
ISQA 8380	ENTERPRISE ARCHITECTURE AND SYSTEMS INTEGRATION	3
ISQA 8410	DATA MANAGEMENT	3
ISQA 8420	MANAGING THE I.S. FUNCTION	3
Research Methods		
ISQA 8060	RESEARCH IN MIS	3
Electives		
Select 9 credits of graduate courses offered by the College of IS&T, not counted elsewhere in the plan of study, including ISQA, BMI, CIST, CSCI, CYBR, and ITIN 8xx0 and 8xx6 level courses with at minimum 3 credits from ISQA electives. Graduate level courses from other departments or colleges need approval by the Graduate Program Chair.		9
ISQA 8990	THESIS (6 Hours Required) ¹	3
Total Credits		36

¹ See Exit Requirements below for additional details.

Exit Requirements

Either pass ISQA 8950 or complete the thesis option (thesis plus thesis defense).

Code	Title	Credits
ISQA 8990	THESIS	6
or		
ISQA 8950	CAPSTONE MANAGEMENT INFORMATION SYSTEMS	3

Other Requirements

- All core classes must be complete before students may enroll in ISQA 8950.
- All candidates should carefully review the Graduate College requirements for forming the supervisory committee, Thesis/Thesis Equivalent Proposal Approval forms, and final approval and submission of the thesis.
- Transfer students may request permission to transfer as many as 12 semester hours of credit on a 36-hour program provided the courses are pertinent to the student's graduate program. Submit petitions to the Graduate Program Committee for transfer credit and include a syllabus for each course to be transferred.
- ISQA 8086, ISQA 8076, and ISQA 8066 combined hours cannot exceed 9 credit hours.
- ISQA 8070, ISQA 8090, and ISQA 8080 combined hours cannot exceed 9 credit hours.
- Students have seven years to complete their MS in MIS degree. The 7-year time limit starts with the first degree-program class on the plan of study.

Concentrations

The ISQA faculty has developed a set of concentrations to assist students as they work to complete the MS in MIS program. Concentrations consist of a set of elective courses that are related to a particular subject area. Students may choose to take courses that make up a concentration, or not, as they see fit. Concentrations are not minors in the traditional sense, but rather reflect areas in demand in the community. If you have any questions regarding these concentrations, please contact the MS in MIS graduate advisor.

Analytics Concentration

Data analytics uses a variety of techniques to examine large amounts of data to discover patterns that can lead to business insights. Data analytics has broad applicability in customer behavior analysis, fraud detection, scientific inquiry, process improvement, financial analysis, trend analysis, forecasting, and decision-making. Techniques may include statistical methods, data mining, modeling and simulation, and data visualization. The analytics concentration prepares students for work in the area of analytics, and also offers the necessary methodological foundation for thesis work in a master's or PhD program.

Code	Title	Credits
Required Courses		
Pick one ISQA course from each of the three categories below		
Data Engineering		3
ISQA 8016	BUSINESS INTELLIGENCE	
ISQA 8206	INFORMATION AND DATA QUALITY MANAGEMENT	
ISQA 8450	NOSQL AND BIG DATA TECHNOLOGIES	
ISQA 8460	INTERNET OF THINGS (IOT), BIG DATA AND THE CLOUD	
ISQA 8600	FROM DATA TO DECISIONS	
ISQA 8700	DATA MINING: THEORY AND PRACTICE	
CSCI 8350	DATA WAREHOUSING AND DATA MINING	
Data Analytics		3
ISQA 8156	ADVANCED STATISTICAL METHODS FOR IS&T	
ISQA 8340	APPLIED REGRESSION ANALYSIS	
ISQA 8700	DATA MINING: THEORY AND PRACTICE	
ISQA 8720	APPLIED STATISTICAL MACHINE LEARNING	
ISQA 8736	DECISION SUPPORT SYSTEMS	
ISQA 8160	APPLIED DISTRIBUTION FREE STATISTICS	
ISQA 9120	APPLIED EXPERIMENTAL DESIGN AND ANALYSIS	
ISQA 9130	APPLIED MULTIVARIATE ANALYSIS	
ECON 8310	BUSINESS FORECASTING	
CSCI/MATH 8156	GRAPH THEORY & APPLICATIONS	
CSCI/MATH 8306	DETERMINISTIC OPERATIONS RESEARCH MODELS	
CSCI 8360	MACHINE LEARNING FOR TEXT	
Data Visualization		3
ISQA 8525	GRAPHICAL USER INTERFACE DESIGN	
ISQA 8750	STORYTELLING WITH DATA	
GEOG 8535	CARTOGRAPHY AND DATA VISUALIZATION	
Electives		3
Pick one of the remaining courses from any of the three categories above ¹		
ISQA 8080	SEMINAR IN MANAGEMENT INFORMATION SYSTEMS ²	
ISQA 8086	SPECIAL TOPICS: INFORMATION SYSTEMS & QUANTITATIVE ANALYSIS ²	
ISQA 8900	INDEPENDENT RESEARCH IN MANAGEMENT INFORMATION SYSTEMS ²	
ISQA 8990	THESIS ^{2,3}	
Total Credits		12

¹ This is not an exhaustive list. Other courses may be taken as electives with approval of the GPC.

² Topic must be related to Analytics concentration area. Prior approval from the GPC is required to use this course.

³ Only three hours of the required six hours of thesis may be applied to the concentration.

Data Management Concentration

The effective management of data and information is a fundamental task not only in the information society, but also for civilization as a whole. This concentration will prepare students to manage a growing variety of types of data throughout the data lifecycle. The curriculum gives students theoretical and practical training in database design, database administration, data quality management, knowledge management, business intelligence, data integration, and data governance. Students will gain exposure to transaction processing systems, data warehouses, and XML data stores. Students may also gain experience managing geospatial data.

Code	Title	Credits
Required Courses		
ISQA 8206	INFORMATION AND DATA QUALITY MANAGEMENT	3
ISQA 8306	DATABASE ADMINISTRATION	3
ISQA 8700	DATA MINING: THEORY AND PRACTICE	3
Electives		
Select one of the following: ¹		3
ISQA 8016	BUSINESS INTELLIGENCE	
ISQA 8450	NOSQL AND BIG DATA TECHNOLOGIES	
ISQA 8736	DECISION SUPPORT SYSTEMS	
GEOG 8535	CARTOGRAPHY AND DATA VISUALIZATION ²	
GEOG 8056	GEOGRAPHIC INFORMATION SYSTEMS I	
ISQA 8080	SEMINAR IN MANAGEMENT INFORMATION SYSTEMS ³	
ISQA 8086	SPECIAL TOPICS: INFORMATION SYSTEMS & QUANTITATIVE ANALYSIS ³	
ISQA 8900	INDEPENDENT RESEARCH IN MANAGEMENT INFORMATION SYSTEMS ³	
ISQA 8990	THESIS ^{3,4}	
Total Credits		12

¹ This is not an exhaustive list. Other courses may be taken as electives with approval of the GPC.

² GEOG 8535 : (2 credit hours+2 credit hours lab)

³ Topic must be related to Data Management concentration area. Prior approval from the GPC is required to use this course.

⁴ Only three hours of the required six hours of thesis credit may be applied to the concentration.

Information Security Management Concentration

The information security management concentration focuses on understanding security governance, risk management, privacy, and compliance and the managerial aspects of security that are priorities within an organization. Students interested in information security management are encouraged to declare a formal concentration by contacting the graduate advisor.

Code	Title	Credits
Required Courses		
ISQA 8546	COMPUTER SECURITY MANAGEMENT	3
ISQA/CYBR 8570	INFORMATION SECURITY POLICY AND ETHICS	3
ISQA 8580	SECURITY RISK MANAGEMENT AND ASSESSMENT	3
Electives		
Select one of the following: ¹		3
ISQA 8560	INFORMATION WARFARE AND SECURITY	
ISQA 8080	SEMINAR IN MANAGEMENT INFORMATION SYSTEMS ²	
ISQA 8086	SPECIAL TOPICS: INFORMATION SYSTEMS & QUANTITATIVE ANALYSIS ²	
ISQA 8900	INDEPENDENT RESEARCH IN MANAGEMENT INFORMATION SYSTEMS ²	
CYBR 8490	CYBER INVESTIGATIONS	
CYBR 8456	ETHICAL HACKING - MALWARE ANALYSIS	
CYBR 8470	SECURE WEB APPLICATION DEVELOPMENT	
CYBR 8466	ETHICAL HACKING - NETWORK ANALYSIS	
ISQA 8990	THESIS ^{2,3}	
Total Credits		12

¹ This is not an exhaustive list. Other courses may be taken as electives with approval of the GPC.

² Topic must be related to information security management concentration area. Prior approval from the GPC is required to use this course.

³ Only three hours of the required six hours of thesis credit may be applied to the concentration.

Project Management Concentration

The project management concentration will provide students with the technical, organizational and managerial background to be effective project managers, project leaders, information technology managers, and software engineers. The curriculum in this concentration integrates project management standards developed by organizations such as IEEE (The Institute of Electrical and Electronics Engineers) and PMI (Project Management Institute) with conceptual background from disciplines such as project management, software engineering, management science, psychology, organization behavior, and organization change. Students are to start coursework in the project management concentration after completion of at least 9 hours of the core courses, including ISQA 8210.

Code	Title	Credits
Required Courses		
ISQA 8810	INFORMATION TECHNOLOGY PROJECT FUNDAMENTALS	3
ISQA 8820	PROJECT RISK MANAGEMENT	3
Electives		
Select two of the following: ¹		6
ISQA/CYBR 8570	INFORMATION SECURITY POLICY AND ETHICS	
ISQA 8196	PROCESS REENGINEERING WITH INFORMATION TECHNOLOGY	
ISQA 8080	SEMINAR IN MANAGEMENT INFORMATION SYSTEMS ²	

ISQA 8086	SPECIAL TOPICS: INFORMATION SYSTEMS & QUANTITATIVE ANALYSIS ²	
ISQA 8900	INDEPENDENT RESEARCH IN MANAGEMENT INFORMATION SYSTEMS ²	
ISQA 8990	THESIS ^{2,3}	
Total Credits		12

¹ This is not an exhaustive list. Other courses may be taken as electives with approval of the GPC.

² Topic must be related to project management concentration area. Prior approval from the GPC is required to use this course.

³ Only three hours of the required six hours of thesis credit may be applied to the concentration.

Quality of Work Standards

The Graduate College's Quality of Work standards shall be applied to foundation courses as well as courses taken as part of the degree program. In particular, the Graduate Program Chair (GPC) will recommend to the Graduate College that any

1. Student receiving a grade of "C-" or below in any foundation courses will be automatically dismissed from the program or, in the case of non-degree students, be automatically denied admission.
2. Student receiving a grade of "C+" or "C" in any foundation course will be placed on probation or dismissed from the program.
3. Student not maintaining a "B" (3.0 on 4.0 scale) average in foundation courses will be placed on probation or dismissed from the program.

Students who have been dismissed from a MIS graduate program may request reinstatement by following the process outlined below:

Step 1: Students must submit a written petition for reinstatement to the GPC. The petition needs to include a 1–2 paragraph letter explaining the circumstances that led to the student's academic difficulties, the specific challenges they faced during the semester, and their plan for improvement to ensure these issues do not recur.

Step 2: The petition will be shared with the graduate program committee. The committee will review the petition and decide the student's eligibility for reinstatement.

Step 3: If reinstated, the student will be placed on probation for the following semester of enrollment. The graduate program committee will determine the conditions of this probation. Please note that students who are on probation cannot hold a graduate assistantship or internship and are ineligible for an independent study.

Students are encouraged to take proactive steps to address any challenges that may impact their academic success. For any questions about this process, please contact the GPC.