

MANAGEMENT INFORMATION SYSTEMS, BACHELOR OF SCIENCE

The Bachelor of Science in Management Information Systems degree provides students with the educational background for pursuing an exciting career in applying computers in business and government to process data and solve a wide variety of business problems.

The computer is an important tool, which processes information for management decision making. Managers can be more effective and efficient when assisted by computer-based information systems. Students pursuing a degree in Management Information Systems will learn how the computer can be applied to produce information both for controlling the day-to-day operations of a business and for planning for the future of that business. With a Management Information Systems degree, the study of information systems and quantitative analysis prepares students for pursuing career opportunities in business data management, management information systems, systems analysis, systems design, decision support, information security, electronic commerce, and other related areas.

Student Group

MIS Student Organization: MISSO

The Management Information Systems Student Organization (MISSO) was founded in 1999 and has been an active part of UNO ever since. MISSO membership and attendance at MISSO meetings is open to all UNO and UNL students in all majors who are interested in the field of information systems. Learn more about MISSO here (<https://www.unomaha.edu/college-of-information-science-and-technology/information-systems-and-quantitative-analysis/student-involvement/>).

Fast Track

The department of Information Systems and Quantitative Analysis (ISQA) 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 9 graduate credit hours towards 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 CIST undergraduate degree desiring to pursue an MS in either the same or a related CIST field.
- Students must have completed no less than 60 undergraduate hours.
- Students must have a minimum undergraduate GPA of 3.0.
- Students must complete the Fast Track Approval form and obtain all signatures and submit 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 for graduate coursework 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.

Contact

For more information, contact the College of IS&T Academic Advising Office at 402.554.3819.

Website (<http://www.unomaha.edu/college-of-information-science-and-technology/academics/management-information-systems.php>)

Requirements

A minimum of 120 credit hours is required for a Bachelor of Science degree in Management Information Systems. Thirty of the last 36 hours must be University of Nebraska at Omaha (UNO) courses. Registering for courses without having taken the stated prerequisites could result in administrative withdrawal.

To obtain a Bachelor of Science in Management Information Systems, a student must fulfill the University, College and Departmental requirements. Some courses may satisfy requirements in more than one area, but credit is awarded only once, thereby reducing the total number of credit hours for the degree to 120. (This total does not include prerequisites; students are accountable for all prerequisite courses.)

Code	Title	Credits
	University General Education (46 total, 21 hours of which can be satisfied by courses in the required areas below)	25
	College of IS&T Core for MIS majors	15
	MIS Core	24
	Mathematics and Statistics	6
	Business	15
	Specialization	12
	Electives	23
Total Credits		120

College of IS&T Core Courses for MIS Majors (15 hours)

The College of IS&T has developed a series of courses that are required for students wishing to obtain a Management Information Systems degree from the College. The development and implementation of this core curriculum is unique and serves as a basis for preparing students to enter more advanced courses. The core curriculum is as follows:

Code	Title	Credits
CYBR 1100	INTRODUCTION TO INFORMATION SECURITY ¹	3
CIST 1300	INTRODUCTION TO WEB DEVELOPMENT	3
CIST 1400	INTRODUCTION TO COMPUTER SCIENCE I ²	3
CIST 2100	ORGANIZATIONS, APPLICATIONS AND TECHNOLOGY ³	3

CIST 3110	INFORMATION TECHNOLOGY ETHICS ⁴	3
Total Credits		15

¹ CYBR 1100 counts toward the Global Diversity requirement.

² A minimum grade of C is required for CIST 1400 (and CSCI 1620) as a prerequisite for all subsequent CSCI courses.

³ CIST 2100 counts toward a Social Science requirement.

⁴ CIST 3110 counts toward a Humanities requirement.

MIS Core Courses (24 hours)

Code	Title	Credits
ISQA 3310	MANAGING THE DATABASE ENVIRONMENT	3
ISQA 3400	INFORMATION TECHNOLOGY INFRASTRUCTURE	3
ISQA 3420	MANAGING IN A DIGITAL WORLD	3
ISQA 3900	WEB APPLICATION DEVELOPMENT	3
ISQA 3910	INTRODUCTION TO PROJECT MANAGEMENT	3
ISQA 4110	INFORMATION SYSTEMS ANALYSIS	3
ISQA 4120	SYSTEM DESIGN AND IMPLEMENTATION	3
ISQA 4900	FULL STACK DEVELOPMENT ¹	3

¹ Students may substitute CSCI 1620 for ISQA 4900. A minimum grade of C is required for CSCI 1620 as a prerequisite for all subsequent CSCI courses.

Math and Statistics Courses (6 hours)

Code	Title	Credits
MATH 1930	CALCULUS FOR THE MANAGERIAL, LIFE, AND SOCIAL SCIENCES ¹	3
or MATH 1370	APPLIED ALGEBRA AND OPTIMIZATION WITH DATA ANALYSIS	
CIST 2500	INTRODUCTION TO APPLIED STATISTICS FOR IS&T	3

¹ This course will also satisfy UNO's General Education Quantitative Literacy requirement.

Co-Requisite Courses from the College of Business Administration (15 hours)

The Management Information Systems degree is cross-disciplinary in nature; students therefore need to have an understanding of economics, accounting, and business functions. These areas are covered by required co-requisite courses offered through the College of Business Administration (CBA). All CBA courses require a grade of C or better.

Code	Title	Credits
ACCT 2010	PRINCIPLES OF ACCOUNTING I	3
ACCT 2020	PRINCIPLES OF ACCOUNTING II	3
ECON 2200	PRINCIPLES OF ECONOMICS (MICRO) ¹	3
ECON 2220	PRINCIPLES OF ECONOMICS (MACRO) ¹	3

¹ ECON 2200/ECON 2220 count toward Social Science requirements.

Upper-Level Business Courses: Select three credit hours from the following:

Code	Title	Credits
ACCT 3080	ACCOUNTING INFORMATION SYSTEMS	3
ECON 3200	ECONOMIC THEORY: MICRO	3

ECON 3220	ECONOMIC THEORY: MACRO	3
ENTR 3710	ENTREPRENEURIAL FOUNDATIONS	3
FNBK 3250	PRINCIPLES OF FINANCIAL MANAGEMENT	3
MKT 3310	PRINCIPLES OF MARKETING	3
MGMT 4030	HUMAN RESOURCE MANAGEMENT	3
MGMT/ITIN 4090	MANAGING COLLABORATIVE ENGAGEMENT	3

Upper-Level Specialization Courses: Select 12 credit hours from the following:

Code	Title	Credits
CYBR 3600	INFORMATION SECURITY POLICY AND AWARENESS	3
CYBR 4360	FOUNDATIONS OF CYBERSECURITY	3
CYBR/CIST 4540	COMPUTER SECURITY MANAGEMENT	3
ISQA 3520	GRAPHICAL USER INTERFACE DESIGN	3
ISQA 4000	SPECIAL TOPICS: INFORMATION SYSTEMS & QUANTITATIVE ANALYSIS *	3
ISQA 4060	SPECIAL TOPICS: INFORMATION SYSTEMS & QUANTITATIVE ANALYSIS *	1
ISQA 4070	SPECIAL TOPICS: INFORMATION SYSTEMS & QUANTITATIVE ANALYSIS *	2
ISQA 4010	BUSINESS INTELLIGENCE	3
ISQA 4100	INFORMATION SYSTEMS ARCHITECTURE AND ORGANIZATION	3
ISQA 4130	INFORMATION TECHNOLOGY FOR DEVELOPMENT	3
ISQA 4150	ADVANCED STATISTICAL METHODS FOR IS&T	3
ISQA 4160	ENTERPRISE RESOURCE PLANNING SOFTWARE CONSULTING	3
ISQA 4180	ELECTRONIC COMMERCE	3
ISQA 4170	DIGITAL SUPPLY CHAIN & LOGISTICS	3
ISQA 4190	PROCESS REENGINEERING WITH INFORMATION TECHNOLOGY	3
ISQA 4200	INFORMATION AND DATA QUALITY MANAGEMENT	3
ISQA 4300	DATABASE ADMINISTRATION	3
ISQA 4380	DISTRIBUTED TECHNOLOGIES AND SYSTEMS	3
ISQA 4500	SPECIAL PROBLEMS IN INFORMATION SYSTEMS AND QUANTITATIVE ANALYSIS	2-3
ISQA 4510	INFORMATION SYSTEMS INTERNSHIP	1-3
ISQA 4730	DECISION SUPPORT SYSTEMS	3
ISQA 4880	SYSTEMS SIMULATION AND MODELING	3
ISQA 4890	DATA WAREHOUSING AND DATA MINING	3

* ISQA 4000, ISQA 4060, and ISQA 4070 cover different topics each semester. These courses may be repeated, but no topic may be taken more than once. Check the class schedule for specific topics offered during a particular semester.

Writing in the Discipline

All UNO students are required to take a writing-in-the-discipline course within their major. Management Information Systems degree students must take CIST 3000

Second Bachelor's Degree

General Requirements

Students who have satisfied the requirements for a first bachelor's degree, other than one in Management Information Systems (MIS) at the University of Nebraska at Omaha or another academic institution, must complete a **minimum** of 30 additional semester hours at the University for a second bachelor's degree.

MIS Requirements (72 hours)

To obtain an MIS degree as a second bachelor's degree, students must complete academic requirements for the degree which include **15 credit hours of IS&T core courses, 24 credit hours of MIS core courses, 12 credit hours of specialization courses, 6 credit hours of mathematics and applied statistics courses, and 15 hours of business co-requisite courses.** International students may be required to complete nine hours of English composition courses and any relevant pre-requisites as determined by the English Placement and Proficiency Exam (EPPE). Students who are admitted to a second degree program in MIS must meet with an academic advisor in the College of IS&T before beginning the degree to make a plan of study. Some transfer coursework may apply; however, 30 of the last 36 hours must be University of Nebraska at Omaha courses.

Optional Concentrations

The Management Information Systems (MIS) degree includes 23 credit hours that can be used for prerequisite classes, free-choice elective classes, optional minors, optional MIS concentrations and certificates, or a combination of any of the aforementioned areas.

Upper-division Information Systems and Quantitative Analysis (ISQA) courses that are not part of the MIS core requirements and satisfy MIS concentration requirements also satisfy upper-level Specialization Courses required for the MIS degree.

Internet Technologies Concentration for MIS Majors (18 Hours)

The Internet Technologies (IT) concentration is only available to Management Information Systems (MIS) majors and supplements the MIS curriculum by focusing on the expertise needed to implement solutions that involve contemporary internet technologies and software applications. The concentration is designed to accommodate the differing backgrounds of MIS students, while providing the necessary knowledge to pursue the IT concentration. The IT concentration provides extensive hands-on, project-based experience for students.

Students are responsible for completing the prerequisites for all courses taken for the Internet Technologies concentration.

Requirements

Code	Title	Credits
Core Courses		
CSCI 2850	PROGRAMMING ON THE INTERNET	3
CSCI 3830	ADVANCED JAVA PROGRAMMING	3
Elective Courses		
Select 9 hours from the following:		9
CYBR 3600	INFORMATION SECURITY POLICY AND AWARENESS	
ISQA 3310	MANAGING THE DATABASE ENVIRONMENT	
ISQA 3400	INFORMATION TECHNOLOGY INFRASTRUCTURE	
ISQA 3520	GRAPHICAL USER INTERFACE DESIGN	
ISQA 4000	SPECIAL TOPICS: INFORMATION SYSTEMS & QUANTITATIVE ANALYSIS ¹	

ISQA 4180	ELECTRONIC COMMERCE	
ISQA 4300	DATABASE ADMINISTRATION	
ISQA 4730	DECISION SUPPORT SYSTEMS	
ISQA/ITIN 4880	SYSTEMS SIMULATION AND MODELING	
ISQA/CSCI 4890	DATA WAREHOUSING AND DATA MINING	
Capstone Course		
CIST 4910	SYSTEMS DEVELOPMENT IN OPEN SOURCE COMMUNITIES	3
Total Credits		18

¹ NOTE: The ISQA 4000 topic MUST be related to Internet Technologies. Approval from the Undergraduate Program Committee is required prior to taking this course.

i-Business Application Development and Management (18 Hours)

The i-Business Application Development and Management concentration is only available to Management Information Systems (MIS) majors and provides students with the technical, organizational, and managerial background to plan, develop, and manage internet-based applications. The concentration includes courses that give students an understanding of the issues, concepts, and technologies involved in establishing and implementing a corporate strategy for electronic businesses. These courses address issues of organizational strategy, process re-engineering, and information systems architecture support. Students will also learn and apply technical skills needed to develop internet-based distributed applications.

Students are responsible for completing the prerequisites for all courses taken for the I-Business Application Development and Management concentration.

Requirements

Code	Title	Credits
Core Courses		
ISQA 3910	INTRODUCTION TO PROJECT MANAGEMENT	3
ISQA 4180	ELECTRONIC COMMERCE	3
Elective Courses		
Select 9 hours from the following:		9
ISQA 3520	GRAPHICAL USER INTERFACE DESIGN	
ISQA 4000	SPECIAL TOPICS: INFORMATION SYSTEMS & QUANTITATIVE ANALYSIS ¹	
ISQA 4100	INFORMATION SYSTEMS ARCHITECTURE AND ORGANIZATION	
ISQA 4190	PROCESS REENGINEERING WITH INFORMATION TECHNOLOGY	
CYBR/CIST 3600	INFORMATION SECURITY POLICY AND AWARENESS	
Capstone Course		
ISQA 4380	DISTRIBUTED TECHNOLOGIES AND SYSTEMS	3
Total Credits		18

¹ NOTE: The ISQA 4000 topic MUST be related to i-Business. Approval from the Undergraduate Program Committee is required prior to taking this course.

Information Assurance Concentration for MIS Majors (18 Hours)

The Information Assurance concentration is only available to Management Information Systems (MIS) majors and supplements and extends the MIS curriculum by focusing on the foundational principles, worked examples, theory, and skills necessary to analyze, design, and construct secure information systems. The courses in the concentration address the fundamental technologies, policies, assurance, and ethics involved in the protection of information systems. Hands-on experience is gained through laboratory exercises associated with courses.

Students are responsible for completing the prerequisites for all courses taken for the Information Assurance concentration.

Requirements

Code	Title	Credits
Core Courses		
CIST 3110	INFORMATION TECHNOLOGY ETHICS	3
ISQA 3400	INFORMATION TECHNOLOGY INFRASTRUCTURE	3
CYBR 2600	SYSTEM ADMINISTRATION	3
CYBR/CIST 3600	INFORMATION SECURITY POLICY AND AWARENESS	3
CYBR 4360	FOUNDATIONS OF CYBERSECURITY	3
CYBR/CIST 4540	COMPUTER SECURITY MANAGEMENT	3
Total Credits		18

IT Audit and Control (18 Hours)

The IT Audit and Control concentration is only available to Management Information Systems (MIS) majors. It provides students with the technical, organizational, accounting/auditing, and managerial background to plan and conduct IT audit and control activities. The concentration covers the following conceptual areas: business risks and the management of business risk, IT risk as a component of business risk, the need to manage IT risks, basic types of controls required in a business system to control IT risks, controls associated with top management, system development, quality assurance, boundary controls, and communications. Issues associated with new system control risks created by the use of the internet for business applications and electronic business will also be covered in one or more courses. Students learn to apply and integrate the technical, managerial, and conceptual skills needed to plan and conduct IT audits and to establish appropriate controls.

Students are responsible for completing the prerequisites for all courses taken for the IT Audit and Control concentration.

Requirements

Code	Title	Credits
Core Courses		
CIST 3110	INFORMATION TECHNOLOGY ETHICS	3
CYBR/CIST 3600	INFORMATION SECURITY POLICY AND AWARENESS	3
ACCT 4080	PRINCIPLES OF AUDITING	3
Elective Courses		
Select 9 hours from the following:		9
ACCT 4060	ADVANCED MANAGERIAL ACCOUNTING	
ACCT 4090	INFORMATION SYSTEMS AUDITING	
CYBR 2600	SYSTEM ADMINISTRATION	
CYBR 4540	COMPUTER SECURITY MANAGEMENT	
ISQA 4000	SPECIAL TOPICS: INFORMATION SYSTEMS & QUANTITATIVE ANALYSIS ¹	

ISQA 4190	PROCESS REENGINEERING WITH INFORMATION TECHNOLOGY
ISQA 4500	SPECIAL PROBLEMS IN INFORMATION SYSTEMS AND QUANTITATIVE ANALYSIS ¹
ISQA 4510	INFORMATION SYSTEMS INTERNSHIP ¹

¹ NOTE: ISQA 4000/ISQA 4500/ISQA 4510 topics MUST be related to IT Audit and Control. Prior approval from the ISQA Department is required to use these courses in the concentration.

First Year

Fall		Credits
ENGL 1150	ENGLISH COMPOSITION I	3
CMST 1110 or CMST 2120	PUBLIC SPEAKING FUNDS or ARGUMENTATION AND DEBATE	3
CIST 1300	INTRODUCTION TO WEB DEVELOPMENT	3
MATH 1930 or MATH 1370	CALCULUS FOR THE MANAGERIAL, LIFE, AND SOCIAL SCIENCES ¹ or APPLIED ALGEBRA AND OPTIMIZATION WITH DATA ANALYSIS	3
CYBR 1100	INTRODUCTION TO INFORMATION SECURITY	3
Free Elective		1
Credits		16

Spring

ENGL 1160	ENGLISH COMPOSITION II	3
CIST 1400	INTRODUCTION TO COMPUTER SCIENCE I	3
CIST 2500	INTRODUCTION TO APPLIED STATISTICS FOR IS&T	3
Humanities & Fine Arts/ US Diversity Requirement		3
Free Elective		3
Credits		15

Second Year

Fall		Credits
ACCT 2010	PRINCIPLES OF ACCOUNTING I	3
ECON 2200	PRINCIPLES OF ECONOMICS (MICRO)	3
CIST 2100	ORGANIZATIONS, APPLICATIONS AND TECHNOLOGY	3
Free Elective		3
Free Elective		3
Credits		15

Spring

ACCT 2020	PRINCIPLES OF ACCOUNTING II	3
CIST 3110	INFORMATION TECHNOLOGY ETHICS	3
ISQA 3310	MANAGING THE DATABASE ENVIRONMENT	3
ECON 2220	PRINCIPLES OF ECONOMICS (MACRO)	3
Free Elective		3
Credits		15

Third Year

Fall		Credits
ISQA 3400	INFORMATION TECHNOLOGY INFRASTRUCTURE	3
ISQA 3900	WEB APPLICATION DEVELOPMENT	3
ISQA 3420	MANAGING IN A DIGITAL WORLD	3
CIST 3000	ADVANCED COMPOSITION FOR IS&T	3

Specialization Elective		3
Credits		15
Spring		
ISQA 3910	INTRODUCTION TO PROJECT MANAGEMENT	3
ISQA 4900	FULL STACK DEVELOPMENT	3
Business Co-requirement: See list of approved courses		3
Natural/Physical Science Requirement		3
Free Elective		3
Credits		15
Fourth Year		
Fall		
ISQA 4110	INFORMATION SYSTEMS ANALYSIS	3
Natural/Physical Sciences Requirement with Lab		4
Specialization Elective		3
Humanities & Fine Arts Requirement		3
Free Elective		1
Credits		14
Spring		
ISQA 4120	SYSTEM DESIGN AND IMPLEMENTATION	3
Specialization Elective		3
Specialization Elective		3
Free Elective		3
Free Elective		3
Credits		15
Total Credits		120

¹ MATH 1930 or MATH 1370 - Satisfy General Education Quantitative Literacy requirement

This roadmap is a suggested plan of study and does not replace meeting with an advisor. Please note that students may need to adjust the actual sequence of courses based on course availability. Please consult an advisor in your major program for further guidance.

This plan is not a contract and curriculum is subject to change.

Additional Information About this Plan:

University Degree Requirements: The minimum number of hours for a UNO undergraduate degree is 120 credit hours. Please review the requirements for your specific degree program to determine all requirements for the program. In order to graduate on time (four years for an undergraduate degree), you need to take 30 credit hours each year.

Placement Exams: For Math, English, and Foreign Languages, a placement exam may be required. More information on these exams can be found at <https://www.unomaha.edu/enrollment-management/testing-center/placement-exams/information.php>

Please note that transfer credit or placement exam scores may change a suggested plan of study.