UNO COLLEGE OF INFORMATION SCIENCE & TECHNOLOGY





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UNDERGRADUATE ADVISING

Telephone (402) 554-3819 FAX (402) 554-3284 University of Nebraska at Omaha PKI 170 1110 South 67th Street Omaha, NE 68182 www.mavtrack.unomaha.edu



PKI Building

The College of Information Science and Technology (IS&T) is housed in the Peter Kiewit Institute (PKI), located approximately one mile south of the UNO Dodge Street campus, separated by a city park and golf course. The facility provides laboratory, office, research, and classroom space, as well as computer facilities for both the College of Engineering and the College of IS&T. The computer networks and labs in this building consist of the latest fiber optic design. The Management Information Systems degree was established in June 1996; the PKI building opened its doors to students in August 1999.

www.istunomaha.edu

THE COLLEGE OF INFORMATION SCIENCE AND TECHNOLOGY OBJECTIVE

The principal goal of the College of Information Science and Technology (IS&T) is to produce the next generation of information specialists. The College is committed to providing comprehensive, current, and quality education to students as illustrated by its motto: "*No student will go unchallenged or unassisted.*" Students graduating from our programs are prepared technically to enter the information industry, apply technology in organizational environments, embrace life-long learning, and contribute to their communities. IS&T is utilizing some of the following methods to achieve its objectives:

- Forming partnerships with the business community
- · Assisting students in finding internships
- Offering challenging courses including freshman/junior/senior seminars and special topics courses
- Facilitating faculty and executive-in-residence programs
- Providing the latest in curriculum, programs and computer technology
- Identifying future needs in business and information technology, and preparing students to meet those needs
- Aiding students with career planning and job searches

ACCREDITATION

The College of Information Science and Technology undergraduate programs in Computer Science and Management Information Systems are accredited by the Computing Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET), 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, telephone: 410/347-7700.

DEGREES

Bachelor of Science in Management Information Systems (BIS)

The MIS program involves the study of the

- acquisition, deployment, and management of information technology resources
- development of an information infrastructure
- systems for use in organizations

Courses in this degree program are listed in the UNO course catalog as Information Systems and Quantitative Analysis (ISQA).

INTERNSHIP PROGRAM

The College of IS&T has a unique opportunity to match students and businesses together through its internship program, which is structured for junior and senior students who desire a work environment where they can apply the knowledge they acquire in the classroom to a work situation. Arrangements are made for the experience to be full or part time, and academic credit can also be determined depending on the opportunities involved in the work assignment. Through internships, businesses have the opportunity to assess an individual's performance level, problem solving skills, and ability to work in a group, and students are prepared for the best jobs because they are challenged to learn the skills needed to become the leaders of tomorrow.

CAREER FIELDS

Students with an MIS undergraduate degree will have the educational background appropriate for pursuing career opportunities in:

- business data processing
- information management
- software development and maintenance
- information centers

- · systems analysis and design
- distributed systems
- network management
- · systems simulation
- IT project management
- · other related areas

Managers can be more effective and efficient when assisted by computer-based information systems. In this specialization, the student learns how information technology can be used to solve business problems, and how to enhance corporate performance and gain a competitive advantage in the marketplace.

Managing an information system requires:

- developing, implementing and managing computers, communication and information for organizational, departmental, and individual technology systems
- acquiring new information technology and incorporating it in the organization's strategy, planning and practices
- developing and adapting systems for use in organization processes using quality systems and interfaces, as well as recognizing socio-technical design issues and change management

This brochure provides basic information about the Management Information Systems degree. All potential MIS majors are encouraged to see an IS&T academic advisor to determine a suggested program schedule. To obtain a BIS degree, the student must fulfill certain university, college and departmental requirements.

UNIVERSITY REQUIREMENTS FOR THE BSCS DEGREE GENERAL REQUIREMENTS

- 1. A minimum of 120 credit hours is required for the degree.
- 2. Students may follow the UNO catalog requirements in effect at the time of their first enrollment, provided continuous enrollment is maintained (fall, spring, fall, spring....).
- 3. Thirty of the last 36 hours must be University of Nebraska at Omaha courses.
- 4. Registering for courses without having taken the stated prerequisites could result in administrative withdrawal.
- 5. Courses such as English 1050, 1090, and 1100 and orientation courses in other colleges or divisions may not be counted as part of the minimum 120 credit hours in the degree program. University Seminar 1010 may be applied as an elective if taken in the first 30 hours of the degree program.
- 6. No more than four semester hours of physical education may count toward the degree.
- 7. No more than a maximum of 12 semester credit hours of approved courses may be taken in any one department outside of the College of IS&T with the exception of foreign languages. A maximum of 16 semester credit hours in any one foreign language may be applied to the degree. More than one foreign language is allowed.
- 8. A repeated course may count only once for graduation. (Exceptions are internships, independent studies, physical education activity courses, and special topic courses).
- 9. Students must see a College of IS&T advisor regarding the specific requirements for their major. Advising appointments can be scheduled online at http://mavtrack.unomaha.edu or by contacting the College of IS&T Academic Advising Office at 402/554-3819.
- 10. Students must obtain a grade of "C-" or better in each class for the purpose of meeting general education, Departmental, and College requirements with the exception of ECON 2200 and ACCT 2010, which require a grade of "C" or better to continue on with ACCT 2020 and ECON 2220. Students are also responsible for meeting the specific prerequisites of the upper-level business co-requisite courses. A minimum cumulative GPA of 2.5 is required by the College of Information Science and Technology.
- 11. Students must complete an online Application for Degree form through Mavlink on or before the deadline during the semester in which they plan to graduate. An Application for Degree fee is payable at the time the application is submitted. Students should visit the UNO Bookstore as soon

as possible after submitting the degree application to order a cap and gown and graduation announcements. Deadlines to order graduation items vary depending on the ceremony in which the student plans to participate. Please contact the UNO Bookstore at 402/554-2336 with any questions.

UNIVERSITY GENERAL EDUCATION REQUIREMENTS FOR THE BIS DEGREE Fundamental Academic Skills, Distribution, and Diversity Requirements

Fundamental Academic Skills - 15 hours (Grade of C- or better required)

See an IS&T advisor regarding placement requirements in English and Math courses.

English and Writing

9 hours

- ENGL 1150* English Composition I (or equivalent)
- ENGL 1160* English Composition II (or equivalent)
- CIST 3000 Advanced Composition for IS&T

Public Speaking

SPCH 1110 Public Speaking Fundamentals OR 3 hours

SPCH 2120 Argumentation and Debate

Mathematics 3 hours

MATH 1310 Intermediate Algebra (may test out)

University Distribution Requirements – 26 hours (Grade of C- or better is required)

See UNO's general education website for a list of approved courses http://gened.unomaha.edu/approvedcourses.php

Natural & Physical Sciences (7 hours from at least two disciplines)

Understanding the nature of scientific inquiry and the operation of the natural, physical, and technological world is essential for making personal and public policy decisions. Students must complete 8 credit hours of course work representing at least two different disciplines in this category with at least one laboratory course.

Successful students shall be able to do the following:

- demonstrate a broad understanding of the fundamental laws and principles of science and interrelationships among science and technology disciplines
- demonstrate a broad understanding of various natural phenomena that surround and influence our lives
- describe how scientists approach and solve problems including an understanding of the basic components and limitations of the scientific method
- solve problems and draw conclusions based on scientific information and models, using critical thinking and qualitative and quantitative analysis of data and concepts in particular to distinguish reality from speculation

Humanities/Fine Arts (9* hours from at least two disciplines)

Understanding the meaning, value, and history of human existence is an essential skill for living in contemporary society. One must have an understanding and appreciation of the various forms of humanistic/artistic expression and the role these artifacts play across various cultures. Students must complete 9 credit hours of coursework representing at least two different disciplines in this category.

^{*} For students testing into ENGL 1150, the nine-hour requirement is satisfied by completing ENGL 1150 or 1154; ENG 1160 or 1164 and CIST 3000. For students testing into ENGL 1160, the nine-hour requirement is satisfied by completing ENGL 1160, CIST 3000 and applying for retroactive credit for ENG 1150. For students testing proficient on the English Placement and Proficiency Examination (EPPE), the nine-hour requirement is satisfied by completing CIST 3000 and applying for retroactive credit for ENG 1150 and ENG 1160.

Successful students shall be able to do the following:

- analyze representative texts, artifacts, and/or essential elements of the relevant discipline
- recognize and articulate the diversity of human experience across a range of historical periods and global societies
- describe and evaluate ways in which humanistic/artistic expression throughout the ages expresses the culture and values of time and place
- demonstrate an understanding of the value and role of literature, history, language, philosophy and/or the arts as they impact academic career or community life.

Social Sciences (9* hours from at least two disciplines)

The goal of the social sciences is to help students understand the social dynamics that make up the world, particularly the relationships between individuals, groups, societies and social institutions. Students must complete 9 credit hours of coursework representing at least two different disciplines in this category.

Successful students shall be able to do the following:

- understand the diversity of human motivations and institutional forces that influence social behavior
- develop analytical and critical thinking skills as applied to the study of the social sciences
- recognize multiple methods and modes of inquiry used in the social sciences and their appropriate application
- communicate ideas and explain concepts and analyses using the language of the social sciences

University Diversity requirements - 6 hours (Grade of C- or better is required)

See UNO's general education website for a list of approved courses http://gened.unomaha.edu/approvedcourses.php

Global Diversity (3* hours)

Courses in this category focus on significant cultural, economic, geographical, historical, political, and/or sociological aspects of one or more countries or nations (including indigenous nations) other than or in comparison to the United States. Students must complete 3 credit hours of coursework.

Successful students shall be able to do the following:

- recognize the environmental and historical circumstances that produce different social and cultural systems
- demonstrate specific knowledge of the cultural, historical, social, economic, and/or political aspects
 of one or more countries other than the United States
- explain the interrelations among global economic, political, environmental and social systems
- explain ways in which identity is developed and how it is transmitted within and by members of the group or groups

United States Diversity (3 hours)

This requirement develops students' awareness and appreciation of the history, society, and/or culture of one or more underrepresented groups in the United States. Students must complete 3 credit hours of coursework.

Successful students shall be able to do the following:

- demonstrate knowledge of the role and contributions of one or more underrepresented groups in the development of the United States
- recognize and articulate differences, expectations, and/or challenges experienced by one or more underrepresented groups

^{*} CIST 3110 IT Ethics applies to both College of IS&T Core and Humanities requirements

^{*} CIST 2100 applies to both College of IS&T Core and Social Sciences requirements; ECON 2200, and ECON 2220 apply to both Co-requisite and Social Sciences requirements

^{*} ISQA 3420 applies to both MIS Core and Social Sciences requirements

- demonstrate specific knowledge of the cultural, historical, social, economic, and/or political factors that shape the interaction of a diverse group or groups within society
- expin ways in which identity is developed and how it is transmitted within and by members of the group or groups.

MANAGEMENT INFORMATION SYSTEMS Major Requirements GENERAL REQUIREMENTS

A minimum of 75 credit hours must be taken including:

- 21 hours of IS&T Core courses
- 21 hours of Management Information Systems Core courses
- 6 hours of Mathematics courses
- 15 hours of co-requisite Business courses
- 12 hours of Specialization Elective courses

CIST 1400, CSCI 1620, and ISQA 3300 should be completed in consecutive semesters. ISQA 3300, ISQA 3310, ISQA 3420, and ISQA 3910 should be completed in the junior year. ISQA 4110 and ISQA 4120 should be completed in the senior year.

IS&T CORE COURSES (21 hours)

IASC	1100	Introduction to Information Security
CIST	1300	Introduction to Web Development
CIST	1400	Introduction to Computer Programming
CIST	1404*	Introduction to Computer Programming Lab
CSCI	1620	Introduction to Computer Science II
CIST	2100*	Organizations, Applications and Technologies
CIST	2500	Introduction to Applied Statistics for IS&T
CIST	3110*	IT Ethics

^{*}CIST 1404 is optional; CIST 2100 applies to Social Sciences requirement; CIST 3110 applies to Humanities requirement.

MIS CORE COURSES (21 hours)

ISQA	3300	File Structures for Information Systems
ISQA	3310	Managing the Database Environment
ISQA	3400	Business Data Communications
ISQA	3420*	Managing in a Digital World
ISQA	3910	Introduction to Project Management
ISQA	4110	Information System Analysis
ISQA	4120	System Design and Implementation

^{*}ISQA 3420 applies to Global Diversity requirement.

MATHEMATICS COURSES (6 hours)

MATH	1930	Calculus for Management, Life, and Social Sciences
MATH	2030	Discrete Math

CO-REQUISITE COURSES from the College of Business* (15 hours)

	2010 2020 2200** 2220**	Principles of Accounting I Principles of Accounting II Principles of Economics (Micro) Principles of Economics (Macro)
ACCT ECON ECON FNBK	3080 3200 3220 3250	Accounting Information Systems OR EconomicTheory: Micro OR Economic Theory: Macro OR Principles of Financial Management OR

MGMT 3510 Human Resource Management **OR**MGMT 3710 Entrepreneurial Foundations **OR**MGMT 4090 Principles of Collaboration **OR**MRKT 3310 Principles of Marketing

*Students may only enroll in each business co-requisite course twice. Withdrawing before the end of the first week does not count as an attempt. Withdrawing after the first week counts as one attempt.

SPECIALIZATION ELECTIVE COURSES (12 hours)

ISQA	3520	Graphical User Interface Design
ISQA	4000*	Special Topics in Information Systems & Quantitative Analysis
ISQA	4010	Business Intelligence
ISQA	4100	Information Systems Architecture & Organization
ISQA	4130	Information Technology for Development
ISQA	4140	Teaching Computer Basics to Inmates at the Douglas County of Corrections
ISQA	4150	Advanced Statistical Methods for IT
ISQA	4180	Electronic Commerce
ISQA	4190	Process Reengineering with Information Technology
ISQA	4200	Information and Data Quality Management
ISQA	4300	Database Administration
ISQA	4380	Distributed Technologies and Systems
ISQA	4500	Special Problems in Information Systems and Quantitative Analysis
ISQA	4510	Information Systems Internship
ISAQ	4590	IT Audit and Control
ISQA	4730	Decision Support Systems
ISQA	4880	Systems Simulation and Modeling
ISQA	4890	Data Warehousing and Data Mining
ISQA	4900	Internet Systems Development
IASC	3350	Security Administration - Linux
IASC	3370	Security Administration - Windows
IASC	3600	Information Security, Policy and Awareness
IASC	4540**	Computer Security Management
IASC	4360	Foundations of Information Assurance

^{*} ISQA 4000 covers different topics. Check the class schedule for specific topics offered during a particular semester;

^{**} ECON 2200 and ECON 2220 apply to Social Sciences requirement

^{**} IASC courses cross-listed with CIST courses

Optional ISQA Concentrations (18 hours)

Concentrations consist of coordinating elective courses developed by ISQA faculty to assist students as they work to complete the program. 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, they reflect areas of demand in the community. For questions regarding these concentrations, please call the ISQA Department at 402/554-3770.

Students pursuing a concentration must complete a *Change of Academic Program* form, secure the appropriate signatures, and submit the form in person at the Registrar's Office.

Global IT Leadership and Management Concentration

The College of Information Science and Technology (CIST) and UNO's International Studies and Programs (ISP) have joined to offer an interdisciplinary "Global IT Leadership Management" (GITLM) specialization in both the International Studies (INST) undergraduate program and the CIST undergraduate program in Management Information Systems. The GITLM specialization fosters the integration of technology and internationalization through an interdisciplinary program offered through intercampus collaboration with UNO's sister universities in Norway, India, Germany, Austria, and China. GITLM brings a global perspective to the Information Technology (IT) curriculum and adds a technology component to the International Studies (INST) major.

The education and training of globally savvy professionals in science, engineering and information technology (IT) are important for the long-term viability of many American firms today. Future business leaders must:

- appreciate the challenges and opportunities of IT management in the context of 21st century global organizations
- understand the international aspects of IT leadership and management as a basis for integrating a global and multicultural view
- learn about the various roles, responsibilities, skills, and concepts essential to being a successful IT
 manager in the context of a dynamic technological environment, a diverse workforce, a global
 economy, and an ethically and socially responsible perspective in the development and deployment
 of systems

Prerequisite Courses

CIST	1400	Introduction to Computer Programming
CIST	2100	Organizations, Applications, and Technology
CIST	3110	IT Ethics
ECON	2200	Principles of Economics (Micro)
ECON	2220	Principles of Economics (Macro)
ENGL	1150/1	154 Composition I
GEOG	1020	Human Geography
INST	2130	International Studies
PSCI	2210	Introduction to International Relations

Core Courses (15 hours)

ISQA	3310	Managing the Database Environment
ISQA	3420	Managing in a Digital World
ISQA	3910	Introduction to Project Management
ISQA	4380	Distributed Technologies and Systems
INST	3000	Perspectives in International Studies OR
ISQA	4130	IT for Development

Capstone Course (3 hours)

ISQA 4500 Special Problems in Information Systems and Quantitative Analysis

i-Business Application, Development, and Management Concentration

The i-Business Application Development and Management Concentration provides students with the technical, organizational, and managerial background to plan, develop, and manage Internet-based applications. The concentration includes courses that promote an understanding of the issues, concepts, and technologies involved in establishing and implementing a corporate strategy for electronic business. These courses address issues of organizational strategy, process reengineering, and information systems architecture support. Students also learn and apply technical skills needed to develop Internet-based distributed applications.

Prerequisite Courses

CIST	2100	Organizations, Applications and Technology
ISQA	3310	Managing the Database Environment
ISQA	4110	Information Systems Analysis
ISQA	4120	System Design and Implementation

Core Courses (6 hours)

ISQA	3910	Introduction to Project Management
ISQA	4180	Electronic Commerce

Elective Courses (9 hours)

IASC	3600	Information Security, Policy and Awareness
ISQA	3520	Graphical User Interface Design
ISQA	4000	Special Topics:Information Systems and Quantitative Analysis
ISQA	4100	Information Systems Architecture and Organization
ISQA	4190	Process Reengineering with Information Technology

Capstone Course (3 hours)

ISQA 4380 Distributed Technologies and Systems

Information Assurance Concentration

The Information Assurance concentration 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. These courses address the fundamental technologies, policy, assurance, and ethics involved in the protection of information systems. Hands-on experience is gained through numerous laboratory exercises associated with each course. The concentration is designed to accommodate students with a CS or MIS background and is offered through both the Computer Science and MIS majors.

Prerequisite Courses

CIST	1400	Introduction to Computer Programming
CSCI	1620	Introduction to Computer Science II
CIST	2100	Organizations, Applications and Technology
CSCI	2240	Introduction to C Programming
ISQA	3300/	File Structures OR
CSCI	3320	Data Structures
MATH	1930	Calculus for Managerial, Life and Social Sciences
MATH	2030	Discrete Mathematics

Core Courses (18 hours)

CIST	3110	IT Ethics
IASC	3600	Information Security, Policy, and Awareness
IASC	4360	Foundations of Information Assurance
CIST	4540	Computer Security Management
Choos	e one o	f the following:
IASC	3350	Security Administration – Linux OR
IASC	3370	Security Administration – Windows
Choos	e one o	f the following:CSCI 3550/ Communication Networks OR
ISQA	3400	Business Data Communications

IT Audit and Control Concentration

The IT Audit and Control Concentration is available only to MIS majors and provides students with the technical, organizational, accounting/auditing and managerial background to plan and conduct IT audit and control activities. The concentration covers these conceptual areas:

- · business risks and the management of business risks
- IT risk as a component of business risk
- the need to manage IT risks
- basic type of controls required in a business system in order 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

Students will learn, apply and integrate the technical, managerial and conceptual skills needed to plan and conduct IT audits and establish appropriate controls.

Core Courses (9 hours)

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CIST 3110 IT Ethics
IASC 3600 Information Security, Policy and Awareness
ACCT 4080 Principles of Auditing
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Elective Courses (6 hours)

ACCT	4000	Special Topics in Accounting
ACCT	4060	Advanced Managerial Accounting
ACCT	4090	Advanced Auditing
ISQA	3910	Introduction to Project Management
ISQA	4000	Special Topics: Information Systems and Quantitative Analysis
ISQA	4190	Process Reengineering with Information Technology
ISQA	4500	Independent Study in Information Systems and Quantitative Analysis
ISQA	4510	Internship in Information Systems and Quantitative Analysis

Capstone Course (3 hours)

ISQA 4590 IT Audit and Control

Internet Technologies (iT) Concentration

The Internet Technologies (iT) concentration supplements and extends the MIS curriculum by focusing on the expertise needed to implement solutions involving contemporary Internet technologies and software applications. The concentration accommodates the background of MIS majors by making extensive use of existing MIS courses, building on what has been accomplished in this program. The iT concentration provides extensive hands-on, project-based experience for students.

Core Courses (6 hours)

CSCI	2850	Programming on the Internet
CSCI	3830	Advanced JAVA Programming

Elective Courses (9 hours)

CIST	2910	Multimedia Systems
ISQA	3310	Managing the Database Environment
ISQA	3400	Business Data Communications
ISQA	3520	Graphical User Interface Design
ISQA	4000	Special Topics: Information Systems and Quantitative Analysis
ISQA	4180	e-Commerce
ISQA	4300	Database Administration
ISQA	4730	Decision Support Systems
ISQA	4880	Systems Simulation and Modeling
ISQA	4890	Data Warehousing and Data Mining

Capstone Course (3 hours)

ISQA 4900 Internet Systems Development

Undergraduate Certificates (15 hours)

Undergraduate certificates allow the College of Information Science and Technology to offer a path for non-traditional and traditional students who have not completed a baccalaureate degree to advance their education along a focused, professionally-oriented course of study, and to have those studies acknowledged, documented, and later applied to a related bachelor's degree, should the student so desire. Prospective students already in the workforce who have an associate degree will benefit from advanced certifications in targeted areas. Such certifications fit with organizational professional development requirements and could be used, at the discretion of the organization, as professional development units (PDU

Data Management

Data Management is the practice of managing data-related issues for organizations. Data management practitioners seek to optimize the design, storage and use of organizational data.

Prerequisite Courses

Introduction to Statistics (CIST 2500 or equivalent)

Two semesters of programming or work experience (CIST 1400 and CSCI 1620 or equivalent) Introduction to Management Information Systems (MIS) or work experience (CIST 2100, BSAD 3100 or equivalent)

Core Courses (12 hours)

ISQA 3300 File Structures

ISQA 3310 Managing the Database Environment

ISQA 4200 Information and Data Quality Management

ISQA 4300 Database Administration

Elective Courses (3 hours)

ISQA 4380 Distributed Technologies and Systems

ISQA 4730 Decision Support Systems

ISQA 4890 Data Warehousing and Data Mining

Systems Development

Systems Development practitioners seek to optimize the design, implementation and use of information systems for organizational purposes.

Prerequisite Courses

Introduction to Statistics (CIST 2500 or equivalent)

Two semesters of programming or work experience (CIST 1400 and CSCI 1620 or equivalent) Introduction to Management Information Systems (MIS) or work experience (CIST 2100, BSAD 3100 or equivalent)

Core Courses (12 hours)

ISQA	3310	Managing the Database Environment
ISQA	3910	Introduction to Project Management
ISQA	4110	Information Systems Analysis
ISQA	4120	Systems Design and Implementation

Elective Courses (3 hours)

ISQA 3300 File Structures

ISQA 4100 Information Systems Architecture and Organization

IT Administration

The undergraduate certificate in Information Technology (IT) Administration is designed for students who are interested in managing the complex technical infrastructure of today's organizations and is offered in partnership with the University of Agder in Norway (UiA), a sister university to UNO.

Prerequisite Courses

One semester of database management (ISQA 3310 or IS-201*)

One semester of data or file structures (CSCI 3320/ISQA 3300 or IS-102*)

One semester of data communications (ISQA 3400 or IS-105*)

Two semesters of programming (CIST 1400 and CSCI 1620 or equivalent)

Core Courses (14 hours)

IS- 204* IT Resource Operations (5 hours) ISQA 4300 Database Administration (3 hours)

ISQA 4380 Distributed Technologies and Systems (3 hours)

IASC 3350/ Security Administration – Linux **OR** IASC 3370 Security Administration – Windows

BACHELOR OF SCIENCE IN MANAGEMENT INFORMATION SYSTEMS (BIS) SUGGESTED COURSE SEQUENCE

	FRESH	IAN YEAR			SOPHOI	MORE YEAR	
Fall Seme	ester	Spring Ser	nester	Fall Sem	ester	Spring Semest	er
ENGL 1150	3	ENGL 1160	3	ACCT 2010	3	ACCT 2020	3
CMST 1110	3	Hum/US Div	3	MATH 2030	3	ECON 2200/SS	3
CIST 1300	3	CIST 1400	3	CSCI 1620	3	ISQA 3300	3
MATH 1930	3	CIST 2100/SS	3	CIST 3000	3	CIST 2500	3
IASC 1100	3	Elective	3	Elective	3	ISQA 3310	3
TOTAL	15	TOTAL	15	TOTAL	15	TOTAL	15

	JUNIO	R YEAR			SENIO	R YEAR	
Fall Semes	ter	Spring Semester		Fall Semester		Spring Sen	nester
ECON 2220/SS	3	Bus Co-req	3	Natural Science	3	Elective	3
ISQA 3420/GI Div	3	ISQA 3910	3	ISQA 4110	3	ISQA 4120	3
CIST 3110/Hum	3	ISQA 3400	3	ISQA Elective	3	ISQA Elective	3
ISQA Elective	3	Elective	2	ISQA Elective	3	Elective	3
Elective	3	Natural Science	4	Humanities	3	Elective	3
TOTAL	15	TOTAL	15	TOTAL	15	TOTAL	15

INTEGRATED UNDERGRADUATE/GRADUATE PROGRAM IN MANAGEMENT INFORMATION SYSTEMS (BIS) SUGGESTED COURSE SEQUENCE

	FRESHI	IAN YEAR			SOPHON	IORE YEAR	
Fall Semester		Spring Semester		Fall Semester		Spring Semeste	r
ENGL 1150	3	ENGL 1160	3	ACCT 2010	3	ACCT 2020	3
CMST1110	3	Hum/US Div	3	MATH 2030	3	ISQA 3420/GI Div	3
CIST 1300	3	CIST 1400	3	CSCI 1620	3	ISQA 3300	3
MATH 1930	3	CIST 2100/SS	3	CIST 3000	3	CIST 2500	3
IASC 1100	3	Elective	3	ECON 2200/SS	3	ISQA 3310	3
TOTAL	15	TOTAL	15	TOTAL	15	TOTAL	15

JUNIOR YEAR	SENIOR YEAR

^{*} Taught remotely by faculty at the University of Agder in Norway

Fall Semester		Spring Semester		Fall Semester		Spring Semester	
ECON 2220/SS	3	ISQA 8060	3	Science	3	Elective	3
ISQA 4110	3	ISQA 4120	3	ISQA 8310	3	ISQA 8410	3
CIST 3110/Hum	3	ISQA 3400	3	ISQA 8420	3	ISQA 8210	3
Bus Co-req	3	ISQA Elec/8xxx	3	Elective	3	Elective	3
Natural Science	4	Humanities	3	ISQA Elec/8xxx	3	Elective	3
TOTAL	16	TOTAL	15	TOTAL	15	TOTAL	15

	FIFTH YEAR			
Fall Semes	Fall Semester Spring Semester			
ISQA 8810	3	ISQA 8220	3	
ISQA 8380	3	ISQA Elec/8xxx	3	
ISQA Elec/8xxx	3	ISQA Elec/8xxx	3	
Elective	3	Elective	3	
Elective	2			
TOTAL	14	TOTAL	12	

Recommended specialization elective courses, cross-listed between the graduate and undergraduate catalog:

ISQA	4100/8106	Information Systems Architecture and Organization
ISQA	4730/8736	Decision Support Services
ISQA	4180/8186	e-Commerce
ISQA	4190/8196	Process Reengineering with Information Technology

SECOND BS DEGREE IN MANAGEMENT INFORMATION SYSTEMS General Requirements

Students who have satisfied the requirements for a first baccalaureate degree other than Management Information Systems at the University of Nebraska at Omaha must complete a minimum of 30 additional semester hours at the University for a second baccalaureate degree.

Management Information Systems Requirements (75 hours)

To obtain Management Information Systems as a second bachelor's degree, students must complete academic requirements for the degree which include:

- 21 hours of IS&T Core courses
- 21 hours of Management Information Systems Core courses
- 6 hours of Mathematics courses
- 15 hours of co-requisite Business courses
- 12 hours of Specialization Elective courses

Students must consult a College of IS&T academic advisor prior to starting this program. Some transfer coursework may apply; however, 30 of the last 36 hours must be University of Nebraska at Omaha courses.

MINOR IN MANAGEMENT INFORMATION SYSTEMS

A minor in Management Information Systems may be earned by completing 12 hours, consisting of:

PREREQUISITE COURSES

CIST	2100	Organizations, Applications, and Technology OR
BSAD	2100	Management Information Systems

IS&T CORE COURSES (9 hours)

ISQA	3310	Managing the Database Environment
ISQA	3910	Introduction to Project Management
ISQA	4110	Information Systems Analysis

ELECTIVE COURSES (3 hours) at the 3000 level or above

ISQA ISQA ISQA ISQA ISQA ISQA ISQA ISQA	4120 4130	File Structures for Information Systems Business Data Communications Managing in a Digital World Graphical User Interface Design Special Topics: Information Systems and Quantitative Analysis Business Intelligence Information Systems Architecture and Organization System Design and Implementation Information Technology for Development Teaching Computer Basics to Inmates at the Douglas County Department of Corrections
ISQA ISQA ISQA	4150 4160 4180	Advanced Statistical Methods for IS&T Introduction to Enterprise Resource Planning Electronic Commerce
ISQA ISQA ISQA	4200 4300 4380	Information and Data Quality Management Database Administration Distributed Technologies and Systems
ISQA ISQA ISQA ISQA	•	Decision Support Systems restems Simulation and Modeling Data Warehousing and Data Mining Internet Systems Development

^{*}Cross isted with CSCI 4890

NOTE: Students are responsible for meeting the prerequisites of the courses listed for the minor.

MINOR IN MANAGEMENT INFORMATION SYSTEMS for Accounting Majors

The following courses have been approved by the ISQA and Accounting Departments as specifically relevant for students in the accounting area. The prerequisites are consistent with course requirements of accounting students.

PREREQUISITE COURSES

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CIST 2100 Organizations, Applications, and Technology OR
BSAD 3100 Management Information Systems
MIS CORE COURSES (15 hours)

ISQA 3310 Managing the Database Environment
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ISQA ISQA		Business Data Communications Introduction to Project Management
ISQA ISQA	4110 4120	Information Systems Analysis System Design and Implementation

NOTE: Student is accountable for any course prerequisites.

MINOR IN ENTERPRISE RESOURCE Planning (ERP)

ERP systems such as SAP, PeopleSoft and Oracle are used to integrate internal and external management of information across an entire organization, encompassing finances, accounting, manufacturing, sales and service, customer relationship management, etc. The purpose of ERP is to facilitate the flow of information between all business functions inside the boundaries of the organization and manage the connections to outside stakeholders. The College of Information Science and Technology (IS&T) offers a variety of courses that utilize ERP systems as a technology platform to apply course concepts. A minor in ERP for Business and other majors consists of the following 15 hours:

PREREQUISITE COURSES

CIST BSAD AND	2500 3160	Introduction to Applied Statistics for IS&T OR Managerial Statistics for Business
CIST BSAD ACCT	3100	Organizations, Applications, and Technology OR Management Information Systems OR Accounting Information Systems

CORE COURSES (12 hours)

ISQA	33Ì0	Managing the Database Environment
ISQA	4160	Introduction to Enterprise Resource Planning Systems
ISQA	4190	,
ISQA	4200	Information and Data Quality Management

ELECTIVE COURSES (3 hours)

ISQA	3910	Introduction to Project Management
		Special Topics: Information Systems and Quantitative Analysis IT Audit & Control

^{*}ISQA 4000 Topic must be related to ERP.

NOTE: Student is accountable for any course prerequisites

NAME: **STUDENT ID#:**

General Education Requirements

ENGLISH COMPOSITION (9 CREDIT HRS)					
Course #	Course Name	Grade	Cr	Notes	
ENGL 1150	Composition I				
ENGL 1160	Composition II				
CIST 3000	Adv Comp for IS&T				
Remaining:	9	Compl:	0		
	MATHEMATICS (3	CREDIT I	HRS)		
Course #	Course Name	Grade	Cr	Notes	
MATH 1310 or 1	est out				
Remaining:	3	Compl:	0		
	PUBLIC SPEAKING (3	CREDIT	HRS)		
Course #	Course Name	Grade	Cr	Notes	
CMST 1110	Public Speaking				
CMST 2120	-OR- Debate				
Remaining:	3	Compl:	0		
	HUMANITIES (9 C	REDIT H	RS)		
Course #	Course Name	Grade	Cr	Notes	
CIST 3110	IT Ethics	*	*		
Remaining:	6	Compl:	0		
	SOCIAL SCIENCE (9	CREDIT	HRS)		
Course #	Course Name	Grade	Cr	Notes	
CIST 2100	Orgs, Apps & Tech	*	*		
ECON 2200	Microeconomics	*	*		
ECON 2220	Macroeconomics	*	*		
Remaining:	0	Compl:	0		
NAT	URAL/PHYSICAL SCIE	NCE (7 C	REDIT H	IRS)	
Course #	Course Name	Grade	Cr	Notes	
	Lab				
Include 2 differ	ent areas; 1 with a lab				
Remaining:	Remaining: 7 Compl: 0				
GLOBAL D	IVERSITY COURSE (3 (REDIT F	IRS)		
Course #	Course Name	Grade	Cr	Notes	
ISQA 3420	Mng Digital World	*	*		
US DIVE	RSITY COURSE (3 CRE	DIT HRS	5)		
Course #	Course Name	Grade	Cr	Notes	
Remaining:	3	Compl:	0		
-					

Mgmt Info	Mgmt Information Systems Curriculum Requirements				
	IS&T CORE COURSES (21 (CREDIT I	HRS)		
Course #	Course Name	Grade	Cr	Notes	
IASC 1100	Intro to Information Security				
CIST 1300	Intro to Web Developmnt				
CIST 1400	Intro to Comp Prgrmng				
CIST 1404 Opt	Intro to Comp Prgrmng Lab				
CSCI 1620	Intro to Comp Science II				
CIST 2100	Orgs, Apps & Technology				
CIST 2500	Intro to Applied Statistics				
CIST 3110	IT Ethics				
Remaining:	21	Compl:	0		
	MATHEMATICS COURSES (6	6 CREDIT	r HRS)		
Course #	Course Name	Grade	Cr	Notes	
MATH 1930	Calc for Mgmt/Life/Soc Sci				
MATH 2030	Discrete Math				
Remaining:	6	Compl:	0		
CO-REQ TO	OPIC COURSES (15 CREDIT HI	RS) C or	better g	rade req.	
Course #	Course Name	Grade	Cr	Notes	
ACCT 2010	Principles of Accounting I				
ACCT 2020	Principles of Accounting II				
ECON 2200	Microeconomics				
ECON 2220	Macroeconomics				
ACCT 3080	Accounting Info Sys OR				
ECON 3200	Microeconomic Theory OR				
ECON 3220	Macroeconomic Theory OR				
FNBK 3250	Princ of Financial Mgmt OR				
MGMT 3510	Human Resource Mgmt OR				
MGMT 3710	Entrepreneurial Fndtns OR				
MGMT 4090	Princ of Collaboration OR				
MRKT 3310	Principles of Marketing				
Remaining:	15	Compl:	0		
:	SPECIALIZATION COURSES (1	L2 CRED	IT HRS)		
Course #	Course Name	Grade	Cr	Notes	
Upper Division	Courses Only				
Remaining: 12 Compl: 0					
TOTAL CREDITS (Including in-progress classes): 0					

GPA:

Last update: March 2015

LAST UPDATED:



T COLLEGE OF INFORMATION SCIENCE & TECHNOLOGY					
MIS CORE COURSES (21 CREDIT HRS)					
Course #	Course Name	Grade	Cr	Notes	
ISQA 3300	File Structures				
ISQA 3310	Mng the DB Environment				
ISQA 3400	Business Data Comm				
ISQA 3420	Mng in a Digital World				
ISQA 3910	Intro to Project Mgmt				
ISQA 4110	Info Systems Analysis			Fall/Summer	
ISQA 4120	Sys Design and Implement			Spring/Summe	
Remaining:	21	Compl:	0		
	ELECTIVE COURSES (20 C	REDIT H	RS)		
Course #	Course Name	Grade	Cr	Notes	
Remaining:	20	Compl:	0		
	BIS ACADEMIC RU	JLES			
1. A minimum of 1 IS&T with a Bachel	20 credit hours and 2.5 GPA are requi	red to grad	luate from	the College of	
	be "C-" or higher with the exception	of ECON 2	200 and A	CCT 2010 which	
require a "C" grad	e or better to continue on with ACCT	2020 & EC	ON 2220.	Students are	
responsible for me courses.	eting the specific prerequisites of the	upper leve	el business	co-requisite	
	ee an IS&T academic advisor regardin	g the speci	fic require	ments for their	
major.					
	Ilow the UNO catalog requirements in led continuous enrollment is maintain				
	countable for prerequisites of all cours		rilig, iali, :	springj.	
6. Thirty of the las	36 hours must be University of Nebr	aska at Om			
7. Up to 4 semester hours of different physical education activity courses may count toward					
the degree. 8. A repeated course may count only once for graduation. (Exceptions are internships, independent studies,					
physical education	activity courses, and special topic cou				
topic.)					
Notes					

NAME: STUDENT ID#: LAST UPDATED:

Optional Concentrations

j-l	BUSINESS APPLICATION/DEVE	LOPMEN	NT/MG	MT
Course #	Course Name	Grade	Cr	Notes
PREREQUISITI	ES:			
CIST 2100	Orgs, Apps & Technology			
ISQA 3310	Mng the DB Environment			
ISQA 4110	Info Sys Analysis			
ISQA 4120	Sys Design and Implement			
CORE COURSE	ES (6 HRS):			
ISQA 3910	Intro to Project Mgmt			
ISQA 4180	e-Commerce			
ELECTIVE COU	JRSES (9 HRS):			
IASC 3600	Info Security, Policy & Aware			
ISQA 3520	Graphical User Inteface Des			
ISQA 4000*	Special Topics: ISQA			
ISQA 4100	Info Sys Architecture & Org			
ISQA 4190	Process Reengineering w/IT			
CAPSTONE CO	OURSE (3 HRS):			
ISQA 4380	Distributed Techs & Systems			
Remaining:	18	Compl:	0	•

INTERNET TECHNOLOGIES				
Course #	Course Name	Grade	Cr	Notes
CORE COURSES	(6 HRS):			
CSCI 2850	Prgmng on the Internet			
CSCI 3830	Adv JAVA Programming			
ELECTIVE COUR	SES (9 HRS):			
CIST 2910	Multimedia Systems			
ISQA 3310	Mng the DB Environment			
ISQA 3400	Business Data Comm			
ISQA 3520	GUI Design			
CIST 3600	Info Security & Policy			
ISQA 4000*	Special Topics: ISQA			
ISQA 4180	e-Commerce			
ISQA 4300	Database Administration			
ISQA 4730	Decision Support Systems			
ISQA 4880	Sys Simulation and Modeling			
ISQA 4890	Data Warehousing & Mining			
CAPSTONE COU	IRSE (3 HRS):			
ISQA 4900	Internet Systems Devel			
Remaining:	18	Compl:	0	

MAJOR: MANAGEMENT INFORMATION SYSTEMS

INFORMATION ASSURANCE				
Course #	Course Name	Grade	Cr	Notes
PREREQUISITES	:			
CIST 1400	Intro to Comp Prgrm			
CSCI 1620	Intro to Comp Science II			
CIST 2100	Orgs, Apps & Technology			
CSCI 2240	Intro to C Programming			
ISQA 3300	File Structures - OR -			
CSCI 3320	Data Structures			
MATH 1930	Calc for Mgmt/Life/Soc Sci			
MATH 2030	Discrete Math			
CORE COURSES	(18 HRS):			
CIST 3110	IT Ethics			
IASC 3350	Security Admin-Linux - OR -			
IASC 3370	Security Admin-Windows			
CSCI 3550	Comm Networks - OR -			
ISQA 3400	Business Data Comm			
IASC 3600	Info Security, Policy, & Aware			
IASC 4360	Found of Info Assurance			
CIST/IASC4540	Computer Security Mgmt			
Remaining:	18	Compl:	0	

	IT AUDIT & CONTR	ROL**		
Course #	Course Name	Grade	Cr	Notes
CORE COURSE	S (9 HRS)			
CIST 3110	IT Ethics			
IASC 3600	Info Security, Policy & Aware			
ACCT 4080	Principles of Auditing			
ELECTIVE COU	IRSES (6 HRS)			
ISQA 4000*	Special Topics: ISQA	Х		
ACCT 4000*	Special Topics in Accounting	Х		
ACCT 4060	Adv Managerial Acctg	Х		
ACCT 4090	Info Systems Auditing	Х		
ISQA 4190	Process Reengineering w/IT	х		
ISQA 4500	Special Problems in ISQA	Х		
ISQA 4510	Info Systems Internship	х		
CAPSTONE CO	OURSE (3 HRS):			
ISQA 4590	IT Audit & Control			
Remaining:	18	Compl:	0	



GLOBAL IT LEADERSHIP/MANAGEMENT				
Course #	Course Name	Grade	Cr	Notes
PREREQUISITES	:			
CIST 1400	Intro to Comp Prgrm			
CIST 2100	Orgs, Apps & Technology			
CIST 3110	IT Ethics			
ENGL 1150	Composition I(CIST 2100 co/pre	e-req)		
ECON 2200	Microeconomics			
ECON 2220	Macroeconomics			
GEOG 1020	Intro to Human Geography			
INST 2130	Intro to Intl Studies			
PSCI 2210	Intro to InternI Relations			
	•	· · · · · · · · · · · · · · · ·		•
CORE COURSES	(15 HRS):			
ISQA 3310	Mng the DB Environment			
ISQA 3420	Mng in a Digital World			
ISQA 3910	Intro to Project Mgmt			
ISQA 4380	Distrib Technolog & Systems			
INST 3000	Study Abroad -OR-			
ISQA 4130	IT for Development			
CAPSTONE COU	RSE (3 HRS):	•		•
ISQA 4500	Spec Problems in ISQA			
Remaining:	18	Compl:	0	
		•		

^{*} Topic must be related to Concentration

This matriculation form corresponds with UNO Catalog 2015-2016. update: March 2015

Last

^{**} Students are responsible for prerequisite courses.

NAME: STUDENT ID#: LAST UPDATED:

MINOR in MIS*

OPTION I				
Course #	Course Name	Grade	Cr	Notes
CORE COURSES	(9 HRS):			
ISQA 3310	Mng the DB Environment			
ISQA 3910	Intro to Project Mgmt			
ISQA 4110	Info Systems Analysis			
ELECTIVE COUR	SES (3 HRS):			
ISQA 3300	File Structures			
ISQA 3400	Business Data Comm			
ISQA 3420	Mng in a Digital World			
ISQA 3520	GUI Design			
ISQA 4000	Special Topics: ISQA			
ISQA 4010	Business Intelligence			
ISQA 4100	Info Sys Architecture & Org			
ISQA 4120	Sys Design & Implement			
ISQA 4130	IT for Development			
ISQA 4140	Teaching Computer Basics			
ISQA 4150	Adv Statistical Methods			
ISQA 4160	Intro to Enterprise Res Ping			
ISQA 4180	e-Commerce			
ISQA 4200	Info & Data Quality Mngmt			
ISQA 4300	Database Administration			
ISQA 4380	Distrib Techs & Systems			
ISQA 4730	Decision Support Systems			
ISQA 4880	Systems Simulation & Model			
ISQA 4890	Data Warehouse & Mining			
ISQA 4900	Internet Systems Devel			
Remaining:	12			

Compl: 0

MINOR in MIS for ACCOUNTANTS

	OPTION II			
Course #	Course Name	Grade	Cr	Notes
CORE COURS	ES (15 HRS):			
ISQA 3310	Mng the DB Environment			
Prereq: BSAD	3100 or CIST 2100			
ISQA 3400	Business Data Comm			
Prereq: BSAD	3100 or CIST 2100			
ISQA 3910	Intro to Project Mgmt			
Prereq: BSAD	3100 or ACCT 3080 or			
CIST 2500 or	(CIST 2100 and BSAD 3160)			
ISQA 4110	Info Systems Analysis			
Prereq: BSAD	3100 or concurrent:			
(CIST 2100 an	d ISQA 3910 and ISQA 3310)			
ISQA 4120	Sys Design & Implement			
Prereq: ISQA	3310 or ISQA 4110			
Remaining:	15	Compl:	0	



This matriculation form corresponds with UNO Catalog 2015-2016.

Last updated: March 2015

*Students are responsible for prerequisite courses.

MINOR in ENTERPRISE RESOURCE PLANNING (ERP)

	ERP			
Course #	Course Name	Grade	Cr	Notes
PREREQUISITE	COURSES (6 HRS)			
CIST 2500	Intro to Applied Stats - OR			
BSAD 2130	Principles of Business Stats			
CIST 2100	Orgs Apps & Tech - OR -			
BSAD 3100	Mgmt Info Systems - OR -			
ACCT 3080	Acctg Information Systems			
CORE COURSES	(12 HRS):			
ISQA 3310	Mng the DB Environment			
ISQA 4160	Intro to ERP			
ISQA 4190	Process Re-Enginring w/ IT			
ISQA 4200	Info & Data Quality Mgmt			
ELECTIVE COUR	SES (3 HRS):			
ISQA 3910	Intro to Project Mgmt			
ISQA 4590	IT Audit & Control			
ISQA 4000	Spec Topics: ERP Config		-	
Remaining:	15	Compl:	0	

NAME: STUDENT ID#: LAST UPDATED:

Undergraduate Certificates*

	DATA MANAGEN	IENT		
Course #	Course Name	Grade	Cr	Notes
CORE COURSES	6 (12 HRS):			
ISQA 3300	File Structures for Info Sys			
ISQA 3310	Mng the DB Environment			
ISQA 4200	Info & Data Quality Mgmt			
ISQA 4300	Database Administration			
ELECTIVE COUR	RSES (3 HRS):			
ISQA 4380	Distrib Techs and Systems			
ISQA 4730	Decision Support Systems			
ISQA 4890	Data Warehousing & Mining			
			·	
Remaining:	15	Compl:	0	•

Remaining:	15	Compl:	0	
	SYSTEMS DEVELO	PMENT		
Course #	Course Name	Grade	Cr	Notes
CORE COURSE	ES (12 HRS):			
ISQA 3310	Mng the DB Environment			
ISQA 3910	Intro to Project Mgmt			
ISQA 4110	Info Systems Analysis			
ISQA 4120	Sys Design & Implement			
ELECTIVE COL	JRSES (3 HRS):			
ISQA 3300	File Structures			
ISQA 4100	Info Sys Architecture & Org			
Remaining:	15	Compl:	0	

MAJOR: MANAGEMENT INFORMATION SYSTEMS

IT ADMINISTRATION					
Course #	Course Name	Grade	Cr	Notes	
CORE COURSES	(14 HRS):				
IS 204 (UiA)**	IT Resource Operations				
IS 209 (UiA)**	Sys Admin w/ Free Software -	OR-			
IASC 3350	Security Admin-Linux -OR-				
IASC 3370	Security Admin-Windows				
IS 203 (UiA)**	Adv DB Systems -OR-				
ISQA 4300	Database Administration				
ISQA 4380	Distributed Technologies				
**IS203 and 204 (UiA) are each worth 5 Credit Hrs at UNO;IS209 for 2 hrs.					
Remaining:	14	Compl:	0		



Through undergraduate certificates, the College of IS&T offers a path for individuals not holding a baccalaureate degree to advance their education along a focused, professionally-oriented course of study that can be applied later to a related bachelor degree program.

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*Students are responsible for prerequisite courses.