

Information Systems

Today's competitive business environment requires that companies leverage Information Technology to gain a competitive edge and to operate efficiently. The Master of Science in Information Systems provides students with the managerial and technological skills that support these goals. The focused program consists of 31.5 credits in IS-related courses and an abbreviated business core (waivable based on prior academic background). Students take core courses in key topics such as database management systems, global issues in IT, systems analysis and design, and IS strategy and may customize their degree by selecting from diverse elective courses. Graduates of the program are employed in diverse industries in positions such as project managers, system developers, technology leads, IT managers, and systems analysts. The MS program conforms with the DHS - STEM program so that international students who graduate from the MSIS program may be eligible for an additional extension on their optional practical training (OPT).

MS in Information Systems Program Learning Goals

Information Systems Strategy	Students will be able to analyze or develop an organization's information systems strategy and align it with that organization's overall business strategy.
Information Systems and the Organization	Students will be able to analyze or develop an organization's information systems strategy and align it with that organization's overall business strategy.
Information Technology Infrastructure	Students will be informed about the major components of current organizational Information Technology infrastructure.
Information Systems Development	Students will understand and apply general Information Systems development principles.
Teamwork and Leadership	Students will gain conceptual knowledge and analytical skills helpful to functioning effectively in teams and experience opportunities to understand and develop leadership competencies.

MS in Information Systems Curriculum

Courses in Specialization (31.5 - 33 credits)		
Required (13.5 - 15 credits)		
BUS 9551*	Business Communication I	1.5 credits
CIS 9000	Information Technology Strategy	3 credits
CIS 9340	Principles of Database Management Systems	3 credits
CIS 9490	Systems Analysis and Design	3 credits
CIS 9590 (capstone)	Information Systems Development Project	3 credit**
*Students who intend to pursue a career in Accounting may substitute BUS 9557 (3 cr) for BUS 9551. Students should note that BUS 9557 will not be offered during the 2020-2021 academic year, and should continue to enroll in BUS 9551. Students may not receive credit for both BUS 9551 and BUS 9557.		
Electives (18 credits)		

Choose 12-18 credits

Choose 12-18 credits from the list below for the MS-IS degree. If you plan to specialize in one of the concentrations, please ensure that you take the appropriate electives specific to those tracks.

BUS 9801, 9802, 9803	Graduate Internships I, II, and III (in IS)	3 credits
CIS 9230	Globalization and Technology	3 credits
CIS 9240	Sustainability and Information Technology	3 credits
CIS 9310	Object-Oriented Programming I	3 credits
CIS 9350	Networks and Telecommunications	3 credits
CIS 9355	Cybersecurity	3 credits
CIS 9375	Social Technology and Business	3 credits
CIS 9410	Object-Oriented Programming II	3 credits
CIS 9440	Data Warehousing and Analytics	3 credits
CIS 9444	E-Business Principles and Technologies	3 credits
CIS 9445	Digital Media Management	3 credits
CIS 9467	Business Modeling with Spreadsheets	3 credits
CIS 9480	Information Technology Project Management	3 credits
CIS 9551	Blockchain Technologies and Applications	3 credits
CIS 9555	Principles of FinTech	3 credits
CIS 9556	Risk Management System and Information Security	3 credits
CIS 9557	Business Intelligence	3 credits
CIS 9558	Information Technology Audit	3 credits
CIS 9650	Programming for Analytics	3 credits
CIS 9655	Data Visualization	3 credits
CIS 9660	Data Mining for Business Analytics	3 credits
CIS 9665	Applied Natural Language Processing	3 credits
CIS 9700	Integrating Information Technology and Business Processes	3 credits
CIS/STA 9760	Big Data Technologies	3 credits
CIS 9791	Special Topics in Information Systems Technologies	1.5 credits
CIS 9793	Special Topics in Information Technologies	3 credits
CIS 9795	Special Topics in Information Systems Strategy	1.5 credits

CIS 9797 (formerly CIS 9775)	Special Topics in Information Systems Strategy	3 credits
Business Electives: Choose 0-6 credits from the list below:		
ACC 9110	Financial Reporting	3 credits
ACC 9810	Current Topics in Financial Accounting (no longer effective for students entering Spring 2020)*	3 credits
ACC 9993	Special Topics in Accountancy	3 credits
TAX 9861	Federal Income Taxation: Theory and Practice	3 credits
FIN 9770	Corporate Finance	3 credits
MGT 9700	Managing Business Operations	3 credits
OPR 9721	Introduction to Quantitative Modeling	3 credits
STA 9708	Managerial Statistics	3 credits

Concentration in Data Analytics		
Students will take all required courses and will take at least 9 credits from the following list of electives. To complete the remaining 6 – 9 elective credits, students will select from the information systems and business electives listed above.		
CIS 9660	Data Mining for Business Analytics	3 credits
CIS 9650	Programming for Analytics	3 credits
CIS 9440	Data Warehousing and Analytics	3 credits
CIS 9655	Data Visualization	3 credits
CIS/STA 9665	Applied Natural Language Processing	3 credits
CIS/STA 9760	Big Data Technologies	3 credits

Concentration in Cybersecurity and Information Assurance		
Students will take all required courses and will take the two required courses for the concentration (6 credits) and one of the electives (3 credits) from the list below. To complete the remaining elective credits, students will select from the information systems and business electives listed above		
Required Courses for the concentration		
CIS 9350	Networks and Telecommunications	3 credits
CIS 9355	Cybersecurity	3 credits
Concentration Electives (take at least one course)		

CIS 9558

OR

CIS 9556

IT Audit

OR

Risk Management and Information Security

3 credits