MIS - Management Information Systems

Management Information Systems: MIS

Lower-Division Courses

MIS 301. Introduction to Information Technology Management.

Restricted to students in the McCombs School of Business. Explores how information technology helps to achieve competitive advantage and improve decision making, business processes, operations, and organizational design. Uses a cross-functional perspective to recognize the role of technology across business activities of management, finance, marketing, human resources, and operations. Three lecture hours a week for one semester. Management Information Systems 301 and 301H may not both be counted. Offered on the letter-grade basis only.

MIS 301H. Introduction to Information Technology Management: Honors.

Restricted to students admitted to the McCombs School of Business Honors Program. Explores how information technology helps to achieve competitive advantage and improve decision making, business processes, operations, and organizational design. Uses a cross-functional perspective to recognize the role of technology across business activities of management, finance, marketing, human resources, and operations. Three lecture hours a week for one semester. Management Information Systems 301 and 301H may not both be counted. Offered on the letter-grade basis only.

MIS 302F. Foundations of Information Technology Management.

Restricted to non-McCombs School of Business majors. Explores how information technology helps to achieve competitive advantage and improve decision making, business processes, operations, and organizational design. Uses a cross-functional perspective to recognize the role of technology across business activities of management, finance, marketing, human resources, and operations. Three lecture hours a week for one semester. Management Information Systems 301 and 302F may not both be counted.

MIS 304. Introduction to Problem Solving and Programming.

Same as Business Analytics 304. Restricted to students in the McCombs School of Business. Programming skills for creating easy-to-maintain systems for business applications. Object-oriented and structured methodologies with Python. Three lecture hours a week for one semester. Only one of the following may be counted: Business Analytics 304, 305, or Management Information Systems 304. Offered on the letter-grade basis only.

MIS 310 (TCCN: BCIS 1305). Introduction to Management Information Systems.

Basic computer terminology, hardware and software, communications technology, graphics, systems analysis and design, and issues arising out of the rapidly evolving field of information systems. Students are expected to achieve a working knowledge of personal computer software, including operating system software and environments, as well as spreadsheets, analytical graphics, databases, and presentation software. Hands-on experience with the Internet and use of electronic mail. Three lecture hours a week for one semester.

Upper-Division Courses

MIS 325. Database Management.

Same as Business Analytics 325. Restricted to students in the McCombs School of Business. Beginning and intermediate topics in data modeling for relational database management systems. Three lecture hours a week for one semester. Only one of the following may be counted: Business Analytics 325, 327, or Management Information Systems 325. Offered on the letter-grade basis only.

MIS 333K. Web Application Development.

Restricted to students in a business major. Concepts and practices of information systems. Advanced programming techniques used to generate menu-driven applications. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Business Analytics 304, 305, or Management Information Systems 304; and Business Analytics 325, 327, or Management Information Systems 325 with a grade of at least C- in each.

MIS 140S, 240S, 340S, 440S, 540S, 640S, 740S, 840S, 940S. Topics in Management Information Systems.

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office or the school's BBA Exchange Programs. Credit is recorded as assigned by the study abroad adviser in the Department of Information, Risk, and Operations Management. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. May be repeated for credit when the topics vary.

MIS 366P. Management Information Systems Practicum.

Restricted to students in a business major. Students apply skills in their major area and focus on additional project management skills through group projects conducted in a professional setting. Students may work with a private or a public enterprise. The equivalent of three lecture hours a week for one semester. Prerequisite: Forty-five semester hours of college coursework and consent of instructor.

MIS 372T. Topics in Management Information Systems.

Restricted to students in a business major. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Additional prerequisites vary with the topic.

Topic 1: Open Innovation. Management Information Systems 372T (Topic 1) and 373 (Topic 21) may not both be counted.
Topic 2: IT Audit and Security. Management Information Systems 372T (Topic 2) and 373 (Topic 22) may not both be counted.
Topic 3: Fundamentals of Health IT. Management Information Systems 372T (Topic 3) and 373 (Topic: Fundamentals of Health IT) may not both be counted.
Topic 4: Mobile Apps and Web Services. Explore mobile and web services technology models and architectures. Management Information Systems 372T (Topic 4) and 373 (Topic 24) may not both be counted. Additional prerequisite: Management Information Systems 333K.
Topic 9: Enterprise Computing. Management Information Systems 372T (Topic 9) and 373 (Topic 19) may not both be counted. Additional prerequisite: Management Information Systems 333K, or equivalent programming experience.
Topic 11: Advanced Analytics Programming. Same as Business Analytics 372T (Topic 11). Restricted to students in a business major. Focus on data analysis using the Python programming language. Explore machine learning tasks such as classification and clustering. Only one of the following may be counted: Business Analytics 372 (Topic 1), 372T (Topic 11), Management Information Systems 372T (Topic 11), 373 (Topic 11). Additional prerequisite: Business Analytics

304 or Management Information Systems 304 with a grade of at least C-.

Topic 12: Information Technology for Supply Chains. Same as Operations Management 372T (Topic 12). Learn how information technology is used to coordinate supply chain activities across different industries. Only one of the following may be counted: Management Information Systems 373 (Topic 13), 372T (Topic 12), Operations Management 337 (Topic 4), 372T (Topic 12). Additional prerequisite: Management Information Systems 301, 301H, or 302F with a grade of at least C-.

Topic 17: Health Care Analytics. Same as Business Analytics 372T (Topic 17) and Operations Management 372T (Topic 17). Explore key management challenges and how data may be leveraged to guide decisions and improve operations, with the unifying theme of providing health care services in a manner that leads to lower cost and higher quality. Only one of the following may be counted: Business Analytics 372 (Topic 17), 372T (Topic 17), Management Information Systems 373 (Topic 26), 372T (Topic 17) Operations Management 337 (Topic 8), 372T (Topic 17).

Topic 22: Predictive Analytics and Data Mining. Same as Business Analytics 372T (Topic 22) and Marketing 372T (Topic 22). Introduction to data mining problems and tools to enhance managerial decision making at all levels of the organization. Discuss scenarios, including the use of data mining to support customer relationship management (CRM) decisions, decisions in the entertainment industry, financial trading, and even professional sports teams. Only one of the following may be counted: Business Analytics 372 (Topic 2), 372T (Topic 22), Management Information Systems 373 (Topic 17), 372T (Topic 22), Marketing 372 (Topic 22), 372T (Topic 22). Additional prerequisite: Statistics 301 or 301H.

Topic 23: Social Media Analytics. Same as Business Analytics 372T (Topic 23). Restricted to students in a business major. Introduction to social network analysis for business value using statistical optimization and decision theory. Analyze online search and conversation data for market sensing, sentiments, product quality, reputation, recommendations, and brand awareness. Only one of the following may be counted: Business Analytics 372 (Topic 23), 372T (Topic 23), Management Information Systems 372T (Topic 23), 373 (Topic 23).

Topic 25: User Generated Content Analytics. Same as Business Analytics 372T (Topic 25). Focus on a gamut of questions ranging from strategic to operational matters pertaining to a firm's social media initiatives, metrics to capture relevant outcomes, and predictive analysis to link social media chatter to business performance. Only one of the following may be counted: Business Analytics 372 (Topic 4), 372T (Topic 25), Management Information Systems 372T (Topic 25), 373 (Topic 25).

MIS 374. Business System Development.

Restricted to students in a business major. Provides foundation in business system analysis, project management, planning, design, and implementation using basic business knowledge and computer skills. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Seventy-five semester hours of college coursework, including Management Information Systems 333K.

MIS 375. Strategic Information Technology Management.

Restricted to students in a business major. Designed to develop an understanding and appreciation for the role of information technology in the context of a firm's strategy. Explores the impact of information technology on the economy and business performance, the emergence of electronic business applications and organizational and market transformation, and the nature of technology-driven business models and strategies. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Upper-division standing.

MIS 179, 379. Independent Research in Management Information Systems.

Restricted to students in a business major. Conference course. Only one of the following may be counted: Accounting 379C, Business Administration Honors 379, Business, Government, and Society 379, Finance 379C, International Business 379C, Legal Environment of Business 379, Management 379C, Management Information Systems 379, Marketing 379C, Operations Management 379, Risk Management 379. Prerequisite: Eighteen hours of coursework in business and economics, six of which must be upper-division; Business Analytics 304, 305, or Management Information Systems 304 and Business Analytics 325, 327, or Management Information Systems 325 with a grade of at least B- in each, and consent of instructor; and written approval before the first meeting of the course from the department chair's office, on forms provided for that purpose.

Graduate Courses

MIS 380. Seminar in Organizational Communication.

Selected topics in organizational communication, written and oral. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 1: Research Methodology in Business and Organizational Communication.

Topic 2: Projects, Proposals, and Presentations. Communicating effectively in business using advanced writing and presentation concepts and techniques to increase individual and team effectiveness.

Topic 3: Advanced Report Writing, Professional Reports, and Other Scholarly Papers.

MIS 180D, 280D, 380D. Database Management.

Explore designing, building, and implementing a relational database to improve company operations and reporting. Examine how databases affect analytics and app development. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. Prerequisite: Graduate standing and consent of instructor.

MIS 380N. Topics in Information Management.

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Graduate standing.

Topic 2: Managing Information. Understanding, designing, and controlling the information processing activities of an organization. Complements Business Administration 380C by focusing on information systems rather than information technology. Includes business intelligence, knowledge management, data modeling, group decision support systems, and electronic commerce. Offered on the letter-grade basis only. Additional prerequisite: Business Administration 380C.

Topic 3: Business Process Excellence. Emerging technology, data and process modeling (flow focus for integrated applications), reengineering, and change management. Offered on the letter-grade basis only. Additional prerequisite: Business Administration 380C.

Topic 4: Digital Economy and Commerce. Offered on the letter-grade basis only. Additional prerequisite: Management Information Systems 380N (Topic 2) and credit or registration for Management Information Systems 380N (Topic 3).

MIS 180P, 280P, 380P. Problem Solving and Programming.

Explore programming skills for creating easy-to-maintain systems for business applications. Examine object-oriented and structured methodologies with Python. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. Prerequisite: Graduate standing and consent of instructor.

MIS 181N, 281N, 381N. Topics in Information Systems.

Selected topics in information technology and management of information systems development. For each semester hour of credit earned, one lecture hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 1: Introduction to Data Management.
Topic 2: Research in Information Systems: Organizational and Behavioral Perspectives.
Topic 3: Strategic Analysis for High-Tech Industries. Management 185, 285, 385 (Topic 9) and Management Information Systems 181N, 281N, 381N (Topic 3) may not both be counted. Additional prerequisite: Management Information Systems 380N (Topic 2: Managing Information), 380N (Topic 3: Managing Systems), and credit or registration for Management Information Systems 380N (Topic 4: Digital Economy and Commerce).
Topic 4: Decision Support Systems.
Topic 5: Information Systems Design and Implementation. Additional prerequisite: Management Information Systems 380N (Topic 2: Managing Information), 380N (Topic 3: Managing Systems), and credit or registration for Management Information Systems 380N (Topic 4: Digital Economy and Commerce).
Topic 6: Research Seminar.
Topic 7: Information and Knowledge Management. Additional prerequisite: Management Information Systems 380N (Topic 2: Managing Information), 380N (Topic 3: Managing Systems), and credit or registration for Management Information Systems 380N (Topic 4: Digital Economy and Commerce).
Topic 8: Managing Disruptive Innovations. Focuses on the management of disruptive technologies, including analyzing whether an emerging technology is sustaining or disruptive, identifying new markets for disruptive technologies, justifying investments in disruptive technologies, implementing disruptive technologies, and appropriating value from them.
Topic 9: Change Management Practicum I. Project-oriented course focusing on design of organizational change.
Topic 10: Change Management Practicum II. Project-oriented course focusing on implementation of organizational change. Additional prerequisite: Management Information Systems 381N (Topic 9).
Topic 11: Research in Information Technology.
Topic 12: Advanced Information Systems Readings.
Topic 13: Advanced Data Communications. Additional prerequisite: Management Information Systems 381N (Topic 8).
Topic 14: Global Information Technology Management.
Topic 15: Introduction to Electronic Commerce.
Topic 16: Information Systems Projects.
Topic 17: Client/Server Development.
Topic 18: Innovation, Technology, and Commercialization.
Topic 19: Technology Transfer: Theory and Practice.
Topic 20: Cross-Cultural Issues in Information Systems.
Topic 21: Seminar in Multimedia Systems.
Topic 22: Information Technology Strategy and Services. Additional prerequisite: Management Information Systems 380N (Topic 2: Managing Information), 380N (Topic 3: Managing Systems), and credit or registration for Management Information Systems 380N (Topic 4: Digital Economy and Commerce).
Topic 23: E-Business: Strategy and Policy. The responsibilities of the strategist for choosing, developing, and managing an overall e-business firm strategy in uncertain market, technology, and policy environments.
Topic 24: Global E-Business: Theory and Cases. Analysis of case studies, incorporating Oracle and other Web-based distributed computing solutions. Additional prerequisite: Consent of instructor.
Topic 25: E-Security and E-Forensic Frameworks. Discussion and hands-on use of current Web and distributed computing security software and e-forensic solutions. Additional prerequisite: Consent of instructor.
Topic 26: Research Methods in Information Systems. Restricted to doctoral students. Overview of research methods used to study information systems problems. Fundamental concepts and criteria for use with and evaluation of quantitative and qualitative, positivist and interpretive research methods. Current state-of-the-art applications.
Topic 27: Strategies for Networked Economy. Analyzes the competitive dynamics of platform-mediated networks; explores innovations like cloud computing in supporting network-based competition, the implications of information technology-enabled global sourcing, and business intelligence for business value and competitive advantage; and discusses the role of information technology in business transformation and making a case for information technology investments. Management Information Systems 381N (Topic 27) and 381N (Topic 29) may not both be counted.
Topic 28: Data Management. Explore general database concepts such as E-R modeling, relational database design, and advanced SQL. Design and develop mission-critical web-based business applications using databases. Explore data warehouse design and advanced analytics functions within SQL. Management Information Systems 181N, 281N, 381N (Topic 28) and 284N (Topic: Data Management) may not both be counted.
Topic 29: Digital Strategies for Enterprise Transformation. Analyze the competitive dynamics of platform-mediated business models; explore innovations such as cloud computing and Internet of things in supporting platform-based competition; study the implications of information technology-enabled disruption; understand applications of artificial intelligence and machine learning to develop competitive advantage; and discuss the role of information technology in business transformation. Management Information Systems 381N (Topic 27) and 381N (Topic 29) may not both be counted.
Topic 30: Privacy Preserving Analytics. Restricted to students in the Master of Science program. Management Information Systems 381N (Topic 30) and 285N (Topic: Privacy Preserving Analytics) may not both be counted.

MIS 382N. Topics in Information Management.

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 1: Managing Financial Information. Data modeling and information management for investment analysis and financial systems.
Topic 2: E-Business Change.
Topic 3: E-Business Application Development.
Topic 4: Cross-Functional Systems Integration. Prerequisite: Management Information Systems 380N (Topic 2), 380N (Topic 3), and credit or registration for Management Information Systems 380N (Topic 4).
Topic 5: Managing Complexity.
Topic 6: Computer Auditing and Systems Security.
Topic 7: Project Management in Fast-Cycle Environments.
Topic 8: Balanced Scoreboard: An Information Systems Perspective. Theory and tools that support the design and implementation of balanced scoreboard evaluation systems.
Topic 10: Data Mining for Marketing.

Topic 11: Business Intelligence Capstone. Explores foundations of business analytics related to database management, data analysis techniques, and business decision making to solve a business problem of a client. Additional prerequisite: Consent of instructor.
Topic 12: Social Media Analytics. An introduction to social network analysis for business value using statistical optimization and decision theory, including the foundation for analyzing online search and conversation data for market sensing, sentiments, product quality, reputation, recommendations, and brand awareness. Additional prerequisite: Consent of instructor.
Topic 13: Predictive Analytics and Data Mining. Management Information Systems 382N (Topic 9: Business Data Analytics with Data Mining) and and 382N (Topic 13) may not both be counted.
Topic 14: Business Data Science. An introduction to basic concepts, methodology, algorithms, and technology used in business analytics and decision making. Explore concepts from probabilistic modeling, analysis and experimental design. Examine the basics of modern regression and classification, clustering, visualization, dimensionality reduction, A/B Testing and an introduction to deep learning. Management Information Systems 382N (Topic: Business Data Science) and 382N (Topic 14) may not both be counted.
Topic 15: Business Analytics Capstone. Restricted to students in the Master of Science in Business Analytics program.

MIS 283M, 383M. Supply Chain Management for Executives.

Restricted to students in the Executive MBA Program. Examine frameworks for understanding how to transform supply chain strategy in the face of pressures from technological, social, and political disruption. For each semester hour of credit earned, one lecture hour a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing.

MIS 383N. Topics in Information-Intensive Business Processes.

Topics in management of information in specific industries or application areas. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

Topic 1: Health Care Management.
Topic 2: Health Services Seminar.
Topic 3: Customer Insights.
Topic 4: Supply Chain Management.
Topic 5: Computer Tools for Investment Science.
Topic 6: Trading-Floor Technology.
Topic 10: Practicum in Multimedia Systems Development. Restricted to MBA and MPA students who have chosen the information management concentration. Additional prerequisite: Business Administration 380C and consent of instructor.
Topic 12: E-Business Innovation.
Topic 13: Managing Innovation in a Global Company. Examines innovation-based business strategies that rely on internal and external sources, processes in different organization forms, and market structures.

MIS 184N, 284N, 384N. Topics in Business Analytics.

Restricted to students admitted to the Master of Science in Information, Risk, and Operations Management. Selected topics in business analytics. One, two, or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate Standing; additional prerequisites vary with the topic.

MIS 385. Management Information Systems.

Restricted to students in the MS in Information Technology and Management Program. Overview of hardware and software life cycles; in-depth considerations of program design, including experience programming for large-scale computer systems in COBOL, FORTRAN, and/or BASIC. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

MIS 185G, 285G, 385G. Machine Learning and Artificial Intelligence for Executives.

Restricted to students in the Executive MBA Program. Introduction to artificial intelligence (AI) and machine learning (ML) through a review of AI and ML concepts, tools, and the complete AI/ML lifecycle in the context of tackling business and organizational challenges. For each semester hour of credit earned, one lecture hour a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing.

MIS 185N, 285N, 385N. Topics in Information Technology and Management.

Restricted to students admitted to the Master of Science in Information Technology and Management program. Selected topics in information technology and management. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic.

Topic 1: Big Data and Distributed Programming. Explore a range of subjects required for developing modern applications that operate over vast data sets that are potentially distributed in nature. Consider alternative technologies and architectures for working with big data, examining the pros and cons of the different approaches. Management Information Systems 284N (Topic: Big Data/Distr Programming) and 185N, 285N, 385N (Topic 1) may not both be counted.
Topic 2: Emerging Technologies I. Explore all aspects of the Internet of Things (IoT) product life-cycle. Interface with the devices (sensors/actuators) that collect data and affect the environment. Explore network protocols for communication with these constrained devices. Examine programming of the back-end services that host, manipulate and disseminate the collected data. Study the development of apps that facilitate human interaction with these devices and the analysis of the data they produce. Examine security, privacy and performance considerations specific to IoT. Management Information Systems 284N (Topic: Emerging Technologies I) and 185N, 285N, 385N (Topic 2) may not both be counted.
Topic 3: IT Security, Policy, and Compliance. Explore the prevention and mitigation of data security and privacy risks in newly designed digital artifacts through IT governance, risk, and control frameworks as well as relevant laws, regulations, and industry standards. Management Information Systems 382N (Topic: IT/Secur/Policy/Compliance) and 185N, 285N, 385N (Topic 3) may not both be counted.
Topic 4: IT Capstone. Develop real-life business and social solutions using emerging information technologies. Engage with industry partners to explore business context for IT Capstone projects. Management Information Systems 382N (Topic: IT Capstone) and 185N, 285N, 385N (Topic 4) may not both be counted.
Topic 5: Cognitive Computing. An overview of convolutional neural networks, recurrent neural networks and generative adversarial networks. Explore deep learning and artificial neural networks. Applications include computer vision, image and time series modeling as well as computational aspects of deep learning over big datasets. Utilize Python and Tensorflow, among other tools. Management Information Systems 284N (Topic: Cognitive Computing) and 185N, 285N, 385N (Topic 5) may not both be counted.
Topic 6: Strategic IT and Change Management. Explore the strategic management of new IT-embedded product and service innovations and their incorporation into the digital business ecosystems of

organizations. Management Information Systems 284N (Topic: Strat IT and Change Mgmt) and 185N, 285N, 385N (Topic 6) may not both be counted.

Topic 7: IT and Supply Chain Management. Examine the role of Information Technology in managing Supply Chains. Explore the IT capabilities needed by firms to coordinate their operations, collaborate with business partners and manage uncertainty. Illustrate the role of technologies and tools like ERP platform, ABAP programming, XML, web services, distributed computing and machine learning to improve the performance of supply chains. Management Information Systems 284N (Topic: IT and Supply Chain Mgmt) and 185N, 285N, 385N (Topic 7) may not both be counted.

Topic 8: Design Methods. Utilize design tools and methods to understand user needs, frame business opportunities, and design solutions. Examine design from both organizational and technical perspectives. Conduct research with end users, synthesize data, prototype solution ideas, and communicate compelling stories. Undertake design challenges that focus on emerging information technologies, including the internet of things (IoT), cognitive computing, AI, cloud, mobile, and 3D/4D printing. Management Information Systems 382N (Topic: Design Methods) and 185N, 285N, 385N (Topic 8) may not both be counted.

Topic 9: Advanced Programming and App Development. Explore various approaches to modern app development, including required advanced programming and software engineering concepts. Explore approaches to app development ranging from native platform programming through programming frameworks that allow cross-platform development, to high-level approaches based on web frameworks. Management Information Systems 382N (Topic: Adv Programming/App Devel) and 185N, 285N, 385N (Topic 9) may not both be counted.

Topic 10: User Generated Content Analytics. Generate business and social insights from user-generated content (e.g., text, images, video, etc.) through the use of text analytics, sentiment analysis, visualization techniques, etc. Management Information Systems 381N (Topic: User Genrtd Content Anlytcs) and 185N, 285N, 385N (Topic 10) may not both be counted.

Topic 11: Advanced Data Mining and Web Analytics. Examine a variety of data mining and machine learning techniques for descriptive, predictive and prescriptive analytics. Explore approaches to analyzing different types of information from the Web (web structure, content, usage). Management Information Systems 382N (Topic: Advanced Mining/Web Analytics) and 185N, 285N, 385N (Topic 11) may not both be counted.

Topic 12: Healthcare IT and Analytics. Design new healthcare solutions using emerging information technologies such as Internet of Things, cognitive computing, artificial intelligence, the cloud, mobile, and 3D and 4D printing.

Topic 13: Emerging Technologies II. Build a strong business and technical foundation for blockchain. Discuss business inefficiencies that can be addressed by blockchain technology. Examine cryptology and distributed computing that blockchain systems rely on, including an overview of Bitcoin. Explore current research problems, perform programming assignments, lead discussions, and hear presentations from industry and academic researchers. Management Information Systems 382N (Topic: Emerging Technologies II) and 185N, 285N, 385N (Topic 13) may not both be counted.

Topic 14: Programming Blockchain. Cover the development of the bitcoin protocol from scratch. Explore basic libraries to build the protocol using a step-by-step approach. Examine the primary and secondary aspects of scaling, mining and operating a bitcoin protocol based system. Management Information Systems 284N (Topic: Programming Blockchain) and 185N, 285N, 385N (Topic 14) may not both be counted.

MIS 698. Thesis.

The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in information, risk, and operations management and consent of the graduate adviser; for 698B, Management Information Systems 698A.

MIS 398R. Master's Report.

Preparation of a report to fulfill the requirement for the master's degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in information, risk, and operations management and consent of the supervising faculty member and the graduate adviser.

MIS 399W, 699W, 999W. Dissertation.

May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree.

Professional Courses