

MANAGEMENT SCIENCE & INFORMATION SYSTEMS (MSIS)

MSIS 2103 Business Data Science Technologies

Description: The class focuses on problem solving with data analytics tools and technologies that are key to organization decision making. Emphasis is placed on decision making with spreadsheets and databases. Key information systems and cybersecurity concepts are also studied.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Undergraduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 2203 Computer Programming for Business

Prerequisites: MSIS 2103 or equivalent.

Description: Computer programming for organizations from the perspective of integrating the Internet into business information systems. Fundamental principles and constructs of programming and applied programming in the business environment.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Undergraduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 3023 Technology, Diversity and Entrepreneurship

Prerequisites: MSIS 2103 or consent of instructor.

Description: A study of technology, diversity and entrepreneurship. The use of technology as a research tool to study diversity and the opportunities available to diverse groups through entrepreneurship.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Undergraduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 3103 End User Database Systems Design and Management

Prerequisites: MSIS 2103 and Non-MIS (or CS) majors only.

Description: Use of computer technology and software to represent, manipulate and manage data. Principles and techniques of logical database design and related database concepts. Analysis, design and implementation of a database system using a relational DBMS. No credit for students in the MIS major.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Undergraduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 3153 International Telecommunications Business Environment (I)

Prerequisites: MSIS 2103 or consent of instructor.

Description: This course concentrates on understanding the implications and challenges of utilizing telecommunications networks in today's global business environment. Emphasis will be placed on identifying the major players in the global information infrastructure, standards setting bodies and procedures, and the various regulatory processes encountered. Students will research the telecommunications industry in other countries and develop comprehensive written reports. Course previously offered as TCOM 3153.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Undergraduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

General Education and other Course Attributes: International Dimension

MSIS 3203 Advanced Computer Programming for Business

Prerequisites: MSIS 2203.

Description: Advanced programming features are examined with an emphasis on the development of computer programs for business applications. Previously offered as MSIS 4203.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Undergraduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 3223 Operation Analytics

Prerequisites: MSIS 2103 and MATH 2103 or equivalent.

Description: Examination of analytic approaches used in managing processes that provide services or produce products. Analytic approaches include forecasting, optimization, decision analysis, among others. The analytics support decision making related to location analysis, project management, inventory management, among other areas. Previously offered as MGMT 3223.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Undergraduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 3233 Management Science - Prescriptive Analytics

Prerequisites: MSIS 3223.

Description: Prescriptive analytics applied to resource allocation and operational problems encountered in accounting, economics, finance, management and marketing. Linear programming, goal programming, integer programming, and network models.. Previously offered as MGMT 3233.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Undergraduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 3243 Managerial Decision Theory

Prerequisites: MSIS 3223 and calculus.

Description: Decision processes under risk and uncertainty. The use of models in business decision-making with outcomes governed by probability distributions. Bayesian decision analysis, utility measurements, game theory, Markov chains, queuing theory, simulation, and inventory models. Previously offered as MGMT 3243.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Undergraduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 3333 Database Systems Design, Management and Administration

Prerequisites: MSIS 2103 and MIS or CS or ACCT majors only.

Description: Extensive data modeling implemented and queried using SQL, DDL, and DML. Data integrity and accessibility in a shared network environment. Related database concepts including data warehousing, database security, data and database administration. Required for MIS majors. Course previously offered as MSIS 4013.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Undergraduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 3363 Web Application Development

Prerequisites: MSIS 2203 and MSIS 3333.

Description: Develop web applications involving database development, user interface design, and asynchronous client-side programming.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Undergraduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 3393 Advanced Spreadsheet Modeling and Programming

Prerequisites: MSIS 2103 and permission of instructor.

Description: This class provides students with advanced spreadsheet skills, including the ability to formulate math programming models, simulations, risk analysis, and other business decision-making tools. The class will also provide students with an introduction to spreadsheet programming (VB, macros, etc.), building decision support systems in spreadsheets, etc.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Undergraduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 3931 Diversity Impacts in Information Systems (D)

Description: Critical analysis of the impact of technology on socially-defined classifications such as race, ethnicity, age, gender, sexuality, and disability; and how those groups affect technology industries. Through reading, observation, discussion, and writing; students will have their own perceptions challenged to better understand technology interaction through and with diverse populations, and how relationships between those groups may be improved or worsened as a result of mediated communications.

Credit hours: 1

Contact hours: Lecture: 1

Levels: Undergraduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

General Education and other Course Attributes: Diversity

MSIS 4003 Systems Analysis and Design

Prerequisites: MSIS 3333 and MSIS 3363.

Description: This course covers the core concepts and skills for developing software in an organizational context, including agile software development techniques, as well as the socio-cultural aspects of the systems analysis and design process. Course previously offered as MSIS 3303 and MGMT 3033.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Undergraduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 4010 Applied Management Science and Information System Studies

Prerequisites: Consent of department head and MSIS majors only.

Description: Structured internship, field study or independent project with supporting academic study. Offered for variable credit, 1-6 credit hours, maximum of 6 credit hours.

Credit hours: 1-6

Contact hours: Other: 1

Levels: Undergraduate

Schedule types: Independent Study

Department/School: Mgmt Sci & Info Sys

MSIS 4020 Applications Software Tools and Techniques

Prerequisites: MSIS 3303, MSIS 2203, permission of instructor.

Description: Hands-on experience with selected software-based tool or programming languages such as SAP, SQL, PERT/CPM, etc. Offered for variable credit, 1-3 credit hours, maximum of 3 credit hours.

Credit hours: 1-3

Contact hours: Lecture: 1

Levels: Undergraduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 4033 Information Systems Project Management and Communication**Prerequisites:** MSIS 2103.**Description:** This class discusses the multi-faceted dimensions critical to successfully leading information systems projects. Topics will include behavioral, strategic, technical, quantitative and communications issues faced by those directing projects. Course previously offered as MSIS 3033.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Undergraduate**Schedule types:** Lecture**Department/School:** Mgmt Sci & Info Sys**MSIS 4113 Enterprise Systems and Collaborative Commerce****Prerequisites:** MSIS 2103.**Description:** Current and emerging management and technical concepts, practices, and tools for information integration and re-engineering of organizational processes. The use of enterprise resource planning tools (ERP II), collaborative commerce, supply chain, business intelligence, and e-business. Previously offered as MGMT 4113.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Undergraduate**Schedule types:** Lecture**Department/School:** Mgmt Sci & Info Sys**MSIS 4123 Information Assurance Management****Description:** A broad investigation of the elements of information assurance and security with an emphasis on the management impact to corporations and businesses engaged in the information services and e-commerce. Students should come away from the course with the ability to advise management on the risks and mitigation for all types of threats to information and privacy. May not be used for degree credit with MSIS 5123. Previously offered as MSIS 3123.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Undergraduate**Schedule types:** Lecture**Department/School:** Mgmt Sci & Info Sys**MSIS 4133 Information Technologies for Electronic Commerce****Prerequisites:** MSIS 4003.**Description:** The Internet and web-based technologies, systems and applications that allow organizations to overcome the barriers of time and distance for conducting commerce. Scripting and markup languages, web programming tools, and the connectivity technologies for designing and developing electronic commerce and systems.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Undergraduate**Schedule types:** Lecture**Department/School:** Mgmt Sci & Info Sys**MSIS 4233 Applied Information Systems Security****Prerequisites:** MSIS 3123, MSIS 4523.**Description:** An investigation into the various technical aspects of attacking and guarding against attacks and failures in various types of information systems. Course content may vary but will generally include computer, network, and data protection technologies (e.g. firewalls, packet filters, proxy servers, user authentication and validation techniques, encryption, backup methodologies, system and component redundancies, etc.). Various threats and attack methods will be examined.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Undergraduate**Schedule types:** Lecture**Department/School:** Mgmt Sci & Info Sys**MSIS 4243 Digital Forensics and Auditing****Prerequisites:** MSIS 3123, MSIS 4523.**Description:** Procedures for identification, preservation and extraction of electronic evidence. Auditing and investigation of network and host system intrusions, analysis and documentation of information gathered, and preparation of expert testimonial evidence. Forensic tools and resources for system administrators and information system security offices. Ethics, law, policy and standards concerning digital evidence.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Undergraduate**Schedule types:** Lecture**Department/School:** Mgmt Sci & Info Sys**MSIS 4253 System Certification and Accreditation****Prerequisites:** MSIS 3123.**Description:** Introduction to the certification and accreditation process. Risk analysis, system security analysis, and other topics. Previously offered as MGMT 4253.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Undergraduate**Schedule types:** Lecture**Department/School:** Mgmt Sci & Info Sys**MSIS 4263 Decision Support and Business Intelligence Applications****Prerequisites:** MSIS 2103.**Description:** Applied knowledge management tools and techniques for organizational decision support. Knowledge-based systems, decision support systems, and data mining techniques such as inductive learning and neural networks.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Undergraduate**Schedule types:** Lecture**Department/School:** Mgmt Sci & Info Sys

MSIS 4273 Legal and Ethical Issues in Information Systems**Prerequisites:** MSIS 3123.**Description:** Reviews the current status of information systems law in regard to rights of privacy, freedom of information, confidentiality, work product protection, copyright, security, legal liability, ethical issues, and a range of additional legal and information policy topics. Investigates the legal difficulties that technological innovations are causing in all of these areas. Legal options for dealing with the conflicts caused by technological change and likely adaptations of the law over time in response to societal changes will be explored.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Undergraduate**Schedule types:** Lecture**Department/School:** Mgmt Sci & Info Sys**MSIS 4283 Operating Systems for Information Assurance****Description:** Operating Systems (OS) concepts for security. Vulnerabilities and threats. Security models. User authentication. Smart cards: architectures, technologies, application environments, and case studies. System availability. Software and data integrity. Auditing. Sensitive data confidentiality. Access control. Secure OS development: design principles, design methodologies, security certification. Case studies: Unix/Linux, MS/Windows XP/2000.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Undergraduate**Schedule types:** Lecture**Department/School:** Mgmt Sci & Info Sys**MSIS 4363 Advanced Application Development****Prerequisites:** MSIS 4003 and MSIS 3363.**Description:** Develop next-generation, data driven mobile applications involving database development, development of web services, server-side business logic, and XML-based user interface design in format of a capstone project.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Graduate, Undergraduate**Schedule types:** Lecture**Department/School:** Mgmt Sci & Info Sys**MSIS 4373 Advanced Topics in Management Information Systems****Prerequisites:** Senior standing and consent of instructor.**Description:** Current and emerging advanced topics in the field of management information systems. Advanced network management, advanced electronic commerce issues, international management information systems and legal and regulatory issues in telecommunications.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Graduate, Undergraduate**Schedule types:** Lecture**Department/School:** Mgmt Sci & Info Sys**MSIS 4443 Introduction to Business Dynamics****Prerequisites:** MSIS 2103 and MSIS 3223 and STAT 2023.**Description:** Simulation modeling of business systems, such as inventory, financial management, data communications, information system problems, or other queuing situations. Collection and numerical analysis of associated data, model verification and validation, model sustainability, and understanding of simulation as a useful tool in management science and information systems. Previously offered as MGMT 4443.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Graduate, Undergraduate**Schedule types:** Lecture**Department/School:** Mgmt Sci & Info Sys**MSIS 4523 Data Communication Systems****Prerequisites:** MSIS 2103.**Description:** Broad coverage of network types and protocols used to drive the diverse voice, video and data needs of today's business. Network vocabulary and the understanding of how telecommunications components function are stressed. Previously offered as MGMT 4523.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Graduate, Undergraduate**Schedule types:** Lecture**Department/School:** Mgmt Sci & Info Sys**MSIS 4623 Data Science Programming****Prerequisites:** MSIS 2203.**Description:** Programming concepts and applications for data science, analytics, and business intelligence. May not be used for degree credit with MSIS 5223.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Undergraduate**Schedule types:** Lecture**Department/School:** Mgmt Sci & Info Sys**MSIS 4673 Data Visualization****Prerequisites:** MSIS 2203.**Description:** This course will provide an understanding of the role of descriptive analytics, visualization, and dashboarding in direct support of managerial decision making (business intelligence and analytics). May not be used for degree credit with MSIS 5673.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Undergraduate**Schedule types:** Lecture**Department/School:** Mgmt Sci & Info Sys**MSIS 4713 Scripting Essentials****Description:** Application of scripting languages (e.g. BASH, PowerShell, Python) for general business, data and information assurance solutions. May not be used for degree credit with MSIS 5713.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Undergraduate**Schedule types:** Lecture**Department/School:** Mgmt Sci & Info Sys

MSIS 4943 Decision-Making Tools for Sports Management

Prerequisites: MSIS 3223.

Description: This course is designed as an elective for MGMT students enrolled in the Sports Management option. Useful decision tools such as statistical inference, decision analysis, mathematical programming, forecasting and simulation are used to address decisions faced by sports administrators and decisions made during sporting contests. Current 'hot' issues in sports decision-making will also be examined.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Undergraduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 5020 Advanced Applications Software Tools

Description: Advanced hands-on experience with selected software-based tool or programming languages such SAP, SQL, PERT/CPM, etc. For graduate credit only. Offered for variable credit, 1-3 credit hours, maximum of 3 credit hours.

Credit hours: 1-3

Contact hours: Lecture: 1

Levels: Graduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 5033 Information Systems Project Management

Prerequisites: Consent of MS in MIS director, MSTM director or MBA director.

Description: This class covers the important multi-faceted dimensions of directing and leading information systems projects. Topics will include behavioral, strategic, technical and quantitative issues faced by information system project teams.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Graduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 5123 Enterprise Resource Planning

Prerequisites: Admission to a graduate program.

Description: Challenges of data integration and redesign of processes in organizations. Introduction to enterprise resource planning (ERP) concepts, software, and practices. ERP issues architecture, planning, design, implementation, and project management. Extensions of ERP Technologies for managing supply chains and customer relationships. Emerging trends. May not be used for degree credit with MSIS 4123.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Graduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 5133 Advanced Web Based Application Development

Prerequisites: Admission to MBA, MSTM, or MS in MIS program, a programming object-oriented language and MSIS 5643 or instructor consent.

Description: Development of n-tier web-based applications, including concepts and technologies relating to the presentation, business, and data tiers. Technologies include (but are not limited to) browser and other client programming, server-side programming, data tier programming and XML technologies.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Graduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 5213 Information Assurance Management

Description: A broad investigation of the elements of information assurance and security with an emphasis on the management impact to corporations and businesses engaged in information services and electronic commerce. Students should come away from the course with the ability to advise management on the risks and mitigation for all types of threats to information and privacy. Course previously offered as TCOM 5223.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Graduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 5223 Programming for Data Science and Analytics

Prerequisites: MSIS 5643, graduate standing; or consent of MS or MIS director.

Description: Programming concepts and applications for data science, analytics, and business intelligence. May be not used for degree credit with MSIS 4623.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Graduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 5233 Applied Information Systems Security

Prerequisites: MSIS 5213.

Description: An investigation into the various technical aspects of attacking, and of guarding against attacks and failures in various types of information systems. Course content may vary but includes computer, network, and data protection technologies (e.g., firewalls, packet filters, proxy servers, user authentication and validation techniques, encryption, backup methodologies, system and component redundancies, etc.). Various threats and attack methods examined.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Graduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 5243 Information Technology Forensics**Prerequisites:** MSIS 5213.**Description:** Review of systems for vulnerabilities and analysis of systems that have been breached. This course will cover the many related issues and have a heavy hands-on component. Course previously offered as TCOM 5243.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Graduate**Schedule types:** Lecture**Department/School:** Mgmt Sci & Info Sys**MSIS 5253 Advanced System Certification and Accreditation****Prerequisites:** MSIS 5213.**Description:** Preparing information systems for operational status requires significant planning and sound execution. Covers the key components of the certification and accreditation process, including risk assessment and mitigation, system security analysis, controls and system documentation. Course previously offered as TCOM 5253.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Graduate**Schedule types:** Lecture**Department/School:** Mgmt Sci & Info Sys**MSIS 5263 Information Assurance Offense****Prerequisites:** MSIS 5233 and graduate coordinator permission.**Description:** Learning successful computer attacks so as to recognize and apply appropriate security controls for system vulnerabilities.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Graduate**Schedule types:** Lecture**Department/School:** Mgmt Sci & Info Sys**MSIS 5273 Legal and Ethical Issues in Information Technology****Description:** This course reviews the current status of information systems law in regard to rights of privacy, freedom of information, confidentiality, work product protection, copyright, security, legal liability, ethical issues and a range of additional legal and information policy topics. Course previously offered as TCOM 5273.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Graduate**Schedule types:** Lecture**Department/School:** Mgmt Sci & Info Sys**MSIS 5283 Secure Information Systems Administration****Prerequisites:** MSIS 5213 and MSIS 5773 and graduate coordinator permission.**Description:** Introduction to basic concepts and technologies relevant to secure information systems administration. The topics covered in this course include, but are not limited to, operating system (OS) hardening, securing servers, network protection, and various access control mechanisms.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Graduate**Schedule types:** Lecture**Department/School:** Mgmt Sci & Info Sys**MSIS 5293 Information Assurance Capstone****Prerequisites:** Final semester in program; graduate coordinator permission.**Description:** This capstone course takes a strategic view of corporate information assurance. The goal is to provide an overarching view of an information assurance program to include physical, personnel, operational, and cyber security, including the underlying legislation and Federal and state regulations that drive corporate IA programs and policy.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Graduate**Schedule types:** Lecture**Department/School:** Mgmt Sci & Info Sys**MSIS 5303 Prescriptive Analytics****Prerequisites:** Admission to a SSB graduate program.**Description:** Application of prescriptive analytic techniques to business problems. Some descriptive analytics may also be covered.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Graduate**Schedule types:** Lecture**Department/School:** Mgmt Sci & Info Sys**MSIS 5313 Production Operations Management****Prerequisites:** Admission to MBA program or consent of MBA director and MSIS 5303.**Description:** The management of operations in manufacturing and service organizations. Production planning, facility location and layouts. Inventory control, waiting line problems and simulation. Project management and quality control. Emphasis is on a management science approach.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Graduate**Schedule types:** Lecture**Department/School:** Mgmt Sci & Info Sys**MSIS 5393 Advanced Spreadsheet Modeling****Description:** Advanced spreadsheet modeling skills critical to business problem solving. Presentation, analysis, solution and communication facets are emphasized.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Graduate**Schedule types:** Lecture**Department/School:** Mgmt Sci & Info Sys**MSIS 5410 Advanced Topics in Information Assurance****Prerequisites:** Graduate standing and consent of program director.**Description:** Advanced topics in information assurance and security. Course previously offered as TCOM 5410.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Graduate**Schedule types:** Lecture**Department/School:** Mgmt Sci & Info Sys

MSIS 5413 Advanced Management Science

Prerequisites: Admission to MBA program or consent of MBA director.

Description: Advanced management science methods, with computer applications. Mathematical programming, simulation, forecasting, queuing, Markov processes.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Graduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 5503 Statistics for Data Science

Prerequisites: Graduate standing.

Description: Data Science focuses on the analysis of large secondary data sets. This course focuses on understanding and applying statistical models and techniques to obtain useful information from large data sets. These techniques are part of supervised statistical machine learning.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Graduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 5600 Special Projects in Business Information Systems

Prerequisites: Consent of MS in MIS director.

Description: Study of advanced topics not covered directly in other classes or directed study under the supervision of a faculty member. Offered for variable credit, 1-12 credit hours, maximum of 12 credit hours.

Credit hours: 1-12

Contact hours: Other: 1

Levels: Graduate

Schedule types: Independent Study

Department/School: Mgmt Sci & Info Sys

MSIS 5613 Advanced Production and Operations Management

Prerequisites: MSIS 5313 or equivalent; admission to MBA program or consent of MBA director.

Description: Production system, including a synthesis of production and management techniques used by operations managers. A computerized management simulation game provides decision-making experience.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Graduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 5623 Information and Network Technology Management

Prerequisites: Admission to a SSB graduate program or consent of MBA director.

Description: Major principles and impact of information technology from a manager's perspective in relation to the operation and success of businesses in today's global digital economy. Topics include the Internet, networks and wireless systems, database management systems, decision support systems, social media and e-business applications.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Graduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 5633 Business Intelligence Tools and Techniques

Prerequisites: Admission to MBA, MSTM, or MS in MIS program or consent of instructor.

Description: A comprehensive analysis of contemporary business intelligence tools and techniques used in managerial decision-making, including decision support systems, data and text mining, knowledge management, expert systems, neural networks, and other tools and techniques.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Graduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 5643 Advanced Database Management

Prerequisites: Admission to the MBA, MSTM or MS in MIS program or consent of instructor.

Description: Advanced theoretical and practical foundations of database systems. Brief review of classical issues surrounding design, analysis, and implementation of databases. Overview and use of modern database systems. Current and emerging issues in the database field.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Graduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 5653 Advanced Systems Analysis and Design

Prerequisites: Consent of MS in MIS director, MSTM director or MBA director.

Description: Systems thinking. Systems life cycle, modeling approaches, methods, tools, and techniques of systems analysis and design for the development of modern organizational information systems.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Graduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 5663 Data Warehousing

Prerequisites: MSIS 5643.

Description: Provides an introduction of the major activities involved in a data warehousing project. These activities include understanding fundamental principles and concepts, design principles, data warehouse prototype development, including table definitions, extract/transformation/load (ETL) logic, and example report definitions. The class will be hands-on.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Graduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 5673 Descriptive Analytics and Visualization

Description: This course will provide an understanding of the role of descriptive analytics, visualization, and dashboarding in direct support of managerial decision making (business intelligence and analytics). Specifically, knowledge about managerial decision making, business intelligence, analytics, decision support systems and how they relate to other types of information systems; knowledge about human visual processing in relation to data presentation; knowledge of dashboard design and management; and knowledge about software packages and hands-on capabilities. May not be used for degree credit with MSIS 4673.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Graduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 5683 Big Data Advanced Analytics Technologies

Prerequisites: MSIS 5633.

Description: The astounding growth of data in all aspects of life in the form of emails, weblogs, tweets, sensors, video and text has necessitated the use of Big Data and advanced analytics techniques to support large scale data analytics. This course brings together key Big Data tools on a Hadoop platform to show how to efficiently manage data with three main characteristics: volume, velocity and variety. Topics include the Hadoop platform, social media analytics, link analysis, and stream analytics.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Graduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 5713 Scripting Essentials

Description: Application of scripting languages (e.g. BASH, PowerShell, Python) for general business, data and information assurance solutions. May not be used for degree credit with MSIS 4713.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Graduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 5773 The Upper Layers of Telecommunications Systems

Description: Applied technical coverage of selected topics from the upper layers of the OSI model. Network and Transport layers using, TCP/IP, IPX/SPX, as well as security issues and other multi-layer protocol suites. Other topics include flow control, RSVP, encryption, compression, and LAN/WAN applications. Course previously offered as TCOM 5123.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Graduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 5900 Practicum in Management Information Systems

Prerequisites: Consent of director of and admission to the MS in MIS program.

Description: Application of MIS-related methods and skills in a business environment. Integration of knowledge through real-world problem solving situations in organizational contexts. Offered for variable credit, 1-6 credit hours, maximum of 6 credit hours.

Credit hours: 1-6

Contact hours: Other: 1

Levels: Graduate

Schedule types: Independent Study

Department/School: Mgmt Sci & Info Sys

MSIS 5950 Advanced Practicum

Prerequisites: Consent of director of and admission to the MS in MIS program.

Description: Application of MIS-related methods and skills in a business environment beyond the normal practicum/internship timeframe. Offered for variable credit, 1-6 credit hours, maximum of 6 credit hours.

Credit hours: 1-6

Contact hours: Other: 1

Levels: Graduate

Schedule types: Independent Study

Department/School: Mgmt Sci & Info Sys

MSIS 5990 Directed Studies in Information Assurance

Prerequisites: Graduate standing and consent of program director.

Description: Special advanced topics, projects and independent study in information assurance and security. Course previously offered as TCOM 5990. Offered for variable credit, 1-6 credit hours, maximum of 6 credit hours.

Credit hours: 1-6

Contact hours: Lecture: 1

Levels: Graduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 6200 Advanced Topics in Management Information Systems

Prerequisites: Doctoral student status and consent of instructor.

Description: Special advanced topics in management information systems for doctoral students. Offered for variable credit, 3-6 credit hours, maximum of 12 credit hours.

Credit hours: 3-6

Contact hours: Other: 3

Levels: Graduate

Schedule types: Independent Study

Department/School: Mgmt Sci & Info Sys

MSIS 6300 Contemporary Topics in MSIS Research

Prerequisites: Doctoral standing.

Description: In depth study in one or more topics in MSIS field. An ongoing conversation about major issues in the field. Topics related to any one of the areas within the broad, interdisciplinary field of management science and information systems, such as management information systems, management science, telecommunications, and operations management. Offered for variable credit, 1-12 credit hours, maximum of 12 credit hours.

Credit hours: 1-12

Contact hours: Lecture: 1

Levels: Graduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 6333 Overview of MSIS Research

Prerequisites: Doctoral standing.

Description: Recent research studies that fall within the broad, interdisciplinary field of management science and information systems. An introduction to the academic "way of life", focusing on research productivity.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Graduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys

MSIS 6343 Advanced Methods in MSIS Research

Prerequisites: Doctoral standing.

Description: Development of advanced methodological skills necessary to carry out research in the chosen area of study within the field of MSIS. Skills related to any one of the areas within the broad, interdisciplinary field of management science and information systems, such as management information systems, management science, telecommunications, and operations management. Same course as BADM 6343.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Graduate

Schedule types: Lecture

Department/School: Mgmt Sci & Info Sys