Fall 2020 Course Descriptions as of 03/30/2020 08:12 PM

Information in Browse Course Catalog is subject to change. Information is term specific. Please refer to the appropriate term when searching for course content. Key to Course Descriptions may be found at: **http://rcs.registrar.arizona.edu/course_descriptions_key**.

Management Info Systems Main (MIS)

MIS 111: Computers and Internetworked Society (3 units)
Description: This course introduces students to concepts of computer technology and the impacts of Internet on social, organizational, personal and ethical issues. Students develop a sufficient understanding of computers and other issues to form critical opinions about them, as well as acquire and hone skills to recognize and evaluate their role in interacting with the Internet.
Grading basis: Regular Grades
Career: Undergraduate
Course Components: Lecture Required
Course typically offered:
Main Campus: Fall, Spring, Summer
Online Campus: Fall, Spring, Summer

MIS 112: Computers & Internetworked Society - Lab (1 unit)
Description: This is an integrated lecture-lab course designed to introduce students to the analytical methods and tools used for business problem solving with an emphasis on analysis techniques, algorithmic design, and implementation.
Grading basis: Regular Grades
Career: Undergraduate
Course Components: Laboratory Required
Course typically offered:
Main Campus: Fall, Spring, Summer
Online Campus: Fall, Spring, Summer

-SA represents a Student Abroad & Student Exchange offering
-CC represents a Correspondence Course offering
May Be Offered Departments may offer this component in some semesters. See the Schedule of Classes for term-specific offerings.

MIS 150A1: Decision Making and Problem Solving for Daily Life (3 units)
Description: To investigate the factors affecting decision making and problem solving in daily life: how to be better prepared to tackle daily problems, how to identify creative solutions, and how to make higher quality decisions.
Grading basis: Regular Grades
Career: Undergraduate
Course Components: Discussion — May Be Offered
Lecture — Required
Course typically offered:
Main Campus: Fall, Winter, Spring, Summer

Enrollment requirement: Enrollment not allowed if you have previously taken INDV 101 "Problem Solving in Daily Life" (Topic 1).
General Education: INDV 101

MIS 150B1: Interpersonal Relationships in a Changing World (3 units)
Description: Develop an understanding of how we relate to and communicate with others, verbally and non-verbally, individually and in groups, and how communication affects how we develop our own concept of who we are. Examination of the communication process, general concepts of stigma and prejudice and relate them to topics of racial bias, gender differences, sexual orientation, different abilities, and cultural differences.
Grading basis: Regular Grades
Career: Undergraduate
Course Components: Discussion — May Be Offered
Lecture — Required
Course typically offered:
Main Campus: Fall, Spring, Summer

Enrollment requirement: Enrollment not allowed if you have previously taken INDV 102 "Interpersonal Relationships in a Changing World" (Topic 9).
General Education: Gen Ed Diversity Emphasis
General Education: INDV 102

MIS 191: Preceptorship (1 - 6 units)
Description: Students will work on an individual basis in actual service in the MIS department practicing skills, methods, and ideas learned in previous classes. Students must have previous experience or coursework in MIS.
Grading basis: Alternative Grading: S, P, F
Career: Undergraduate
Course Components: Independent Study — Required
Repeatable: Course can be repeated for a maximum of 6 units.
Course typically offered:
Main Campus: Fall, Spring

MIS 191H: Honors Preceptorship (1 - 3 units)
Description: Students will work on an individual basis in actual service in the MIS department practicing skills, methods, and ideas learned in previous classes. Students must have previous experience or coursework in MIS.
Grading basis: Regular Grades
Career: Undergraduate
Course Components: Independent Study Required
Course typically offered:
Main Campus: Fall, Spring

Enrollment requirement: Student must be active in the Honors College.
Honors Course: Honors Course
Honors Course: Honors Course

MIS 199: Independent Study (1 - 4 units)
Description: Qualified students working on an individual basis with professors who have agreed to supervise such work.
Grading basis: Alternative Grading: S, P, F
Career: Undergraduate
Course Components: Independent Study Required
Repeatable: Course can be repeated a maximum of 99 times.
Course typically offered:
Main Campus: Fall, Spring

MIS 199H: Honors Independent Study (1 - 3 units)
Description: Qualified students working on an individual basis with professors who have agreed to supervise such work.
Grading basis: Regular Grades
Career: Undergraduate
Course Components: Independent Study Required
Repeatable: Course can be repeated a maximum of 99 times.
Course typically offered:
Main Campus: Fall, Spring

Enrollment requirement: Student must be active in the Honors College.
Honors Course: Honors Course
Honors Course: Honors Course

MIS 293: Internship (1 - 3 units)
Description: Specialized work on an individual basis, consisting of training and practice in actual service in a technical, business, or governmental establishment.
Grading basis: Alternative Grading: S, P, F
Career: Undergraduate
Course Components: Independent Study Required
Repeatable: Course can be repeated a maximum of 99 times.
Course typically offered:
Main Campus: Fall, Spring

MIS 295A: Colloquium for Pre-Business Students (1 - 2 units)
Description: The purpose of this course is to expose students participating in the Zipperman Scholars Program to the field of MIS and job opportunities in the IT business field (beyond what is offered in MIS 111). Students will attend a series of colloquia presented by MIS faculty and practitioners in the field of MIS. Each semester will have an industrial theme such as professional sports industry, retail, or food industries.
Grading basis: Alternative Grading: S, P, F
Career: Undergraduate
Course Components: Colloquium Required
Repeatable: Course can be repeated a maximum of 3 times.
Course typically offered:
Main Campus: Fall, Spring

MIS 299: Independent Study (1 - 4 units)
Description: Qualified students working on an individual basis with professors who have agreed to supervise such work.
Grading basis: Alternative Grading: S, P, F
Career: Undergraduate
Course Components: Independent Study Required
Repeatable: Course can be repeated a maximum of 99 times.
Course typically offered:
Main Campus: Fall, Spring

MIS 299H: Honors Independent Study (1 - 3 units)
Description: Qualified students working on an individual basis with professors who have agreed to supervise such work.
Grading basis: Regular Grades
Career: Undergraduate
Course Components: Independent Study Required
Repeatable: Course can be repeated a maximum of 99 times.
Course typically offered:
Main Campus: Fall, Spring

Enrollment requirement: Student must be active in the Honors College.
Honors Course: Honors Course
Honors Course: Honors Course

MIS 301: Data Structures and Algorithms (3 units)
Description: This course focuses on the design and analysis of basic data structures including stacks, queues, trees, and graphs. Java implementations of selected data structures and their applications will be covered along with a tutorial in C. In addition, this course introduces algorithms for searching, sorting, and graph traversal.
Grading basis: Regular Grades
Career: Undergraduate
Course Components: Lecture Required
Equivalent to: CSC 301
Course typically offered:
Main Campus: Fall, Spring

Recommendations and additional information: MIS 331.
Enrollment requirement: Adv Stdg: Management Information Systems.

MIS 304: Using and Managing Information Systems (3 units)
Description: Students will learn ways that organizations improve their business practices through the use of computer technology. Course emphasizes systems technologies, enterprise integration, business applications, and critical analysis of organizational change through information systems.
Grading basis: Regular Grades
Career: Undergraduate
Course Components: Lecture Required
Course typically offered:
Main Campus: Fall, Spring, Summer

Enrollment requirement: Adv Stdg: Accounting, Business Management, Business Economics, Finance, Marketing, MIS, Ops Management, General Business or Entrepreneurship.

MIS 307: Business Data Communications (3 units)
Description: Data communications, networks, protocols, Internet and Electronic Commerce.
Grading basis: Regular Grades
Career: Undergraduate
Course Components: Lecture Required
Course typically offered:
Main Campus: Fall, Spring

Recommendations and additional information: MIS 331.
Enrollment requirement: Adv Stdg: Management Information Systems.

MIS 331: Database Management Systems (3 units)
Description: Introduction to database management systems; relational models; security concurrency, integrity and recovery issues; query interfaces.
Grading basis: Regular Grades
Career: Undergraduate
Course Components: Lecture Required
Equivalent to: CSC 331
Course typically offered:
Main Campus: Fall, Spring

Recommendations and additional information: MIS 301.
Enrollment requirement: Adv Stdg: Management Information Systems.

MIS 391: Preceptorship (1 - 6 units)
Description: Students will work on an individual basis in actual service in the MIS department practicing skills, methods, and ideas learned in previous classes. Students must have previous experience or coursework in MIS.
Grading basis: Alternative Grading: S, P, F
Career: Undergraduate
Course Components: Independent Study Required
Repeatable: Course can be repeated for a maximum of 6 units.
Course typically offered:
Main Campus: Fall, Spring

Recommendations and additional information: Previous experience or coursework in MIS.
Enrollment requirement: Adv Stdg: Accounting, Business Management, Business Economics, Finance, Marketing, MIS, Ops Management, General Business or Entrepreneurship.

MIS 393: Internship (1 - 3 units)
Description: Each internship will be customized to the opportunity and the student's skills. The student advisor will ensure the academic quality of the student's work.
Grading basis: Alternative Grading: S, P, F
Career: Undergraduate
Course Components: Independent Study Required
Repeatable: Course can be repeated a maximum of 99 times.
Course typically offered:
Main Campus: Fall, Spring

Enrollment requirement: Adv Stdg: Management Information Systems or Operations.

MIS 399: Independent Study (1 - 4 units)
Description: Qualified students working on an individual basis with professors who have agreed to supervise such work.
Grading basis: Alternative Grading: S, P, F
Career: Undergraduate
Course Components: Independent Study Required
Repeatable: Course can be repeated a maximum of 99 times.
Course typically offered:
Main Campus: Fall, Spring

Enrollment requirement: Adv Stdg: Management Information Systems or Operations.

MIS 399H: Honors Independent Study (1 - 3 units)
Description: Qualified students working on an individual basis with professors who have agreed to supervise such work.
Grading basis: Regular Grades
Career: Undergraduate
Course Components: Independent Study Required
Repeatable: Course can be repeated a maximum of 99 times.
Course typically offered:
Main Campus: Fall, Spring

Enrollment requirement: Adv Stdg: Management Information Systems or Operations. Honors active.
Honors Course: Honors Course
Honors Course: Honors Course

MIS 406: Healthcare Information Systems (3 units)
Description: This course introduces students to the concepts and practices of healthcare information systems.. Topics include: (1) introduction to the health IT discipline; (2) major applications and commercial vendors; (3) decision support methods and technologies; (4) information systems design and engineering; and (5) new opportunities and emerging trends. A semester-long group project will provide students hands-on experience in planning and building healthcare information systems; associated ethical and legal concerns, software engineering and human-computer interaction issues, and user acceptance and outcomes evaluation methods will also be discussed.
Grading basis: Regular Grades
Career: Undergraduate
Course Components: Lecture Required
Course typically offered:
Main Campus: Fall, Spring

MIS 411: Social and Ethical Issues of the Internet (3 units)
Description: Broad survey of the individual, organizational, cultural, social and ethical issues provoked by current and projected uses of networked computers on the Internet.
Grading basis: Regular Grades
Career: Undergraduate
Course Components: Lecture Required
Co-convened with: MIS 511
Course typically offered:
Main Campus: Spring

Enrollment requirement: Adv Stdg: Management Information Systems or Operations.

MIS 415: Information Security in Public and Private Sectors (3 units)
Description: This course exposes the student to a broad range of computer systems and information security topics. It is designed to provide a general knowledge of measures to insure confidentiality, availability, and integrity of information systems. Topics range from hardware, software and network security to INFOSEC, OPSEC and NSTISS overviews. Components include national policy, threats, countermeasures, and risk management among others.
Grading basis: Regular Grades
Career: Undergraduate
Course Components: Lecture Required
Co-convened with: MIS 515
Course typically offered:
Main Campus: Fall, Spring

Recommendations and additional information: General knowledge of computer systems and networks.
Enrollment requirement: Adv Stdg: Management Information Systems or Operations.

MIS 416: Information Security Risk Management (3 units)
Description: The objective of our MIS 416/516 course is to provide students with a thorough understanding of risk management as it applies to information security and corporate assets. The course covers numerous concepts to include asset valuation, data collection, conducting a risk assessment, risk reporting and monitoring as well as presenting various risk assessment models and frameworks. Students will complete this course with an understanding of the elements and steps necessary for completing a risk assessment.
Grading basis: Regular Grades
Career: Undergraduate
Course Components: Lecture Required
Co-convened with: MIS 516
Course typically offered:
Main Campus: Fall, Spring

Enrollment requirement: Adv Stdg: Management Information Systems or Operations.

MIS 417: Systems Security Management (3 units)
Description: The information security arena contains a broad array of multi-level models for assessing, planning, implementing and monitoring the mitigation of security risks. At the very core of this information security spectrum are the actual system and network devices which store, manage, transmit and secure information. This course is designed to provide a working knowledge of issues and techniques surrounding the proper safeguarding of operating systems and related components. Filled with Information Assurance topics, this course offers a solid base for system administrators and technical managers.
Grading basis: Regular Grades
Career: Undergraduate
Course Components: Lecture Required
Co-convened with: MIS 517
Course typically offered:
Main Campus: Fall, Spring

Enrollment requirement: Adv Stdg: Management Information Systems or Operations.

MIS 427: Introduction to Enterprise Computing Environments (3 units)
Description: Enterprise Resource Planning (ERP) systems represents integrated strategy for management of information among organizations, suppliers and customers.
Grading basis: Regular Grades
Career: Undergraduate
Course Components: Lecture Required
Co-convened with: MIS 527
Course typically offered:
Main Campus: Fall

Enrollment requirement: Adv Stdg: Management Information Systems or Operations.

MIS 429: Detection of Deception and Intent (3 units)
Description: With the increased challenges from terrorism, the need to protect against security threats is even greater today. Thus, it is becoming increasingly necessary to find innovative and better ways to protect ourselves from these security threats. Finding less invasive techniques of detection suggests analyzing people's behavior or the ways/patterns in which they talk/write and identify cues to detect deception and the intent of deception. Also, this procedure needs to be automated using software tools and techniques because of the infeasibility of the manual approach for deployment of these techniques on a large scale. Thus our focus in this course is geared towards developing software tools and techniques dealing with the automatic deception and intent. The course will be project-based involving exchange of ideas, opportunities, challenges, and research issues as well as development of software tools and techniques, in the area of detection of deception and intent, primarily based on the current research work being done at the Center for the Management of Information (CMI) at the University of Arizona.
Grading basis: Regular Grades
Career: Undergraduate
Course Components: Lecture Required
Co-convened with: MIS 529
Course typically offered:
Main Campus: Spring

Enrollment requirement: Adv Stdg: Management Information Systems or Operations.

MIS 441: Information Systems Analysis and Design (3 units)
Description: The analysis and logical design of business processes and management information systems focusing on the systems development life cycle; project management and cost-benefit analysis; techniques for gathering and analyzing information systems requirements; use of automated and non-automated techniques for logical system design.
Grading basis: Regular Grades
Career: Undergraduate
Course Components: Lecture Required
Course typically offered:
Main Campus: Fall, Spring

Recommendations and additional information: MIS 301, MIS 307.
Enrollment requirement: Adv Stdg: Management Information Systems.

MIS 460: Human Resource Information Systems (3 units)
Description: This course will examine the strategic role of Human Resource Information Systems (HRIS) in the effective management of organizations. The focus of the course will be the determination of the organizational need for HRIS, the factors that assist in the selection and evaluation of an appropriate HRIS as well as an introduction to software application packages that produce reports for management decision-making. Student classroom experiences with specific software tools will be linked to critical needs in functional Human Resource Management (HRM) activities such as Performance Management, Compensation and Benefits, Equal Employment Opportunity and Affirmative Action, Labor Relations and Human Resource Planning as well as enterprise computing needs. The role of HRIS in current Information Management topics such as the Internet, Convergence, Privacy, Security, System Integration and Expert Systems will be explored.
Grading basis: Regular Grades
Career: Undergraduate
Course Components: Lecture Required
Equivalent to: MAP 460, MIS 460
Also offered as: MGMT 460
Course typically offered:
Main Campus: Spring

Home department: Management & Organizations
Enrollment requirement: Adv Stdg: Business Management.

MIS 464: Data Analytics (3 units)
Description: Business intelligence and analytics and the related field of big data analytics have become increasingly important in both the academic and the business communities over the past two decades. The IBM Tech Trends Report identified business analytics as one of the four major technology trends in the 2010s and beyond. A report by the McKinsey Global Institute predicted that by 2018, the United States alone will face a shortage of 140,000 to 190,000 people with deep data analytical skills, as well as a shortfall of 1.5 million data-savvy managers with the know-how to analyze big data to make effective decisions. Big data and data science have begun to transform different facets of the society, from e-commerce and global logistics, to smart health and cyber security.This undergraduate senior level course (elective) will cover the important concepts and techniques relating to data analytics, including: statistical foundation, data mining methods, data visualization, and web mining techniques that are applicable to emerging e-commerce, government, health and security applications. The course contains lectures, readings, lab sessions, and hands-on projects. Most business school seniors are welcome. The course will require some basic computing and database background. The course will prepare students to become a data scientist or a data-savvy manager for different businesses.
Grading basis: Regular Grades
Career: Undergraduate
Course Components: Lecture Required

MIS 478: Project Management (3 units)
Description: Project Management is the application of knowledge, analytical skills, scheduling software tools and techniques related to various project activities in order to meet project requirements. This course specifically addresses the nine project management "knowledge areas", the five project management "process groups" and the 4-way constraints of project management (i.e., scope, time, cost, quality). Graduate-level requirements include an additional term paper or team-based PM Project with a real organization.
Grading basis: Regular Grades
Career: Undergraduate
Course Components: Lecture Required
Co-convened with: MIS 578
Course typically offered:
Main Campus: Fall, Spring

Recommendations and additional information: MIS 373.
Enrollment requirement: Adv Stdg: Management Information Systems or Operations.

MIS 496A: Special Topics in Management Information Systems (3 units)
Description: The development and exchange of scholarly information, usually in a small group setting. The scope of work shall consist of research by course registrants, with the exchange of the results of such research through discussion, reports, and/or papers. Course may include special topics in MIS such as advanced research methodologies, strategic business modeling and simulation, and other potential new topics.
Grading basis: Regular Grades
Career: Undergraduate
Course Components: Seminar Required
Repeatable: Course can be repeated for a maximum of 9 units.
Co-convened with: MIS 596A
Course typically offered:
Main Campus: Fall, Spring

Enrollment requirement: Adv Stdg: Management Information Systems or Operations.

MIS 498H: Honors Thesis (3 units)
Description: An honors thesis is required of all the students graduating with honors. Students ordinarily sign up for this course as a two-semester sequence. The first semester the student performs research under the supervision of a faculty member; the second semester the student writes an honors thesis.
Grading basis: Regular Grades
Career: Undergraduate
Course Components: Independent Study Required
Repeatable: Course can be repeated for a maximum of 9 units.
Course typically offered:
Main Campus: Fall, Spring

Enrollment requirement: Adv Stdg: Management Information Systems or Operations. Honors active.
Honors Course: Honors Course
Honors Course: Honors Course
Writing Emphasis: Writing Emphasis Course

MIS 499: Independent Study (1 - 4 units)
Description: Qualified students working on an individual basis with professors who have agreed to supervise such work.
Grading basis: Alternative Grading: S, P, F
Career: Undergraduate
Course Components: Independent Study Required
Repeatable: Course can be repeated a maximum of 99 times.
Course typically offered:
Main Campus: Fall, Spring

Enrollment requirement: Adv Stdg: Management Information Systems or Operations.

MIS 499H: Honors Independent Study (3 units)
Description: Qualified students working on an individual basis with professors who have agreed to supervise such work.
Grading basis: Regular Grades
Career: Undergraduate
Course Components: Independent Study Required
Repeatable: Course can be repeated a maximum of 99 times.
Course typically offered:
Main Campus: Fall, Spring

Enrollment requirement: Adv Stdg: Management Information Systems or Operations. Honors active.
Honors Course: Honors Course
Honors Course: Honors Course

MIS 501: Fundamentals of Object-Oriented Programming (3 units)
Description: Object-oriented programming is the underlying technology that allows you to play online games, generate apps for your mobile devices, view images in 3D, and to develop intranet and other e-business applications that are the foundation of corporate computing. The course is intended to provide a solid foundation in and understanding of the principles of object-oriented programming language using the Java language and/or to serve as a refresher for more advanced work.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required
Course typically offered: Online Campus: Fall, Spring

MIS 506: Healthcare Information Systems (3 units)
Description: This course introduces students to the concepts and practices of healthcare information systems.. Topics include: (1) introduction to the health IT discipline; (2) major applications and commercial vendors; (3) decision support methods and technologies; (4) information systems design and engineering; and (5) new opportunities and emerging trends. A semester-long group project will provide students hands-on experience in planning and building healthcare information systems; associated ethical and legal concerns, software engineering and human-computer interaction issues, and user acceptance and outcomes evaluation methods will also be discussed. Graduate-level requirements include leading a class discussion on a course related topic.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required
Course typically offered:
Main Campus: Fall, Spring

MIS 507: Software Design and Integration (3 units)
Description: The course will begin with a discussion of techniques and notations for object-oriented modeling. Building on these modeling techniques, we will then discuss strategies for implementing reusable and extensible systems and in particular design patterns--templates for software design that have been proved to deliver great practical value. The course will also cover a selected set of software engineering and project management issues and the current thinking on what constitutes the best practice to deal with these issues.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required
Course typically offered:
Main Campus: Fall

Recommendations and additional information: MIS 541 or consent of instructor. This course is also offered via the MISonline program.
Enrollment requirement: Graduate major: MIS.

-SA represents a Student Abroad & Student Exchange offering
-CC represents a Correspondence Course offering
May Be Offered Departments may offer this component in some semesters. See the Schedule of Classes for term-specific offerings.

MIS 507A: Software Design and Integration (3 units)
Description: MIS 507 aims to equip students with advanced object-oriented system design and software engineering principles and techniques to tackle modern challenges facing the development and maintenance of production-quality software systems in today's fast-paced business environments. The students are expected to develop software architectural designs using design patterns, to write small- to medium-sized computer code to implement such patterns, and to understand a range of software design and integration challenges and implement the best practice from the industry to deal with such challenges. Prerequisites for MIS 507: prior computer programming experience in Java, C++, C#, or python.Although programming is not a particular emphasis of MIS 507, students are expected to be able to write some object-oriented computer code throughout the class (ranging roughly from 50 lines -- 400 lines). The emphasis of coding will be on defining classes/subclasses, and the use of composition and inheritance. For students who do not have prior programming experience, they are strongly encouraged to complete MIS 501 Fundamentals of Object Oriented Programming before enrolling in MIS 507.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required
Course typically offered: Online Campus: Fall, Summer

-SA represents a Student Abroad & Student Exchange offering
-CC represents a Correspondence Course offering
May Be Offered Departments may offer this component in some semesters. See the Schedule of Classes for term-specific offerings.

MIS 509: Business Communications (3 units)
Description: Today's job candidates face an exciting and challenging job market with a need to focus their professional energies as soon as they enter graduate school. As the most recent Corporate Recruiter's Survey claims, `Regardless of company recruiting strategy, MBAs are most sought by employees for business management and communication skills, beyond technical or quantitative skills.(2008). Regardless of a student's "dream job" after graduation the strategies for enhancing these skills, especially the soft "people skills" are critical additions to any professional's portfolio of knowledge. Toward this end, MIS 509, introduces a strategic approach to professional communication, examines principles of effective writing and speaking, and provides practice for developing a more polished, focused, and professional persona. Key components include: audience analysis, communicator credibility, message construction, design, delivery, and style flexibility. Assignments - a combination of both individual and team-based, will focus on strategies for successful internal and external corporate communication and application, including written documents, communication simulations, skills-based workshops, and professional presentations. Assignments will include responding in multiple simulations to varying audiences to replicate the internal mechanisms of experiential learning and position students for success in subsequent courses. Students will receive instruction in class, have the opportunity to perform in simulations and receive coached feedback, as well as participate in weekly workshops or lectures to deepen their understanding of crucial communication practices. At course conclusion, the generation of an E-portfolio will provide students with the foundation to collect exhibit and share evidence of their professional communication abilities.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required
Course typically offered:
Main Campus: Fall

Enrollment requirement: Graduate major: MIS.

-SA represents a Student Abroad & Student Exchange offering
-CC represents a Correspondence Course offering
May Be Offered Departments may offer this component in some semesters. See the Schedule of Classes for term-specific offerings.

MIS 510: Web Computing and Mining (3 units)
Description: This course introduces data mining algorithms that are suited for developing Internet-based information systems in business intelligence, search engines, knowledge management systems, web/data/text mining, national security, and biomedical informatics. The course contains lectures, readings, lab sessions, and a large-scale hands-on system development project. The course comprises introductions to big data, APIs for data collection, basic algorithms for traversing the Internet (e.g. tree/graph traversal) followed by robust web/data/text mining algorithms (e.g., neural networks, decision trees), and practical natural language processing algorithms and tools. These are introduced in the context of modern and emerging information systems in business, engineering, and bioinformatics.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required
Course typically offered:
Main Campus: Spring

Recommendations and additional information: Java Programming.
Enrollment requirement: Graduate major: MIS.

MIS 511: Social and Ethical Issues of the Internet (3 units)
Description: Broad survey of the individual, organizational, cultural, social and ethical issues provoked by current and projected uses of networked computers on the Internet. Graduate-level requirements include an additional term paper.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required
Co-convened with: MIS 411
Course typically offered:
Main Campus: Spring

MIS 512B: Management of Technology II (3 units)
Description: To provide and practical and in depth understanding of management at the first and second levels, the integration of product to market requirements and synchronization of organizations in the challenging and complex world of technology management. The course will include team role playing, in depth (deep dive) analysis of product and organizational process which have insured the sustained and successful performance of technology companies. The content will include lectures, seminars, shared personal experience from senior managers of technology-based enterprises, course specific academic literature, and guest speakers.
Grading basis: Regular Grades
Career: Graduate

Course Components:	Discussion	May Be Offered
	Independent Study	May Be Offered
	Lecture	Required

Equivalent to: MAP 512B, MGMT 512B, MIS 512B
Also offered as: ENGR 512B, MGMT 512B
Course typically offered:
Main Campus: Fall, Spring

Home department: Engineering Administration

MIS 513: Business Foundations for IT (3 units)
Description: This course will integrate many business foundations in support of MIS students in the MS program. In today's environment, IT solutions have to support the competitive needs of organizations and recognize the inter-organizational nature of business processes. In addition, the IT solutions have to support the financial well-being of a firm as well as its responsibility to various stakeholders. This course uses five modules: business strategy in a global environment, process analysis and re-design in an ever expanding value chain; IT in support of these business processes, economic justification, and social implications.
Grading basis: Regular Grades
Career: Graduate

Course Components:	Lecture	Required

Course typically offered:
Main Campus: Spring
Online Campus: Fall, Spring, Summer

Recommendations and additional information: This course is also offered via the MISonline program.

-SA represents a Student Abroad & Student Exchange offering
-CC represents a Correspondence Course offering
May Be Offered Departments may offer this component in some semesters. See the Schedule of Classes for term-specific offerings.

MIS 514: Information Technology Audit (3 units)
Description: This course covers using controls to protect information assets. Topics include internal and external IT auditing, the role of auditing role in information security, the IT audit process, system independent IT audit processes, system dependent IT audit processes, auditing outsourced IT systems and resources. Controls covered will include desktop computer controls, systems development controls, computer center operation controls, assurance of information related to on-line, client-server, web-based, internet, cloud computing, virtualization and other advanced computer topics. Students will learn approaches to evaluating and addressing technology risk throughout the organization from the perspective of internal and external audit in addition to the view of end users. Topics included in the class will include coverage of all areas to prepare students to take the Certified Information Systems Auditor (CISA) exam.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required
Also offered as: ACCT 514
Course typically offered:
Main Campus: Spring

MIS 515: Information Security in Public and Private Sectors (3 units)
Description: This course exposes the student to a broad range of computer systems and information security topics. It is designed to provide a general knowledge of measures to insure confidentiality, availability, and integrity of information systems. Topics range from hardware, software and network security to INFOSEC, OPSEC and NSTISS overviews. Components include national policy, threats, countermeasures, and risk management among others. Graduate-level requirements include an oral case study report as their final. This course is also available through Distance Learning.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required
Equivalent to: MIS 556
Co-convened with: MIS 415
Course typically offered:
Main Campus: Fall, Spring
Online Campus: Fall, Summer

Recommendations and additional information: General knowledge of computer systems and networks. Credit allowed for only one of the courses: MIS 515 or MIS 556.

MIS 515E: Information Security in Public and Private Sectors (2 units)
Description: The protection of information assets and sensitive data, against natural disasters and cyber-attacks, is a reality for each of us personally as well as for governments and organizations. Before one can begin to comprehend depth and gravity of these concerns, it is incumbent on each and every one of us to become aware of the threats and vulnerabilities that surround us. This course exposes you to a broad range of information security topics. It is designed to provide a general, yet comprehensive knowledge of measures to insure confidentiality, availability, and integrity of information systems.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required
Course typically offered:
Main Campus: Fall, Spring, Summer
Online Campus: Summer

MIS 516: Information Security Risk Management (3 units)
Description: The objective of our MIS 416/516 course is to provide students with a thorough understanding of risk management as it applies to information security and corporate assets. The course covers numerous concepts to include asset valuation, data collection, conducting a risk assessment, risk reporting and monitoring as well as presenting various risk assessment models and frameworks. Students will complete this course with an understanding of the elements and steps necessary for completing a risk assessment.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required
Equivalent to: MIS 557
Co-convened with: MIS 416
Course typically offered:
Main Campus: Fall, Spring
Online Campus: Spring, Summer

MIS 517: Systems Security Management (3 units)
Description: The information security arena contains a broad array of multi-level models for assessing, planning, implementing and monitoring the mitigation of security risks. At the very core of this information security spectrum are the actual system and network devices which store, manage, transmit and secure information. This course is designed to provide a working knowledge of issues and techniques surrounding the proper safeguarding of operating systems and related components. Filled with Information Assurance topics, this course offers a solid base for system administrators and technical managers. Graduate-level requirements include an additional project and presentation. Drop prerequisiste. This course is also available through Distance Learning.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required
Equivalent to: MIS 552
Co-convened with: MIS 417
Course typically offered:
Main Campus: Fall, Spring
Online Campus: Fall, Spring

MIS 527: Introduction to Enterprise Computing Environments (3 units)
Description: Enterprise Resource Planning (ERP) systems represents integrated strategy for management of information among organizations, suppliers and customers. Graduate-level requirements include completion of a group project on an advanced complementary or enabling technology using ERP. Students' projects include implementation or demonstration and presentation to class.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required
Equivalent to: MIS 558
Co-convened with: MIS 427
Course typically offered:
Main Campus: Fall

Recommendations and additional information: Credit allowed for only one of the courses: MIS 527 or MIS 558.

MIS 529: Detection of Deception and Intent (3 units)
Description: With the increased challenges from terrorism, the need to protect against security threats is even greater today. Thus, it is becoming increasingly necessary to find innovative and better ways to protect ourselves from these security threats. Finding less invasive techniques of detection suggests analyzing people's behavior or the ways/patterns in which they talk/write and identify cues to detect deception and the intent of deception. Also, this procedure needs to be automated using software tools and techniques because of the infeasibility of the manual approach for deployment of these techniques on a large scale. Thus our focus in this course is geared towards developing software tools and techniques dealing with the automatic deception and intent. The course will be project-based involving exchange of ideas, opportunities, challenges, and research issues as well as development of software tools and techniques, in the area of detection of deception and intent, primarily based on the current research work being done at the Center for the Management of Information (CMI) at the University of Arizona. Graduate-level requirements include additional readings at graduate difficulty and detail level with class projects oriented toward their Masters' project or Ph.D. dissertation.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required
Co-convened with: MIS 429
Course typically offered:
Main Campus: Spring

MIS 529E: Human Deception in Business and Society (1 unit)
Description: Deception is pervasive in business and society. This course focuses on deception in human communication. Topics include a) what is deception, b) current and novel deception detection techniques, and c) detecting deception in real-world scenarios.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required
Course typically offered:
Main Campus: Fall, Spring
Online Campus: Fall, Spring, Summer

-SA represents a Student Abroad & Student Exchange offering
-CC represents a Correspondence Course offering
May Be Offered Departments may offer this component in some semesters. See the Schedule of Classes for term-specific offerings.

MIS 531: Enterprise Data Management (3 units)
Description: This course introduces the student to fundamentals of database analysis, design, and implementation. Emphasis is on practical aspects of business process analysis and the accompanying database design and development. Topics covered include: conceptual design of databases using the entity relationship model, relational design and normalization, SQL and PL/SQL, web based database design, and implementation using Oracle or some other modern Database Management Systems. Students are required to work with a local client organization in understanding their business requirements, developing a detailed set of requirements to support business processes, and designing and implementing a web based database application to support their day- to-day business operations and decision making. Students will acquire hands-on-experience with a state-of-the-art database management system such as Oracle or Microsoft SQL Server, and web-based development tools.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required
Course typically offered:
Main Campus: Fall
Online Campus: Fall, Spring

MIS 541: Information Systems Analysis and Design (3 units)
Description: This course provides an understanding and application of system analysis and design processes centered on the systems development life cycle. Core topics include: project management and cost-benefit analysis; information systems planning and project identification and selection; requirements collection and structuring; process modeling; conceptual and logical data modeling; database design and implementation; design of the human-computer interface (HCI); system implementation; system maintenance and change management. Students will also be introduced to comparative development methodologies and modeling tools. The course involves a substantial project where students will learn the importance of effective communication and integration with users and user systems. The course emphasizes interpersonal skill development with clients, users, team members, and others associated with development, operation, and maintenance of systems. This course is also offered via the MISonline program.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required
Equivalent to: CSC 541
Course typically offered:
Main Campus: Fall
Online Campus: Spring, Summer

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-CC represents a Correspondence Course offering
May Be Offered Departments may offer this component in some semesters. See the Schedule of Classes for term-specific offerings.

MIS 543: Business Data Communications & Networking (3 units)
Description: This course provides an in-depth knowledge of data communications and networking requirements, including networking technologies, hardware, and software. This course has two objectives. First, it focuses on basic networking standards and protocols. Second, students will learn to evaluate, select, and implement different data network options and prepare a cost-benefit analysis for a proposed solution.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required
Course typically offered:
Main Campus: Fall

MIS 545: Data Mining for Business Intelligence (3 units)
Description: Corporations today are said to be data rich but information poor. For example, retailers can easily process and capture millions of transactions every day. In addition, the widespread proliferation of economic activity on the Internet leaves behind a rich trail of micro-level data on consumers, their purchases, retailers and their offerings, auction bidding, music sharing, so on and so forth. Data mining techniques can help companies discover knowledge and acquire business intelligence from these massive datasets. This course will cover data mining for business intelligence. Data mining refers to extracting or "mining" knowledge from large amounts of data. It consists of several techniques that aim at discovering rich and interesting patterns that can bring value or "business intelligence" to organizations. Examples of such patterns include fraud detection, consumer behavior, and credit approval. The course will cover the most important data mining techniques --- classification, clustering, association rule mining, visualization, prediction --- through a hands-on approach using XL Miner and other specialized software, such as the open-source WEKA software.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required
Course typically offered:
Main Campus: Fall
Online Campus: Spring, Summer

Recommendations and additional information: This course is also offered via the MISonline program.

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-CC represents a Correspondence Course offering
May Be Offered Departments may offer this component in some semesters. See the Schedule of Classes for term-specific offerings.

MIS 561: Data Visualization (3 units)
Description: Visualizing data is an important step in understanding data, exploring relationships, and "making a case." The goal of this class is to introduce students to principles and tools of data visualizations, and create visualizations using appropriate tools for two different but related purposes: (1) exploration; and (2) presentation. The first part is about trying to understand the data and test hypotheses that drive the data visualization effort, and formulate a story; the second part is to convey that finding to others in a convincing manner.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required
Course typically offered:
Main Campus: Spring

MIS 562: Cyber Threat Intelligence (3 units)
Description: This course is designed to provide students with a hands-on introduction to the fundamental concepts and tools of modern cyber threat intelligence. Students will become familiar with the cyber threat intelligence lifecycle, identifying, collecting, and integrating intelligence feeds, common intelligence formats, and standard cyber threat intelligence technologies (e.g., CIF servers, TAXII servers, SIEM's etc.).
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required
Course typically offered: Online Campus: Fall, Spring

Recommendations and additional information: Students are recommended to have an introduction to data mining, Python, web development, and databases.

MIS 566: Penetration Testing: Ethical Hacking and Social Engineering (3 units)
Description: This course introduces students to the principles and techniques of the cybersecurity practice known as penetration testing (pen testing), or ethical hacking, and covers the full pen test life cycle. Students discover how system vulnerabilities can be exploited and learn how to avoid such problems. Students will review various tools and methods commonly used to compromise information and control systems. Ethical hacking, also known as penetration testing, is the act of breaking into a system with the permission and legal consent of the organization or individual who owns and operates the system, with the purpose of identifying vulnerabilities to strengthening the organization's security. Students will conduct hands-on penetration tests in a lab environment to practice the concepts presented and tools reviewed in the course. This course is an ethical hacking course and students will learn hacking techniques within a controlled environment for the goal of better securing the IT resources of their rightful owners.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required

MIS 578: Project Management (3 units)
Description: Project Management is the application of knowledge, analytical skills, scheduling software tools and techniques related to various project activities in order to meet project requirements. This course specifically addresses the nine project management "knowledge areas", the five project management "process groups" and the 4-way constraints of project management (i.e., scope, time, cost, quality). Graduate-level requirements include an additional term paper or team-based PM Project with a real organization. Graduate-level requirements include an additional term paper or team-based PM Project with a real organization.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required
Equivalent to: MIS 559
Co-convened with: MIS 478
Course typically offered:
Main Campus: Fall, Spring
Online Campus: Fall

Recommendations and additional information: Credit allowed for only one of the courses: MIS 578 or MIS 559.

MIS 578E: Project Management (2 units)
Description: Numerous surveys suggest that employers increasingly recognize project management as one of the most important skills that business students should possess. Whether or not they plan to become a project manager, students will inevitably work on various project teams in different capacities, or their own projects. Understanding basic principles of project management, and knowing how to use the concepts, tools and methods of this booming field, can significantly increase the chance that students become successful with these endeavors. In fact, the methods and principles that students learn in this class can be readily applied to their other MBA classes, the whole MBA program, their work, and even their personal life. As will soon become clear, "common sense" is essential in project management, but this field is much more than that: Effective management of projects requires "applying common sense with uncommon discipline." (Textbook #1, page 3) This course will take students through a typical process of managing projects, including organizing, planning, and performing projects; and will present to students a scientific, systematic approach to project management.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required
Course typically offered:
Main Campus: Fall, Spring, Summer
Online Campus: Spring

MIS 584: Big Data Technologies (3 units)
Description: This course is to help master-level graduate students develop necessary skills of collecting, storing and managing, exploring, processing and computing big data for business purposes. Topics covered in this course will include big data collection for business, data management with SQL and NoSQL based technologies, data exploration and preprocessing for analytics, data dashboards for business, distributed data storage and computing, and big data based machine learning systems. This course will use state-of-the-art data management, data exploration and computing, and big data machine learning software tools (such as SQL Server, MongoDB, PySpark and TensorFlow) to provide hands-on experience. Students will learn how to apply big data techniques to sift through large amounts of data and provide actionable business insights.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required
Course typically offered:
Main Campus: Fall

Field trip: N/A

MIS 585: Strategic Management of Information Systems (2 units)
Description: The real-world principles, tactics, and strategies for managing information technology in for profit and not-for-profit enterprises are explored from an executive perspective.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required
Course typically offered:
Main Campus: Spring
Online Campus: Fall, Spring

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-CC represents a Correspondence Course offering
May Be Offered Departments may offer this component in some semesters. See the Schedule of Classes for term-specific offerings.

MIS 586: Big Data Analytics (3 units)
Description: The amount of data in our world has been exploding, resulting in what is popularly known as Big Data. At least three major forces are driving the interest and growth in Big Data (1) a rapid increase in the amount of data being generated on the internet, (2) the evolving strategy of firms to collect data from sources both internal and external along the entire product and process lifecycle, and (3) the phenomenal growth of social media, mobile applications, and sensor based technologies as well as the Internet of Things. All of these forces are generating a flood of data which is increasing in volume, variety and velocity.The objective of this course is to introduce students to Data Science techniques to collect, process, visualize and analyze all kinds of "Big Data". It will provide training to those interested in becoming Data Scientists. The course will delve into Web analytics and students will be exposed to tools such as Google analytics and participate in a Google Online Challenge to compete for awards. Topics related to network analysis techniques will be covered in detail where students will learn how to construct, mathematically analyze and visualize different types of networks. Additionally, students will also learn about using MongoDb, Hadoop, and executing map-reduce jobs to process and analyze large datasets collected from social media sites such as Twitter, Youtube, and Facebook.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required
Course typically offered:
Main Campus: Fall

Recommendations and additional information: MIS 531 or an equivalent database course.

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May Be Offered Departments may offer this component in some semesters. See the Schedule of Classes for term-specific offerings.

MIS 587: Business Intelligence (3 units)
Description: The objective of this course is to give students a broad overview of managerial, strategic and technical issues associated with Business Intelligence and Data Warehouse design, implementation, and utilization. Topics covered will include the principles of dimensional data modeling, techniques for extraction of data from source systems, data transformation methods, data staging and quality, data warehouse architecture and infrastructure, and the various methods for information delivery. Critical issues in planning, physical design process, deployment and ongoing maintenance will also be examined. Students will learn how data warehouses are used to help managers successfully gather, analyze, understand and act on information stored in data warehouses. The components and design issues related to data warehouses and business intelligence techniques for extracting meaningful information from data warehouses will be emphasized. The course will use state-of-the-art data warehouse and OLAP software tools to provide hands-on experience in designing and using Data Warehouses and Data Marts. Students will also learn how to gather strategic decision making requirements from businesses, develop key performance indicators (KPIs) and corporate performance management metrics using the Balanced Scorecard, and design and implement business dashboards.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required
Course typically offered:
Main Campus: Spring
Online Campus: Fall, Spring

Recommendations and additional information: MIS 531 or an equivalent database course. This course is also offered via the MISonline program.

MIS 593: Internship (1 - 3 units)
Description: Specialized work, consisting of individual training and practice in actual service in a technical, business, or governmental establishment.
Grading basis: Alternative Grading: S, P, F
Career: Graduate
Course Components: Independent Study Required
Course typically offered:
Main Campus: Summer

MIS 596A: Special Topics in Management Information Systems (3 units)
Description: The development and exchange of scholarly information, usually in a small group setting. The scope of work shall consist of research by course registrants, with the exchange of the results of such research through discussion, reports, and/or papers. Course may include special topics in MIS such as advanced research methodologies, strategic business modeling and simulation, and other potential new topics.
Grading basis: Regular Grades
Career: Graduate
Course Components: Seminar Required
Repeatable: Course can be repeated for a maximum of 9 units.
Equivalent to: ACCT 596A
Co-convened with: MIS 496A
Course typically offered:
Main Campus: Fall, Spring

MIS 599: Independent Study (1 - 6 units)
Description: Qualified students working on an individual basis with professors who have agreed to supervise such work. Graduate students doing independent work which cannot be classified as actual research will register for credit under course number 599, 699, or 799.
Grading basis: Alternative Grading: S, P, F
Career: Graduate
Course Components: Independent Study Required
Repeatable: Course can be repeated a maximum of 99 times.
Course typically offered:
Main Campus: Fall, Spring, Summer

Recommendations and additional information: This course is also offered online.

MIS 601: Statistical Foundations of Machine Learning (3 units)
Description: This course is designed to introduce fundamental statistical principles and modern applied machine learning techniques. The first part will cover the basics of classical probability theory and statistical inference. The second part will introduce statistical learning, with particular attention paid to R implementations. Examples are drawn from marketing, finance and other areas for illustration.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required

MIS 611A: Design Science Research Methodologies (3 units)
Description: Introduces beginning doctoral degree students and advanced master's degree students to important research and survey articles in the field of management information systems.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required
Course typically offered:
Main Campus: Fall

MIS 611B: Topics in Research Methodologies in MIS (3 units)
Description: Provides a knowledge of research methodologies used in the MIS discipline, including experimental design, surveys, case studies, field work, and software engineering.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required
Course typically offered:
Main Campus: Spring

MIS 611C: Economics of Information Systems (3 units)
Description: It is increasingly common to see studies that use principles, theories, and methods from the economics discipline to investigate phenomena of interest to the information systems field. The objective of this class is to introduce PhD students to this field. This class will survey the existing literature for typical applications of economic approaches, and organize them by their contexts. This full semester class will meet once a week for 2.5 hours. It will be a readings and discussion class, with heavy emphasis on both reading and discussion. There will be research articles assigned for readings every week. Students will be expected to read and digest every article we discuss in class. Class periods will focus heavily on student-run discussions; the instructor's role will be to ask guiding questions, moderate, fill in missing pieces, and reinforce key concepts. By the end of the semester students should be confident in their ability to pursue Econ of IS research projects, know what courses they should take to develop further expertise, and have produced at least one work-in-progress research paper in economics of information systems.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required
Course typically offered:
Main Campus: Fall

MIS 611D: Topics in Data and Web Mining (3 units)
Description: This Ph.D. level course aims to provide the foundation and knowledge in state-of-the-art data, text, and web mining research for various structured, unstructured and web-based, data-centric applications. Students will become familiar with key data, text and web mining computational methods and techniques. They will also learn to apply such analytical techniques and related methodologies in advanced business, scientific, or web research.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required
Course typically offered:
Main Campus: Spring

MIS 615: Network Science: Theory and Applications (3 units)
Description: This course will introduce doctoral students to quantitative methods in network science used to model, analyze, and understand various complex systems and the unique interactions among their components. Topics to be covered include the mathematics of networks (graph theory), data analysis, and applications to technology, business, biology, medicine/healthcare, and other relevant fields. Students will learn about ongoing research in the field, and ultimately apply their knowledge to conduct their own analysis of a large real world complex system and corresponding dataset(s) of their choosing as part of the final research paper. You will learn fundamental network theory including, properties of networks, measures and metrics such as centrality, transitivity, reciprocity, homophily, and others. You will cover concepts such as small-world effects, modularity, degree distributions, and assortative mixing. Algorithms on graphs including traversals, and graph partitioning will be explained. You will study random graphs models together with graph clustering methods, small and giant components, power-law distribution, and others. You will also study the concepts of percolation and network reliance, epidemics, and dynamic systems as well as signed networks. Students at the end of the system will have gained knowledge to analyze complex systems by modeling interactions among the components as a network. Students will also learn to analyze these networks by implementing and using various algorithms and visualizing the results of the algorithms and ultimately integrating networks with prediction models. The course is expected to use Python, GEPHI, and SNAP to construct and analyze large datasets using network science.
Grading basis: Regular Grades
Career: Graduate
Course Components: Seminar Required
Course typically offered:
Main Campus: Fall

Field trip: None

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-CC represents a Correspondence Course offering
May Be Offered Departments may offer this component in some semesters. See the Schedule of Classes for term-specific offerings.

MIS 688: Project Execution and Presentation (3 units)
Description: The purpose of this course is to deliver an Information Technology (IT) project to an actively engaged client. The course leverages project management, information evaluation, and other project implementation techniques to assist the students in managing, executing, presenting, and documenting a quality IT project.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required
Course typically offered:
Main Campus: Spring

MIS 689: Cyber Warfare Capstone (3 units)
Description: The focus of this course is the usage of common tools used during penetration assessments and hardening system defenses. Students will draw from previous classes to combine skills in online defense and penetration exercises of systems in a virtual environment. Along with course labs, this course will apply theory and techniques to provide the following learning base - knowledge, comprehension, and application.
Grading basis: Regular Grades
Career: Graduate
Course Components: Lecture Required
Course typically offered: Online Campus: Fall, Spring, Summer

Recommendations and additional information: This course should be taken towards or at the end of your series of security courses. Elements and techniques discussed in previous courses will come in handy for this course. Be aware that this course is technical in nature.

MIS 696A: Readings in MIS (3 units)
Description: The development and exchange of scholarly information, usually in a small group setting. The scope of work shall consist of research by course registrants, with the exchange of the results of such research through discussion, reports, and/or papers.
Grading basis: Regular Grades
Career: Graduate
Course Components: Seminar Required
Course typically offered:
Main Campus: Fall

MIS 696D: Models for Quantitative Analysis (3 units)
Description: The development and exchange of scholarly information, usually in a small group setting. The scope of work shall consist of research by course registrants, with the exchange of the results of such research through discussion, reports, and/or papers. Course will cover basic computational complexity terminology, machine scheduling concepts, and linear programming leading to column generation methodology.
Grading basis: Regular Grades
Career: Graduate
Course Components: Seminar Required
Course typically offered:
Main Campus: Spring

MIS 696H: Master's Report Projects (3 units)
Description: Students will integrate their knowledge from their program of study and apply it to a problem area in MIS. Each student will write a significant report based on the results of his or her work.
Grading basis: Regular Grades
Career: Graduate
Course Components: Seminar Required
Course typically offered:
Main Campus: Fall, Spring, Summer
Online Campus: Fall, Spring, Summer

Recommendations and additional information: MIS 531, MIS 541. Open to majors only. This course is also offered via the MISonline program.

MIS 699: Independent Study (1 - 6 units)
Description: Qualified students working on an individual basis with professors who have agreed to supervise such work. Graduate students doing independent work which cannot be classified as actual research will register for credit under course number 599, 699, or 799.
Grading basis: Alternative Grading: S, P, F
Career: Graduate
Course Components: Independent Study Required
Repeatable: Course can be repeated a maximum of 99 times.
Course typically offered:
Main Campus: Fall, Spring

MIS 799: Independent Study (1 - 6 units)
Description: Qualified students working on an individual basis with professors who have agreed to supervise such work. Graduate students doing independent work which cannot be classified as actual research will register for credit under course number 599, 699, or 799.
Grading basis: Alternative Grading: S, P, F
Career: Graduate
Course Components: Independent Study Required
Repeatable: Course can be repeated a maximum of 99 times.

MIS 920: Dissertation (1 - 9 units)
Description: Research for the doctoral dissertation (whether library research, laboratory or field observation or research, artistic creation, or dissertation writing).
Grading basis: Alternative Grading: S, P, F
Career: Graduate
Course Components: Independent Study Required
Repeatable: Course can be repeated a maximum of 99 times.
Course typically offered:
Main Campus: Fall, Spring, Summer

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-CC represents a Correspondence Course offering
May Be Offered Departments may offer this component in some semesters. See the Schedule of Classes for term-specific offerings.