Management Information Systems (MIS)

Courses

**MIS 0855. Data Science. 3 Credit Hours.**
We are all drowning in data, and so is your future employer. Data pour in from sources as diverse as social media, customer loyalty programs, weather stations, smartphones, and credit card purchases. How can you make sense of it all? Those that can turn raw data into insight will be tomorrow’s decision-makers; those that can solve problems and communicate using data will be tomorrow’s leaders. This course will teach you how to harness the power of data by mastering the ways it is stored, organized, and analyzed to enable better decisions. You will get hands-on experience by solving problems using a variety of powerful, computer-based data tools virtually every organization uses. You will also learn to make more impactful and persuasive presentations by learning the key principles of presenting data visually. NOTE: This course fulfills a Science & Technology (GS) requirement for students under GenEd.

Course Attributes: GS

Repeatability: This course may not be repeated for additional credits.

**MIS 0955. Honors Data Science. 3 Credit Hours.**
We are all drowning in data, and so is your future employer. Data pour in from sources as diverse as social media, customer loyalty programs, weather stations, smartphones, and credit card purchases. How can you make sense of it all? Those that can turn raw data into insight will be tomorrow’s decision-makers; those that can solve problems and communicate using data will be tomorrow’s leaders. This course will teach you how to harness the power of data by mastering the ways it is stored, organized, and analyzed to enable better decisions. You will get hands-on experience by solving problems using a variety of powerful, computer-based data tools virtually every organization uses. You will also learn to make more impactful and persuasive presentations by learning the key principles of presenting data visually. NOTE: This course fulfills a Science & Technology (GS) requirement for students under GenEd.

Cohort Restrictions: Must be enrolled in one of the following Cohorts: SCHONORS, UHONORS, UHONORSTR.

Course Attributes: GS, HO

Repeatability: This course may not be repeated for additional credits.

**MIS 2101. Information Systems in Organizations. 3 Credit Hours.**
Explain the role of information technology as a business enabler and identify and explain management information systems applications including customer relationship management systems, enterprise systems, e-commerce applications, transaction processing systems, business analytics, and emerging technologies. Evaluate the organizational fit and suitability of business applications and interpret the interaction between information technology, customers, processes, data, infrastructure, participants, and environment in an organization. Understand the ethical challenges of information technology and explain the evolving role of management information systems in the organization, and the role and careers of MIS professionals. NOTE: Students pursuing the MIS major or minor need a C grade or better in this class to register for MIS 2501 and 2502.


Repeatability: This course may not be repeated for additional credits.

**MIS 2402. Data-Centric Application Development. 3 Credit Hours.**
Develop web-based data-centric applications using high level programming language. Use debugging techniques to identify errors and make improvements. Interpret system requirement specifications and explain technical components including the use of systems development lifecycles in creating software applications. Create simple data driven applications that connect with a database. A grade of C or better is required in this course to register for MIS 4596. Students should not take MIS 2402 if they have successfully completed MIS 3501.

College Restrictions: Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

Repeatability: This course may not be repeated for additional credits.

Pre-requisites:
(MIS 2101|Minimum Grade of C|May not be taken concurrently
OR MIS 2901|Minimum Grade of C|May not be taken concurrently)
AND (MIS 2502|Minimum Grade of C|May be taken concurrently)
MIS 2502. Data Analytics. 3 Credit Hours.
Analyze data and learn how to present insights from business data. Analyze, model, and design database centric solutions for organizations. Create data models and data warehouses based on business rules. Learn how to operate and manage a database system and structured query language (SQL). Source traditional and new data types and apply data mining and visualization to generate business intelligence. A grade of C or better is required in this course to register for MIS 3504.


Repeatability: This course may not be repeated for additional credits.

Pre-requisites:
MIS 2101|Minimum Grade of C|May not be taken concurrently
OR MIS 2901|Minimum Grade of C|May not be taken concurrently.

MIS 2901. Honors: Information Systems in Organizations. 3 Credit Hours.
Explain the role of information technology as a business enabler and identify and explain management information systems applications including customer relationship management systems, enterprise systems, e-commerce applications, transaction processing systems, business analytics, and emerging technologies. Evaluate the organizational fit and suitability of business applications and interpret the interaction between information technology, customers, processes, data, infrastructure, participants, and environment in an organization. Understand the ethical challenges of information technology and explain the evolving role of management information systems in the organization, and the role and careers of MIS professionals. NOTE: Students pursuing the MIS major or minor need a C grade or better in this class to register for MIS 2501 and 2502.


Cohort Restrictions: Must be enrolled in one of the following Cohorts: SCHONORS, UHONORS, UHONORSTR.

Course Attributes: HO

Repeatability: This course may not be repeated for additional credits.

MIS 3406. Enterprise IT Architecture. 3 Credit Hours.
Specify the IT architecture for the enterprise. Explain and assess information technology such as computer hardware, software, systems, and networking. Identify management, usage, security, and consumer issues related to laptops, desktops, operating systems, servers, media, smartphones, gaming, cloud computing, and other new and evolving technologies. Learn about new computing platforms and how they create business value. Explore the technologies and business models of the ecosystems for new digital products and services. Students who have successfully completed MIS 2501 should not take this course.


Repeatability: This course may not be repeated for additional credits.

Pre-requisites:
MIS 3501|Minimum Grade of C|May not be taken concurrently
OR MIS 2402|Minimum Grade of C|May not be taken concurrently.
MIS 3502. Application Integration and Evaluation. 3 Credit Hours.
Use concepts of application integration to develop data driven software applications. Design the system architecture for an n-tier application. Learn how to integrate existing applications to produce new capabilities. Identify the technical and process issues of integrating a new application into the existing application structure. Relate software components such as middleware to the overall information architecture and apply software components to create client and server based applications.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:**
(MIS 3501|Minimum Grade of C|May not be taken concurrently)
OR (MIS 2402|Minimum Grade of C|May not be taken concurrently)
AND (MIS 3406|Minimum Grade of C|May not be taken concurrently)
OR (MIS 2501|Minimum Grade of C|May not be taken concurrently)

MIS 3503. User Interface Design. 3 Credit Hours.
This course presents basic principles of human-computer interaction and user-centered design as related to interface design for software applications. Topics include managing the design process, usability testing and assessment techniques, and the application of guidelines for window, menu and other dialogue techniques including single user and collaborative applications.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:**
(MIS 3596|Minimum Grade of C|May not be taken concurrently)
OR (MIS 3504|Minimum Grade of C|May not be taken concurrently)
AND (MIS 2501|Minimum Grade of C|May not be taken concurrently)

MIS 3504. Digital Design and Innovation. 3 Credit Hours.
Learn business process analysis including requirements analysis, feasibility, and data and process modeling. Develop the skills required to create innovative, technology enabled, corporate and consumer products and services. Apply information gathering techniques to elicit requirements. Compose business and technical requirements. Work in teams to design and recommend information systems solutions to improve or transform business processes. Lead the 'make vs. buy' decisions. Justify proposed process improvements and proposed information systems solutions. Learn how to implement and negotiate changes to requirements.

**Field of Study Restrictions:** May not be enrolled in one of the following Majors: Management Information Systems.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:**
MIS 2502|Minimum Grade of C|May not be taken concurrently.

MIS 3505. Applied Predictive Analytics. 3 Credit Hours.
This course gives students the applied, hands-on experience necessary to derive patterns and insight from large data sets. Students will learn how to select relevant variables for analysis, apply the appropriate analytic technique, and interpret the practical implications of the results. Topics also include unstructured 'big' data, sentiment analysis, and articulating results to a business audience. Students will have hands-on experience with current, cutting-edge tools such as SAS Enterprise Miner.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:**
MIS 2502|Minimum Grade of C|May not be taken concurrently.

MIS 3506. Digital Solutions Studio. 3 Credit Hours.
Students learn to translate business needs into technology enabled solutions. In a studio setting and working with a real client, students learn to interact with clients as they learn to collect requirements, model processes and data and design solutions to the client's problems. After learning to scope a project and compile the associated set of business rules, students learn to utilize a number of design frameworks and structured techniques for creating innovative solutions.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Management Information Systems.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:**
MIS 2502|Minimum Grade of C|May not be taken concurrently.
MIS 3507. Defending Against Cyber Crime. 3 Credit Hours.
In this course you will learn the importance of Information Security through modern case studies and pragmatic approach to evaluating security as an executive.

Repeatability: This course may not be repeated for additional credits.

Pre-requisites:
MIS 2101|Minimum Grade of C|May not be taken concurrently
OR MIS 2901|Minimum Grade of C|May not be taken concurrently.

MIS 3533. Electronic Commerce Site Design. 3 Credit Hours.
Learn web application development including requirements analysis, usability evaluation, specification, and implementation. Focus on both traditional transaction based systems and new applications for advertising, ordering, payment, and communication. Learn specific skills and tools for the development and management of electronic commerce initiatives. Understand the distinguishing features of front ends, server side code, and third party systems.


Repeatability: This course may not be repeated for additional credits.

Pre-requisites:
(MIS 3501|Minimum Grade of C|May not be taken concurrently)
AND (MIS 2502|Minimum Grade of C|May not be taken concurrently)

MIS 3534. Strategic Management of Information Technology. 3 Credit Hours.
This course prepares students to be effective exploiters and managers of information technology. The management of information technology is addressed by considering the contemporary issues faced by general managers, e.g., globalization, time compression, and technology integration. Strategic approaches for dealing with these issues are explored. An integrative class project is used to pull together operational concepts from lower level information system and business courses as they apply to the management of information technology.


Repeatability: This course may not be repeated for additional credits.

Pre-requisites:
MIS 2101|Minimum Grade of C|May not be taken concurrently
OR MIS 2901|Minimum Grade of C|May not be taken concurrently.

MIS 3535. Lead Global Digital Projects. 3 Credit Hours.
Learn how to lead, plan and manage global technology-enabled, process-centric information systems projects by focusing on initiating, planning, executing, controlling and closing projects in the context of topics such as integration, scope, timing, cost, quality, human resource, technology, communications, and risk and procurement. Explore the impact of the human element as it relates to the success and failure of information systems projects. Learn how to monitor project plans and communicate status reports to clients, and create and respond to request for proposals. A grade of a C or better is required in this course to register for MIS 4596.

Field of Study Restrictions: Must be enrolled in one of the following Majors: Management Information Systems.
College Restrictions: Must be enrolled in one of the following Colleges: Business & Mgmt, Fox School.

Repeatability: This course may not be repeated for additional credits.

Pre-requisites:
MIS 3506|Minimum Grade of C|May not be taken concurrently.
MIS 3536. Information Systems Innovation. 3 Credit Hours.
This course provides the knowledge and skills to leverage emerging and innovative information technology to create business opportunities for both new entrepreneurial ventures and traditional firms. As we move into the digital world, the ways by which companies create value is fundamentally shifting from products to experiences. The rapid convergence to digital technology opens up new opportunities to offer novel products and services that did not exist before. In this course, students will be asked to think how entrepreneurs and companies produce radically new products and services in the increasingly digital world. The course focuses on how organizations can design novel and desirable products and services. Through applied projects, student teams will learn how to evaluate and apply new innovative technologies to create new digital experiences, products, and services.


Repeatability: This course may not be repeated for additional credits.

Pre-requisites:
MIS 2101|Minimum Grade of C|May not be taken concurrently
OR MIS 2901|Minimum Grade of C|May not be taken concurrently.

MIS 3537. Internet Enabled Supply Chains. 3 Credit Hours.
This course provides an understanding of how smart companies are revolutionizing their supply chains through the use of the Internet. Topics include e-business models, network-ready businesses, information hubs, collaboration in supply chains, eMarketplaces and eAuctions, supply chain visibility and security. The course draws from a host of real-world case studies and computer simulations to reinforce learning and understanding of Internet-enabled supply chains.


Repeatability: This course may not be repeated for additional credits.

Pre-requisites:
MIS 2101|Minimum Grade of C|May not be taken concurrently
OR MIS 2901|Minimum Grade of C|May not be taken concurrently.

MIS 3538. Social Media Innovation. 3 Credit Hours.
In this course we review concepts and principles related to new business models supported by innovative use of Web 2.0 and social media. Through a combination of readings, discussion, presentations, and hands-on projects we examine (i) the organizational use of key media technologies such as web sites, blogs, web analytics, and search engine optimization, (ii) the business models underlying successful innovative new media organizations including Wikipedia, Craigslist, YouTube, and Facebook, and (iii) the role of centralized, decentralized, and crowd-sourced information resources in online media innovation.


Repeatability: This course may not be repeated for additional credits.

Pre-requisites:
MIS 2101|Minimum Grade of C|May not be taken concurrently
OR MIS 2901|Minimum Grade of C|May not be taken concurrently.
MIS 3580. Special Topics. 3 Credit Hours.
Special topics in current developments in the field of information systems.


Repeatability: This course may be repeated for additional credit.

Pre-requisites:
MIS 2101|Minimum Grade of C|May not be taken concurrently
OR MIS 2901|Minimum Grade of C|May not be taken concurrently.

MIS 3581. Co-operative Experience in Management Information Systems. 3 Credit Hours.
Students undertake a research project that integrates their current work experience with their classroom experience at Temple University. The results are reported in a series of status reports, blogs and a PowerPoint presentation prepared under the supervision of a faculty member. NOTE: Arrangements are made through the Management Information Systems Department and this course is open to ALL Fox business students. A 2.7 cumulative GPA or higher is recommended. http://ibit.temple.edu/industryexperience/


Repeatability: This course may be repeated for additional credit.

Pre-requisites:
MIS 2101|Minimum Grade of C|May not be taken concurrently
OR MIS 2901|Minimum Grade of C|May not be taken concurrently.

MIS 3582. Independent Study. 1 to 6 Credit Hour.
Students will prepare research papers under supervision of a faculty member. NOTE: None of the required MIS courses can be taken as an independent study.

Field of Study Restrictions: Must be enrolled in one of the following Majors: Management Information Systems.
College Restrictions: Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

Repeatability: This course may be repeated for additional credit.

MIS 3682. Independent Study. 1 to 6 Credit Hour.
Students will prepare research papers under supervision of a faculty member. NOTE: None of the required MIS courses can be taken as an independent study.

Field of Study Restrictions: Must be enrolled in one of the following Majors: Management Information Systems.

Repeatability: This course may be repeated for additional credit.

MIS 3999. Honors Thesis I. 1 to 3 Credit Hour.
The first of a two-part sequence of courses in which independent research is conducted under the supervision of a thesis advisor from the MIS department resulting in a substantial piece of original research, roughly 30 to 50 pages in length upon completion of MIS 4999. The student must publicly present his/her findings at a Temple University Research Forum session or the equivalent during one of the two semesters during which these courses are undertaken.

Field of Study Restrictions: Must be enrolled in one of the following Majors: Management Information Systems.
College Restrictions: Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.
Cohort Restrictions: Must be enrolled in one of the following Cohorts: SCHONORS, UHONORS, UHONORSTR.

Course Attributes: HO

Repeatability: This course may be repeated for additional credit.
MIS 4596. Information Systems Integration. 3 Credit Hours.
This is a capstone course that will apply previous course material to a comprehensive project. Learn how to leverage enterprise information technology assets and capabilities. Justify and prioritize project portfolios within a department and across the enterprise. Evaluate and compare proposed projects based on requirements, vendors, technology, and architectural fit with the organization. Work in teams to participate in a real-world project. Learn how IT organizations are structured and the role of the MIS professional and prepare to enter job marketplace. Students must earn a grade of C- in this course if they are using it to fill the writing intensive course requirement for their degree.

Field of Study Restrictions: Must be enrolled in one of the following Majors: Management Information Systems.
College Restrictions: Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

Course Attributes: WI

Repeatability: This course may not be repeated for additional credits.

Pre-requisites:
(MIS 2501|Minimum Grade of C|May not be taken concurrently)
OR MIS 3406|Minimum Grade of C|May not be taken concurrently)
AND (MIS 3502|Minimum Grade of C|May not be taken concurrently)
AND (MIS 3535|Minimum Grade of C|May not be taken concurrently)
AND (BA 2196|Minimum Grade of C-|May not be taken concurrently)
OR BA 2996|Minimum Grade of C-|May not be taken concurrently)

MIS 4999. Honors Senior Thesis II. 1 to 3 Credit Hour.
Independent research conducted under the supervision of a thesis advisor from the MIS Department resulting in a substantial piece of original research, roughly 30 to 50 pages in length. Student must publicly present his/her findings at a Temple University Research Forum session or the equivalent if this was not done in MIS 3999.

Field of Study Restrictions: Must be enrolled in one of the following Majors: Management Information Systems.
College Restrictions: Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.
Cohort Restrictions: Must be enrolled in one of the following Cohorts: SCHONORS, UHONORS, UHONORSTR.

Course Attributes: HO

Repeatability: This course may be repeated for additional credit.