MIS - Management Information Systems

Courses numbered 500 to 799 = *undergraduate/graduate*. (Individual courses may be limited to undergraduate students only.) Courses numbered 800 to 999 = *graduate*.

MIS 600. Database Management Systems (3).
Introduces various methodologies for conceptual data modeling including entity-relationship data modeling and logical database design. Covers relational database management systems, the SQL standard and data administration issues. Students obtain hands-on development with SQL servers in a client/server environment through a required database programming project. Covers topics of data warehousing, data mining, distributed database management and emerging topics in database areas.

MIS 605. Systems Analysis and Design (3).
Introduces various methodologies for systems analysis, design and implementation. Examines application development in the context of the overall MIS master planning effort; examines techniques related to business process engineering. Uses a real-life project as the vehicle to put into practice tools and techniques related to interviewing, cost/benefit analysis, computer-aided software engineering, software project management and system documentation. Prerequisite(s): junior standing, advanced standing.

MIS 610. Dynamic Web Programming (3).
Uses ASP.NET as the programming tool to teach Web application development. Includes HTML forms, server objects, and SQL-based data sources for developing interactive and dynamic Web applications within a server-based scripting environment. Covers advanced topics such a ADO and implementing security in Web environments. Prerequisite(s): MIS 310, 600 each with a grade of C+ (2.300) or better, junior standing, advanced standing.

MIS 611. Topics in Computer Networking (3).
Selected data communications and networking topics are examined in greater detail and depth. Students study the design, configuration, implementation, maintenance, management, troubleshooting and evaluation of selected networking technologies and software. Time is devoted to both concepts and hands-on exercises. Prerequisite(s): junior standing, advanced standing.

MIS 612. Fundamentals of Cloud Computing (3).
The cloud market is rapidly evolving, and with many technologies available for cloud, it is a difficult task for IT professionals to make decisions for their companies about how to move to cloud. In this course, students learn the complete basics of the cloud ecosystem, explore applications in the cloud, and receive a detailed overview of cloud platforms including Amazon Web Services and Microsoft Azure. By the end of this course, students know what cloud computing is all about and are ready to apply that knowledge to solve real world case studies and scenarios. Prerequisite(s): junior standing, advanced standing.

MIS 615. Advanced Business Application Development (3).
Presents advanced concepts and techniques for business problem solving by developing software applications using a contemporary business programming language. Special emphasis is placed on object-oriented programming approach. Topics include developing classes, using a multi-tiered approach toward application development, establishing database connection, working with data tables, and database processing. Prerequisite(s): MIS 310 with a grade of C+ (2.300) or better, junior standing, advanced standing.

MIS 690. Seminar in Selected Topics (1-3).
An umbrella course created to explore a variety of subtopics differentiated by letter (e.g., 690A, 690B). Not all subtopics are offered each semester – see the course schedule for availability. Students enroll in the lettered courses with specific topics in the titles rather than in this root course. Prerequisite(s): senior standing, departmental consent, advanced standing.

MIS 690E. Enterprise Cybersecurity (3).
Delves into the management challenges and real-world ramifications associated with safeguarding information systems within organizations. It places a strong emphasis on exploring the landscape of IT security threats, cryptography, network security, access control, firewalls, host hardening, application security, data protection and incident response. It couples a robust theoretical foundation with a substantial practical aspect. Students acquire the skills to assess and resolve issues in information systems and employ cutting-edge security tools and software.

MIS 696. Management of the IS Function (3).
Addresses the issues of managing the information systems (IS) function. Includes the role of IS as a corporate entity, developing a strategic plan for IT investments, organizing the IS department, IS personnel management, IS project management, the role of IS as a user-support entity, auditing the IS function and emerging issues in managing the IS department. Pre- or corequisite(s): MIS 605, junior standing, advanced standing.

MIS 750. Data Visualization (3).
Cross-listed as BSAN 750. Introduces data visualization principles and prepares managers for developing and implementing digital performance dashboards to monitor business processes and make informed decisions. Covers a broad category of data visualization strategies for descriptive data analysis, visual data analysis and design choices. Emphasizes the importance of using big data and insightful visualizations to improve the business decision-making process. Hands-on projects with the use of modern data visualization software are included.

MIS 755. Project Management (3).
Cross-listed as DS 755. This hands-on and project-based technology course establishes fundamental guidelines for defining the process of project management and designing time-constrained projects. Covers core methodology for managing complex projects on time. Uses a software tool. Prerequisite(s): junior standing, advanced standing; students are strongly recommended to take DS 350 before taking DS 755.

MIS 874. Management Information Systems (3).
Explores the link between business strategy and information systems strategy. Addresses opportunities, organizational implications and issues faced by today's managers when investing in new information systems. Equips today's managers with an understanding of the potential of information systems for value creation, while recognizing the uncertainties associated with it. Provides the necessary know-how to managers in using information systems for creating sustainable competitive advantages.

MIS 884. Database Planning & Management (3).
Prepares students to deal with issues in planning and managing organization-wide integrated databases. Emphasizes logical database design and relational database implementation. Includes SQL, assuring database integrity, database conversion, database administration and data management.

MIS 890. Seminar in Special Topics (1-3).
An umbrella course created to explore a variety of subtopics differentiated by letter (e.g., 890A, 890B). Not all subtopics are offered

each semester – see the course schedule for availability. Students enroll in the lettered courses with specific topics in the titles rather than in this root course.

MIS 891. Directed Study (1-3).
Individual study of various aspects and issues in information technology. Repeatable for credit with departmental consent.