Management Information Systems

**MIS 6204** Information Technology and MIS Fundamentals (2 semester hours) Necessary background to understand the role of information technology and Management Information Systems in today's business environment. Topics include: strategic role of information, organization of information, information decision making requirements, telecommunications and networking, managing information resources, distributed processing, and current information systems/technology issues. (2-0) S

**MIS 6302 (ACCT 6349)** Information Technology Strategy and Management (3 semester hours) This course explores the strategic management and control issues associated with information technology. It provides a framework to understand how IT strategy aligns with business strategy and focuses on developing an understanding of the key information requirements for developing an IT strategy and systems architecture. This includes conducting IT sourcing analysis, and managing IT investments effectively to maximize business value. The course will consist of a mix of real-world case studies on IT strategy development across different industries. May not receive credit for both **ACCT 6349** and **MIS 6302**. (3-0) R

**MIS 6308 (ACCT 6340)** System Analysis and Project Management (3 semester hours) Provides the student with an in-depth knowledge of object oriented systems analysis and design procedures. Software project management techniques will be introduced. At the end of the course, the student will be able to analyze business solutions and design computer based information systems using object-oriented methodologies. Co/Prerequisite: **MIS 6326**. (3-0) R

**MIS 6309 (ACCT 6309, OPRE 6391)** Business Data Warehousing (3 semester hours) This course provides the student with in depth knowledge of data warehousing principles, data warehouse techniques, and business intelligence systems. The course introduces the topics of data warehouse design, Extract-Transform-Load (ETL), data cubes, and data marts. Students will create business intelligence using data warehouses with several OLAP and analytical tools. The course currently uses SAP BW, SAP BEx, SAP Data Mining Workbench, and SAP Business Objects as tools to illustrate these concepts. (3-0) Y

**MIS 6314** System ReEngineering (3 semester hours) This course utilizes Information Engineering Methodology to plan, analyze, design, and construct a working system. Students are members of a project team which will complete an advanced application execution of a real world development problem. Prerequisite: **MIS 6308**. (3-0) Y

**MIS 6316** Data Communications (3 semester hours) This course covers the fundamentals of telecommunications, including: transmission, switching, throughput and capacity, error rates and checking, and security and policy issues. The course includes demonstration and 'hands on' exercises using the SAP ECC ERP system. (3-0) Y

**MIS 6317 (HMGT 6323)** Healthcare Informatics (3 semester hours) Examines the unique challenges of clinical and patient care delivery in the healthcare industry, including the role of data management, emerging data standards and information technology in improving the quality and cost associated with healthcare. The focus of the course will be on healthcare IT including issues related to governance, data integration, and selection and management of healthcare IT. This course is equivalent to **HMGT 6323** and only one of these may count toward a degree. (3-0) T
MIS 6319 (OPRE 6390) Enterprise Resource Planning (3 semester hours) Examines the role of enterprise systems in organizations. It will focus on business processes, business process integration, and information technology for enabling the integration. The course also covers selection and implementation of ERP systems. A part of the course will be set aside for demonstration and 'hands on' exercises with one of the available ERP software. (3-0) Y

MIS 6320 (OPRE 6393, ACCT 6320) Database Foundations (3 semester hours) The course is designed to provide database knowledge for non-MIS business students to function effectively in their functional area. The course covers fundamentals of relational databases, relational database structure, database queries, and reports. Structured Query Language will be used extensively. Applications of databases for accounting, finance, marketing, and other areas of business will be emphasized. Cannot be used to satisfy the requirements of MS ITM degree. MIS 6320 and MIS 6326 cannot both be used to satisfy degree requirements. (3-0) Y

MIS 6323 Object Oriented Programming (3 semester hours) This course includes the fundamentals of Java programming, writing applets for web-based systems, and business application programming using Java. (3-0) Y

MIS 6324 Business Intelligence Software and Techniques (3 semester hours) This course covers theories and applications of business intelligence. The focus is on extracting business intelligence from firms' business data for various applications, including (but not limited to) customer segmentation, customer relationship management (CRM), personalization, online recommendation systems, web mining and product assortment. The emphasis will be placed on the 'know-how' -- knowing how to extract and apply business intelligence to improve business decision-making. Students will also acquire hands-on experience with several business intelligence software such as XL miner, SAS Enterprise Miner and SQL Server2008 (depending on availability). This class is required for the SAS certificate in data mining. (3-0) Y

MIS 6326 Data Management (3 semester hours) Database theory and tools used to manage accounting data and other information are introduced. Topics include relational database theories, Structured Query Language (SQL), database design and conceptual/semantic data modeling. A client/server database environment is developed with a selected SQL server and a database application development tool. MIS 6320 and MIS 6326 cannot both be used to satisfy degree requirements. Prerequisite: MS ITM Major or permission of instructor. (3-0) Y

MIS 6330 Information Technology Security (3 semester hours) With the advances in information technology, security of information assets has become a keenly debated issue for organizations. While much focus has been paid to technical aspects of the problem, managing information security requires more than technology. Effective information security management demands a clear understanding of technical as well as socio-organizational aspects of the problem. The purpose of this course is to prepare business decision makers to recognize the threats and vulnerabilities present in current information systems and who know how to design and develop secure systems. This course (1) uses lectures to cover the different elements of information security, (2) utilizes business cases and academic research studies to discuss information security issues faced by today's businesses, (3) keeps in touch with the security market and practices through webcasts, and (4) presents strategies and tools to develop an information security program within the organization. (3-0) Y

MIS 6332 Advanced ERP: Sales and Distribution (3 semester hours) The class focuses on advanced process
and configuration issues related to ERP implementation. The functional side of sales, distribution, delivery and billing as well as integration with materials management, production, financial and management accounting is emphasized. SAP is currently used to discuss and provide hands-on experience with key ideas. Some sales theory will also be discussed. Prerequisite: MIS 6319 or consent of the instructor. (3-0) Y

**MIS 6334** Advanced Business Intelligence (3 semester hours) This course is SAS based and is part of the 4-course curriculum for the SAS data mining certificate program. It will cover the topics as required by the SAS certificate program including data manipulation, imputation, variable selection, SAS/STA, SAS/ETS, SAS/QC (DOE) and various SAS stat modules. Students will also learn various advanced business intelligence topics including business data analytics, model analytics, customer analytics, web intelligence analytics, business performance analytics and decision-making analytics. Tool to be used include SAS, Weka and spreadsheet modeling. Prerequisites: OPRE 6301 and MIS 6324. (3-0) Y

**MIS 6338 (ACCT 6338)** Accounting Systems Integration and Configuration (3 semester hours) Using SAP or similar software, this course focuses on accounting information systems as part of integrated enterprise systems and modern systems analysis and design of integrated accounting systems. Emphasis will be on integrated business processes and related financial transaction flows, system analysis and design methods in SAP with focus on configuration methods. (3-0) R

**MIS 6344** Web Analytics (3 semester hours) The course examines the technologies, tools, and techniques to maximize return from web sites. The course includes topics related to web site design issues, web data collection tools and techniques, measurement and analysis of web traffic, visitor tracking, search engine optimization, visitor acquisition, conversion and retention, key performance indicators for web sites, and measurement of online marketing campaigns. The use of web analytics tools such as Google Analytics will be an integral part of the course. (3-0) Y

**MIS 6352** Web Systems Design and Development (3 semester hours) Provides an in depth examination of web application design evaluation practices and web application development techniques. A Rich Internet Application (RIA) is developed using an agile, team based, software development methodology leveraging a combination of CSS, HTML, JavaScript, XHR, DOM, PHP, and MySQL. Emphasis is given to hands on application of course material through development of a web application prototype under conditions simulating a business environment. (3-0) Y

**MIS 6360** Software Project Management (3 semester hours) Provides an in depth examination of project management principles and modern software project management practices. The five process groups and nine knowledge areas of the Project Management Institute Body of Knowledge (PMI BOK) are examined in the context of the systems development lifecycle. (3-0) Y

**MIS 6362** Service Oriented Computing (3 semester hours) Examines the service orientation of technology to serve business. The course will explore Service Oriented Architecture (SOA) fundamentals from application as well as infrastructure perspective and study its impact to business. The course will examine the evolution of service orientation over computing eras leading up to current practices and cutting edge trends in global industry. (3-0) Y

**MIS 6363** Cloud Computing (3 semester hours) This course is designed as a primer for cloud computing which many believe is the third major wave of computing, after mainframe and client-server computing. The course examines this technology from a business perspective. The course is designed to deliver a
holistic and balanced view of business model, technological infrastructure, and security issues of cloud computing useful for the technology student to understand the business challenges and the business student to understand the technology challenges. (3-0) R

**MIS 6364** Enterprise IT Architecture (3 semester hours) Enterprise IT Architecture (EA) provides a roadmap for the analysis and design of an enterprise in its current and future states from a strategy, business and technology perspective. The emphasis is on the alignment between IT and organizational objectives through the integration of business architectures, data and information architecture, application architecture, technology architecture, interfaces and infrastructure. While the course introduces many EA frameworks, it uses TOGAF extensively. Prerequisites: MIS 6308

**MIS 6369 (OPRE 6369)** Supply Chain Software (3 semester hours) The course teaches planning and execution of supply chains with software such as SAP's ERP (R3) and Advanced Planning & Optimization (APO). This software is used in lab exercises that provide students with hands-on, experimental learning. The focus is on the supply planning function of supply chain management. Topics include: fundamentals of ERP and SAP, master and transaction data, MRP, forecasting, supply and demand matching, and integration of ERP and APO modules. This course is intended for graduate students with interests in software-based supply chain management. No SAP experience is required. (3-0) S

**MIS 6372 (OPRE 6392)** IT Services Management (3 semester hours) The purpose of this course is to examine and explain how organizations engage and manage their IT services throughout the IT services lifecycle. The course covers topics related to service strategy, service design, service transition, service operation and continuous improvement. It also includes managing outsourced IT services and the organizational, technological and economical aspects associated with the outsourcing of IT services and functions. The course uses ITIL framework to illustrate various concepts. (3-0) Y

**MIS 6373** Social Media and Business (3 semester hours) Social media represents one of the most significant changes on the Internet. This course is to familiarize students with the newly emerging social media and Web 2.0 landscape and its underlying concepts. The course covers essential skills to analyze, evaluate, and develop the Web 2.0 business models as well as marketing strategies. Different social media and Web 2.0 applications (e.g., Flickr, YouTube, Twitter, Facebook, Groupon, and Blogs) and their multi-disciplinary implications will be discussed. (3-0) R

**MIS 6378 (MKT 6338)** Enterprise Systems and CRM (3 semester hours) The objective of the course is to increase practical skills and conceptual knowledge related to Customer Relationship Management (CRM) utilizing the mySAP.com CRM application and the data mining workbench. Students will garner knowledge of operational, analytical, and collaborative CRM. (3-0) R

**MIS 6379** SAP ABAP Programming (3 semester hours) This course provides a thorough understanding of the role of ABAP programming, SAP's programming language, in the implementation and use of enterprise systems. Components of the course include: complex report development, SAP query, dialog programming, ABAP Objects, transaction development, EDI/ALE and BAPI development, Business Add-ins (BADIs) and output processing. (3-0) R

**MIS 6v98** Information Systems Internship (1-3 semester hours) Student gains experience and improves skills through appropriate developmental work assignments in a real business environment. Student must identify and submit specific business learning objectives at the beginning of the semester. The student
must demonstrate exposure to the managerial perspective via involvement or observation. At semester end, student prepares an oral or poster presentation, or a written paper reflecting on the work experience. Student performance is evaluated by the work supervisor. Consent of the School of Management's Internship Coordinator is required. ([1-3]-0) S

**MIS 6v99** Special Topics in Management Information Systems (1-4 semester hours) May be lecture, readings, or individualized study. May be repeated for credit. ([1-4]-0) S

**MIS 7220** Colloquium in Management Information Systems (3 semester hours) Issues in current information systems research. Prerequisite: Permission of instructor. May be repeated for credit as topics vary. (2-0) R

**MIS 7310** Advanced Topics in Knowledge Management (3 semester hours) The course will discuss knowledge representations and reasoning techniques. It will focus on (1) conceptual models of knowledge in IT-based systems, (2) automated reasoning mechanisms that are enabled by such representations, and (3) automated discovery of knowledge from data. Applications in decision support systems, expert systems, and personalization and recommendation systems will be discussed. Necessary background in data models and information theory will be provided. (3-0) T

**MIS 7330** MIS Teaching Practicum (3 semester hours) Individual sessions with a supervising coach. The student will have responsibility for handling all of the instructional duties for a course, including designing the syllabus, and all assessment. Feedback and guidance will help the student develop their teaching skills. Prerequisite: Permission of department. May be repeated for credit as topics vary. (3-0) S

**MIS 7340** Independent Study in MIS (3 semester hours) The student studies in depth a topic of interest to them in MIS under the guidance of an instructor. Prerequisite: Permission of the instructor. May be repeated for credit as topics vary. (3-0) S

**MIS 7420** Seminar in Management Information Systems (4 semester hours) Survey of theoretical issues and research in information systems. Prerequisite: Permission of instructor. May be repeated for credit as topics vary. (4-0) R