ISTM - MGMT INFO SYSTEMS

ISTM 601 Fundamentals of Business Programming

Credits 3. 3 Lecture Hours. Business Application Development using both procedural and object-oriented programming techniques; use of component based software design and development for distributed business software systems. **Prerequisite:** Graduate business classification or approval of instructor.

ISTM 610 Network and Cloud Infrastructure

Credits 3. 3 Lecture Hours. Concepts and technology of network and cloud systems in business; analysis of networking and cloud requirements, design, selection and application of technologies including wide and local area networks, distributed processing, network and cloud architecture, and systems management and control; software simulation projects emphasized. **Prerequisites:** Graduate classification.

ISTM 612 Management Information Systems

Credits 1 to 3. 1 to 3 Lecture Hours. Concepts, theories, and the strategic role of information systems as applied to business organizations; highly integrative/cross functional in nature. Classification 6 students may not enroll in this course. **Prerequisite:** Enrollment is limited to MBA students.

ISTM 615 Business Database Systems

Credits 3. 3 Lecture Hours. Information processing and management involving applications and user orientation in a business environment using commercially available database management systems. **Prerequisite:** Graduate classification or approval of instructor.

ISTM 620 Systems Analysis and Design

Credits 3. 3 Lecture Hours. Methodologies, techniques, and tools for information systems analysis and design; the analysis and logical design of business processes and management information systems focusing on the systems development life cycle; techniques for logical system design.

ISTM 622 Advanced Data Management

Credits 3. 3 Lecture Hours. Data and database management and advanced SQL techniques; issues of data security, backup and recovery, large scale databases, master data management, concurrent user data access, scalability, and policies. **Prerequisites:** ISTM 615 or equivalent; graduate classification in business.

ISTM 624 Advanced Systems Analysis and Design

Credits 3. 3 Lecture Hours. Advanced topics in business systems analysis and design; alternative methodologies such as agile development, extreme programming, Rational Unified Process; Unified Modeling Language; bench marking and best practices for systems development; cost/benefit analysis, estimation and budgeting for business information systems; testing; patterns, domain-driven design; process modeling; service-oriented architecture and cloud computing. **Prerequisite:** ISTM 620 or equivalent; graduate classification in business.

ISTM 630 MIS Project Management and Implementation

Credits 3. 3 Lecture Hours. Advanced coverage of systems development topics with emphasis on the management and implementation of business computing systems; group project orientation to include feasibility analysis, alternative evaluation and selection, and management approval; use of software engineering tools where appropriate. Classification 6 students may not enroll in this class. **Prerequisite:** ISTM 620.

ISTM 631 Information Systems Design and Development Project

Credits 3. 3 Lecture Hours. Design and delivery of functional, multi-platform application system using current technologies; user interface design emphasized; issues of mobile device forms, software delivery, and development. **Prerequisites:** Graduation classification; ISTM 622; ISTM 630.

ISTM 635 Business Information Security

Credits 3. 3 Lecture Hours. Explores the business, managerial, and technological aspects of information security; analysis, design, and implementation issues surrounding effective information security; authentication, authorization, availability, business continuity planning, confidentiality, disaster recovery, encryption, firewalls, fraud protection, security policy development, integrity, risk management, virus protection, VPNs and wireless security. Classification 6 students may not enroll in this course. **Prerequisite:** ISTM 610.

ISTM 637 Data Warehousing

Credits 3. 3 Lecture Hours. Provides an understanding of the process by which a data warehouse system is designed and developed along with the underlying concepts and software systems; includes OLAP models and their differences with standard OLTP models. **Prerequisite:** ISTM 615 or approval of instructor.

ISTM 643 Corporate Information Planning

Credits 3. 3 Lecture Hours. Concepts regarding the design and use of computer-based management information and decision support systems; combinations of computing hardware and software and design concepts evaluated to meet managers' information needs. Classification 6 students may not enroll in this course. **Prerequisites:** ISTM 615 or equivalent or approval of instructor.

ISTM 644 Computer Trading for Non-Finance Majors

Credits 3. 3 Lecture Hours. Overview of quantitative investing using algorithmic trading for investment management; exploration of collecting and preparing financial trading data, time series analysis, trend systems, momentum and mean reversal, arbitrage, backtesting, order execution, and reporting of risk and performance measures; tools, methods, and trading techniques using R programming language and R Studio. **Prerequisites:** ISTM 601 and ISTM 615, or approval of instructor.

ISTM 645 IT Security Controls

Credits 3. 3 Lecture Hours. Familiarization with planning, design, and implementation of controls to minimize risks to business information; focus on the importance of managing business information security; introduction to the tools, concepts and theories to safeguard an organization's information systems and IT assets; understanding of cryptography and application, operations, and physical security. **Prerequisite:** ISTM 635.

ISTM 650 Business Data Mining

Credits 3. 3 Lecture Hours. Rationale for business Data Mining through case studies of business applications; process of data mining by using commercial Data Mining software on very large data sets; classification, clustering, association rule mining, visualization, and prediction through a hands-on approach. **Prerequisite:** STAT 652 or approval of instructor.

ISTM 652 Customer Relationship Management and Technologies

Credits 3. 3 Lecture Hours. Theory and application of information technology in customer relationship management, construction of CRM infrastructures in organizations. **Prerequisite:** ISTM 615.

ISTM 655 Security Management and Compliance

Credits 3. 3 Lecture Hours. Familiarization with managerial and legal aspects of business information security; focus on importance of managing business information security and theories to help safeguard an organization's information systems and IT assets; understanding of Security Architecture and Design, Business Continuity and Disaster Recovery Planning, Laws Investigation and Ethics. **Prerequisite:** ISTM 635.

ISTM 657 Blockchain and Artificial Intelligence Business Transformation

Credits 3. 3 Lecture Hours. Transforming processes and business models through the application of advanced technologies; Blockchain and Artificial Intelligence (AI); focus on underlying technologies, business process design, and business case development; final project presentation of a new process or model and a supporting business case. **Prerequisites:** Graduate classification.

ISTM 660 Applied Predictive Analytics for Business

Credits 3. 3 Lecture Hours. Develop an understanding of the role of predictive analytics in shaping business outcomes; provide hands-on, practical approach to implementing predictive analytics tools for gaining competitive advantage in business. **Prerequisite:** Graduate classification.

ISTM 662 Management of the Technology Organization

Credits 3. 3 Lecture Hours. Corporate management of technology; exploration of Management Information Systems, Operations, Strategic Management, Human Resources, Management, Organizational Behavior, Entrepreneurship, Marketing, Finance, and Accounting from both a strategic and tactical perspective. **Prerequisites:** Graduate classification.

ISTM 665 Cloud Computing Technologies

Credits 3. 3 Lecture Hours. Overview of cloud computing concepts; examination of information systems in the cloud impacting functional areas of business; topics include Infrastructure as a Service (IaaS), Platform as a Service (PaaS), Software as a Service (SaaS); focus on how changes in computing towards commodity services drive impact across business systems, Line of Business (LoB) applications, cost efficiency, and top-line revenue growth. **Prerequisites:** Graduate classification.

ISTM 670 Capstone Information Systems Service Project

Credits 3. 3 Lecture Hours. Philanthropic collaboration with a not-for-profit or non-profit entity in a consultative capacity; hands-on experience with consulting practices, client relationships, systems analysis and design, project-management, IT development and implementation, digital collaboration tools, knowledge management, organizational change, and/or IT security. **Prerequisite:** ISTM 615 or equivalent; ISTM 620 or equivalent; ISTM 630 or equivalent.

ISTM 680 Human-Computer Interaction in Mangement Information Systems

Credits 3. 3 Lecture Hours. Techniques, principles and theory involved in designing and implementing interactive technologies based on humans' physical, cognitive and emotional resources; focus on application of qualitative and quantitative evaluation techniques for interaction phenomena; understanding interaction phenomena at the individual, group, organizational and societal levels; accessibility, cultural and ethical implications of human-computer interaction. **Prerequisite:** Graduate classification.

ISTM 681 Ethics of Information Systems

Credits 3. 3 Lecture Hours. Exposure to the main ethical issues surrounding information, data and the systems and artifacts that are used; examination of information in multiple business areas, including marketing, accounting, finance, HR, sales, operations and information systems.

ISTM 682 Data Analytics Platforms

Credits 3. 3 Lecture Hours. Coding platforms used for data analytics; data wrangling, exploration and visualization; model testing and validation; machine learning techniques. **Prerequisite:** STAT 601 or equivalent.

ISTM 683 Web and Social Media Analytics

Credits 3. 3 Lecture Hours. Study of business challenges faced by modern firms in the new economy; focus on web analytics, unstructured data analytics and social network analytics to derive insights from business data. **Prerequisites:** Graduate classification.

ISTM 684 Professional Internship

Credits 1 to 6. 1 to 6 Other Hours. A directed internship in an organization to provide students with on-the-job training with professionals in organizational settings appropriate to the student's professional objectives. May be repeated for credit. Classification 6 students may not enroll in this course. **Prerequisite:** Approval of committee chair and department head.

ISTM 685 Directed Studies

Credits 0 to 4. 0 to 4 Other Hours. Directed study on selected problems using recent developments in business research methods. Classification 6 students may not enroll in this course. Must be taken on a satisfactory/unsatisfactory basis. **Prerequisites:** Approval of instructor and graduate advisor.

ISTM 689 Special Topics in...

Credits 1 to 4. 1 to 4 Other Hours. Selected topics in identified area of information systems, operations management or management science. Classification 6 students may not enroll in this course. May be repeated for credit.

ISTM 705 Information Management for Decision Making

Credits 1 to 4. 1 to 4 Lecture Hours. Policies, practices and procedures for management corporation information; relational database theory and relationship database management systems; data modeling; structured and unstructured data management; structured query language; secure data practices; information management for managerial decision making. **Prerequisite:** For Master of Science in Business students only.