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**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 Business Data Communications**  
Credits 3.3 Lecture Hours.  
Concepts and technology of on-line and network-based systems in business; analysis of data communication requirements, design, selection and application of network technologies including wide and local area networks, distributed processing, network architecture, and systems management and control; software simulation projects emphasized. Classification 6 students may not enroll in this course.  
**Prerequisites:** Graduate classification.

**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:** Knowledge of one programming language.

**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.  
**Prerequisite:** ISTM 615 or concurrent enrollment.

**ISTM 622 Advanced Data Management**  
Credits 3.3 Lecture Hours.  
Data/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 640 Information Systems Sourcing**  
Credits 3.3 Lecture Hours.  
Identify the challenges of information systems sourcing, as well as the costs, risks, rewards, and strategies involved in sourcing situations; focus on global sourcing of professional services, including IT, business process, and knowledge process outsourcing; issues such as vendor management, legal issues, distributed work teams, and comparing alternative sourcing strategies.  
**Prerequisites:** ISTM 624 or equivalent or approval of instructor; graduate classification in business.

**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 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 646 E-Services
Credits 3. 3 Lecture Hours.
Examines the deployment and utilization of information technologies by businesses, governments and not-for-profit organizations to deliver services, with applications in banking and financial advisory services, healthcare, and federal, state and local governments.
Prerequisite: ISTM 620.

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; half of the course devoted to lab training in the use of Data Mining software including SAS Enterprise Miner and SPSS Clementine.
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 654 E-Commerce Technologies
Credits 3. 3 Lecture Hours.
Theory and application of constructing E-Commerce sites, including n-tier architecture and technologies, web servers, server interactions with databases, and transaction managers.
Prerequisite: ISTM 615 or equivalent.

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 656 Global Information Systems
Credits 3. 3 Lecture Hours.
Impact and the central role of Information Systems (IS) on globalization of business; issues of deployment of information systems and technology in international commerce, global IS environmental variables such as technology, legal, political, economic, social and cultural. Classification 6 students may not enroll in this course.
Prerequisite: ISTM 610 or equivalent, or approval of instructor.

ISTM 670 IT Consulting
Credits 3. 3 Lecture Hours.
Concerns with the practice of IT consulting; and develops an understanding of consulting practices, business development and revenue management, client relationships, team-based knowledge, knowledge services, technology evaluation, selection and integration, collaboration tools, business process and organizational change, and large application implementations; involves a full semester client-based project.
Prerequisites: ISTM 615, ISTM 620, and SCMT 660, and approval of instructor.

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 1 to 4. 1 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.
Prerequisite: Approval of instructor and graduate advisor.

ISTM 686 Theory and Research in Management Information Systems
Credits 3. 3 Lecture Hours.
Theory, applications and human and organizational issues of Management Information Systems (MIS); current academic research into the analysis, design and implementation of computer information systems. Classification 6 students may not enroll in this course.
Prerequisites: Doctoral classification and approval of instructor.

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.