

Planning for a Masters in Information Science & Technology

Our handout describing this program gives entrance requirements as well as degree requirements. This document is designed to supplement that handout by giving some insight into when courses are likely to be taught. A listing on this document does NOT guarantee or promise that any course will be taught at any specific time -- it merely indicates what seems likely or is planned AT THE PRESENT TIME. All such plans are subject to change. Further, courses may not be taught because there is no instructor available or because there is insufficient enrollment. We've included courses from other departments -- these listings are based on past history only.

IST Core Courses:

Generally scheduled in Fall

IST 336 Internet Computing
IST 351 Leadership in Technology-Based Orgs
IST 385 Human-Computer Interaction

Generally scheduled in Winter

IST 361 Information Systems Project Management
IST 385 Human-Computer Interaction

IST courses that might be taken as electives:

Generally scheduled in Fall

IST 342 E-Commerce Architecture
IST 354 Multimedia Devel. & Design (not sched.)
IST 386 HCI Prototyping
IST 432 Network Security (not scheduled)
IST 435 Mobile Data
IST 436 Voice over IP Svc Mgt (IST 401 in F05)
IST 441 ERP: Des. & Implementation (IST 401 in F04)
IST 444 Data Warehousing (IST 401 in F04)
IST 480 Social Informatics (IST 401 in F04)

Generally scheduled in Winter

IST 321 Network Performance Design & Mgt
IST 326 Telecom Management (IST 301 in W05)
IST 353 Design of Large Sys (Java) (IST 301 in W05)
IST 357 Network Economy
IST 387 HCI Evaluation
IST 451 Business Intelligence (IST 401 in W05)
IST 487 Research Methods in HCI (W05)
IST 368 Law & Ethics in E-Commerce (IST 301, SS04)

Business Administration courses that might be taken as electives:

Generally scheduled in Fall

BUS 240 Basic Marketing
BUS 260 Business Operations
BUS 270 Human Resources Management
BUS 3xx Marketing Strategy (BUS 301 in F04)

Generally scheduled in Winter

BUS 220 Managerial Accounting
BUS 270 Human Resources Management
BUS 280 Strategic Management
BUS 343 New Product Devel. (BUS 301 in W05)

Computer Engineering courses that might be taken as electives:

Generally scheduled in Fall

CmpE 311 Intro. to VLSI Design
CmpE 313 Microprocessor Systems Design
CmpE 315 Digital Computer Design
CmpE 349 Trustworthy, Survivable Comp. Netwks.

Generally scheduled in Winter

CmpE 311 Intro. to VLSI Design
CmpE 312 Digital Systems Design Lab.
CmpE 313 Microprocessor Systems Design
CmpE 315 Digital Computer Design
CmpE 319 Digital Network Design
CmpE 331 Real-Time Systems

Computer Science courses that might be taken as electives:

Generally scheduled in Fall

CSc 303 Multimedia Systems
CSc 304 Database Systems
CSc 306 Software Engineering I
CSc 307 Software Testing & Quality Assurance
CSc 308 Object Oriented Analysis & Design

Generally scheduled in Winter

CSc 306 Software Engineering I
CSc 308 Object Oriented Analysis & Design
CSc 317 Intellectual Property for Comp. Sci.
CSc 319 Management of Computing Services
CSc 347 Intro. to Artificial Intelligence Programming

CSc 342 Java GUI & Visualization
CSc 347 Intro. to Artificial Intelligence Programming
CSc 404 Data Mining & Knowledge Discovery
CSc 412 Web Data Management & XML
CSc 404 Data Mining & Knowledge Discovery
CSc 406 Software Engineering II

Economics & Finance courses that might be taken as electives:

Generally scheduled in Fall

ECON 320 Money & Banking (not sched.)
ECON 323 International Finance (not sched.)
ECON 330 Public Finance (not sched.)
ECON 335 Cost-Benefit Analysis (not sched.)

Generally scheduled in Winter

ECON 321 Finance
ECON 421 Advanced Finance (not sched.)
ECON 423 Advanced Internat'l Finance (not sched.)

Engineering Management courses that might be taken as electives:

Generally scheduled in Fall

EMgt 320 Technical Entrepreneurship
EMgt 333 Management Information Systems
EMgt 368 Systems Engineering & Analysis I
EMgt 375 Total Quality Management
EMgt 378 Intro. to Neural Networks & Apps.

Generally scheduled in Winter

EMgt 333 Management Information Systems
EMgt 356 Industrial System Simulation
EMgt 368 Systems Engineering & Analysis I
EMgt 375 Total Quality Management
EMgt 378 Intro. to Neural Networks & Apps.
EMgt 385 Statistical Process Control

Psychology courses that might be taken as electives:

Generally scheduled in Fall

Psych 305 Cognitive Psychology
Psych 311 Human Factors

Generally scheduled in Winter

Psych 374 Organizational Psychology
Psych 372 Group Dynamics (not sched.)

Course Descriptions For Courses Not In Graduate Catalog

A number of IST and BUS courses are relatively new, so their descriptions are not in the Graduate Catalog. The material below is taken from the best description available at this time -- consult the instructor for a Syllabus before registering for the course, in order to get the actual final description.

IST 326 Telecom Management

Management of the business and technology aspects of telecommunications services, including both the skills to manage a business and the skills to effectively design, select, implement, and operate telecommunications technology. Topics include managerial skills, technology planning, operations management, and planning & acquisition management.

Prerequisite: BUS 110, BUS 120, and IST 321 or equivalent experience

IST 353 Design of Large Systems (Java)

Introduction to Software Life Cycle and characteristics of large software systems. Exploration of software support for such systems, using Java, including use of GUI interfaces, advanced I/O and String handling, Interfaces, Threads, and other modularity features.

Prerequisite: IST 231 or CSc 284

IST 354 Multimedia Development & Design

Students learn current practices for development and design of interactive multimedia. The course covers tools for development of 2-D and 3-D graphics, video, audio, animation, and integrated multimedia environments.

Prerequisite: IST 286

IST 368 Law & Ethics in E-Commerce

Provides the ethical framework to analyze the ethical, legal, and social issues that arise for citizens and computer professionals regarding the computerization of society. Topics include: free speech, privacy, intellectual property, product liability, and professional responsibility.

Prerequisite: Any Intro Level Philosophy Course

IST 386 HCI Prototyping

This course covers designs, methods and tools for creating low and high fidelity prototypes of information technology systems. The different prototyping approaches are examined as part of the iterative design cycle that is commonly used for developing usable information technologies.

Prerequisite: IST 385 taken previously or concurrently

IST 387 HCI Evaluation

This course covers research and analysis methods for evaluating the impact of information technology systems on humans and organizations. During the course, students will use different technical and non-technical tools to evaluate various information technologies. The goal of the course is to teach student to conduct practical evaluations of systems with the goal of providing recommendations for improving system functionality and usability.

Prerequisite: IST 385 taken previously or concurrently

IST 432 Network Security

This course covers encryption methods (public-key encryption, DES, RSA algorithm) key management, authentication functions, codes and protocols, digital signatures, Kerberos, directory authentication, email, IP and web security, intruders, viruses, worms, firewalls and trusted systems, plus management policies and procedures.

Prerequisite: IST 336

IST 435 Mobile Data

This course will describe and evaluate various wireless transmission techniques, communication network components and their characteristics, networking protocols, and network architectures. Appraise their use in existing and evolving applications, along with the management implications of such use.

Prerequisite: Graduate Standing

IST 436 Voice over IP Svc Mgt

Principles, applications, and management issues of converged voice over IP networks, including protocols, transport methods, signalling standards, and network components. Business case analysis and implementation issues associated with deployment, as well as the impact of regulatory proceedings on the deployment.

Prerequisite: IST 336 or equivalent experience

IST 441 ERP: Design & Implementation

Implementation and design practices for business processes in Enterprise Resource Planning (ERP) systems. Course will examine and apply techniques used in SAP R/3 for system configuration and integration with a focus on logistics and finance.

Prerequisite: Graduate Standing

IST 444 Data Warehousing

This course presents the topic of data warehousing and the value to the organization. It takes the student from the database platform to structuring a data warehouse environment. Focus is placed on simplicity and addressing the user community needs.

Prerequisite: IST 223 or C Sc 304 or equivalent relational database experience

IST 451 Business Intelligence

Application of "intelligent" techniques from CS (AI, data mining), and OR (stochastic modeling, simulation, forecasting) to business decision-making. Overview of the theory, but with a focus on the application to business problem solving. Use of SAP as a tool to explain and explore how an enterprise system utilizes the techniques in, for example, retaining customers and optimizing processes.

Prerequisite: Database experience

IST 480 Social Informatics

The course introduces students to the field of social informatics. We examine the impact that information technology has on organizations and society. We study the relationship between the social world and technical systems from a sociotechnical perspective. The goal of this course is to provide students with a greater understanding and appreciation of the complex role that technology plays in human settings.

Prerequisite: IST 385

IST 487 Research Methods in HCI

This course covers advanced skills necessary for conducting research within the area of human-computer interaction. The course will cover techniques and tools for carrying out literature reviews; forming research goals; designing appropriate research methodology; conducting data analyses; and preparing manuscripts and presentations of findings.

Prerequisite: IST 387

BUS 301 Marketing Strategy

Identification and analysis of strategic managerial marketing issues. Integration of marketing concepts and theories through simulation and case analysis. Ethical and international applications.

Prerequisite: BUS 240 or ENG MG 251

BUS 321 Managerial Accounting

Emphasizes internal use of accounting information in establishing plans and objectives, controlling operations, and making decisions involved with management of an enterprise (the determination of costs relevant to a specific purpose, whether inventory valuation, control of current operation, or special decisions).

Prerequisite: BUS 120

BUS 343 New Product Development

Analytic, decision-making, and planning concepts and tools available to product managers from a marketing perspective. New product policy and development, organizational issues, and product modification and deletion. Practical training in design and testing of new products.

Prerequisite: BUS 240 or EMgt 251