

## Contents

# The College of Information Science and Technology 2008-2009 Graduate Course Descriptions

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## Information Science & Systems Courses

### INFO 503 Intro Info System Analysis

Presents information systems development as a life-cycle process, incorporating problem definition, modeling and analysis, system design, implementation, evaluation, support, and maintenance.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

### INFO 510 Info Resources & Services I

Presents applied information retrieval as the foundation for information services. Provides an overview of the present-day online resources and their printed counterparts.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

### INFO 511 Info Resources & Services II

Relates the applied information retrieval of INFO 510 to the larger conceptual structures of library and information science: literature-producing communities, the process of publication, publishing on the Internet, subject domains and form classes.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

### INFO 515 Action Research and Statistics

Surveys the basic statistical, tabular, and graphic methods as applied to decision making, requirements analyses, user studies, and implementation of change in information organizations when generalizability of results beyond the organization is not a primary concern. Focuses on formulating researchable problems, sampling, data gathering, and computer-assisted analysis of data. Develops skills for preparing reports and presentations and for reading research literatures.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

### INFO 520 Prof/Soc Aspects Info Svcs

Surveys the professional, social, ethical, and legal issues that affect information service professionals and organizations. Addresses such topics as information law, access, ownership, and censorship. Studies professional organizations and the sociology of professions.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

### INFO 525 SchL Lib Progs/Srvcs

Introduces the field of school libraries/media centers. Examines the context in which K12 information programs and services exist; explores key concepts related to information work in schools; explains the major functions of the school-based information services. Develops practical skills in meeting users' information needs, such as answering virtual reference questions and creating online resources.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

### INFO 530 Foundations of Info Systems

Introduction to concepts and applications of Information Systems (IS) and Information Technology (IT) as applied throughout library and information science. Topics include the structure of information systems, hardware and software concepts, basic principles of system analysis and design, and contemporary applications of computers in organizational environments.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

### INFO 532 Software Development

Provides a hands-on introduction to software development. Includes programming concepts and a series of programming exercises done by students working in pairs or in small groups. Also covers general concepts and issues in software development to help students understand why creating high quality software is very difficult.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

### INFO 540 Perspectives on Info Systems

Examines various types of information systems and the ways in which these systems support activities of individuals and organizations. Investigates application architectures that occur commonly in information systems. Provides an overview of knowledge domains that comprise the information systems discipline.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

### INFO 604 Object-Oriented Prmg Info Sys

This course provides a hands-on introduction to object-oriented programming language. The language will be a class-based object-oriented programming language in common usage in industry. The class will cover classes, objects, constructors and destructors, access control, inheritance, and use of object libraries and language specific features.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

### INFO 605 Database Management I

A first course in database management systems. Covers database design, data manipulation, and data-base integrity. Emphasizes concepts and techniques related to the entity-relationship model and relational database systems. Discusses normalization up to third normal form and commercial query languages.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

### INFO 606 Database Management II

Examines both traditional database systems and recent advances in database systems. Topics include formal treatment of normalization and denormalization, extended entity-relationship models, advanced query processing techniques, query optimization, physical database design and indexing, and object-oriented database systems.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

### INFO 608 Human-Computer Interaction

This course focuses on the design and evaluation of human-computer interfaces covering such topics as task analysis techniques for gathering design information, iterative design through prototyping, and formative and summative usability testing; theoretical foundations of HCI and cognitive modeling of user interactions; the integration of HCI techniques into the software development life cycle and the use of user constraints to generate new interaction designs.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 610 Analy of Interactive Systems

This course focuses on the evaluation of human-computer interfaces covering such topics as heuristic evaluation, inspection and design reviews, cognitive walkthroughs, ethnographic observation, user testing, interviews, and questionnaires; the usability engineering lifecycle, comparison of usability evaluation methods, selection or design of appropriate methods, reporting usability evaluation findings, and the development of user interface standards and guidelines.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 611 Design of Interactive Systems

Focuses on interactive system design methods in common use covering such topics as interactive design, iterative design, usability analysis, prototyping and evaluation, mental models, conceptual models, interaction styles, the use of guidelines; normative, descriptive, and formative approaches to work analysis; modeling user's activities, defining and validating requirements, presenting interactive system designs, and the theoretical foundations underlying the design of interactive systems.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 612 Knowledge Base Systems

Introduces the concepts, principles, and techniques of knowledge base systems, with a focus on implementation of a working expert system. Presents the expert system development life cycle with a focus on analysis and conceptual modeling techniques.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 613 XML and Databases

Introduces background and basics of XML and XML Schema. Focuses on storing and extracting XML data in Relational Database Systems. Covers the process of modeling real-world problems in XML. Investigates native XML database management systems.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 614 Distrib Comput & Networking

Presents the fundamentals of data communications, networking, and distributed computing technologies. Focuses on the broad foundational coverage of key technologies as well as the key concepts in network planning, design, and management. Major topics include network models, data and voice communications, local-area and wide-area technologies, IP networks and their applications, internetworking (with

an emphasis on the Internet), client/server systems, and distributed computing applications.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 616 Computer-Supt Co-Op Work

Examines human and technical issues and concepts of computer-supported cooperative work (CSCW). Covers topics including the ways groups work in the networked organization, intelligent work flow, various types of CSCW technology, CSCW software design and implementation issues, and future directions of this technology.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 617 Intro to System Dynamics

Introduces simulation, particularly of business processes, using the principles of system dynamics.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 618 Cptr-Support Collab

Learning Examines socio-technical issues and concepts of computer-supported collaborative learning (CSCL). Covers how individuals and groups learn in classes, teams and collaborations with computer support; theory of collaborative knowledge building; CSCL software design, implementation and evaluation issues, and future directions. Review of current research, literature, theories, issues, technologies, and methodologies.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 620 Info Sys Analysis & Design

Offers an advanced treatment of systems analysis and design with special emphasis on object-oriented analysis and design techniques based on the Unified Modeling Language (UML). Discusses major modeling techniques of UML including use-case modeling, class modeling, object-interaction modeling, dynamic modeling and state diagrams and activity diagrams, subsystems developments, logical design, and physical design.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 621 Developing Multimed Info Systm

Introduces concepts and practices associated with the creation, utilization, and evaluation of multimedia for information delivery. Includes the basics of digitizing and manipulating text, sound, and video/still images while engaging in a theoretical exploration of the impact of interactive digital media on human cognitive and communication processes. Covers multimedia design and implementation with an emphasis on creating interactive multimedia information systems.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 622 Content Representation

Focuses on fundamental decisions in designing subject access systems and alternative approaches to indexing. Explores current issues in content representation: principles of subject analysis; natural language vs. vocabulary control; manual, computer-assisted, and automatic indexing; faceted indexing and classification systems; image indexing and retrieval; indexing and the World Wide Web. Includes evaluation of indexer consistency and indexing system performance.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 624 Information Retrieval Systems

Covers the theoretical underpinnings of information retrieval to provide a solid base for further work with retrieval systems.

Emphasizes systems that involve user-computer interaction. Covers aspects of information retrieval including document selection, document description, query formulation, matching, and evaluation.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 625 Cognition & Info Retrieval

Applies cognitive processing and concept formation to the case of humans interacting with information storage and retrieval systems, including automated systems. Links theoretical models of cognitive processes to research studies that examine actual information-seeking behavior.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 626 Language Processing

Studies the problems and techniques of automating human language use and understanding. Introduces different annotations of human language and examines how spoken language differs from written language. Includes syntactic inference, parsing, semantic interpretation, and natural language planning, and discusses how to combine analyses of spoken language with analyses of written language.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 627 Reqmts Engineering & Mgmt

Provides students with an opportunity to explore and experience methodologies, tools, and techniques for eliciting, analyzing, specifying, and managing requirements in modern software development organizations. Focuses on the intersection of requirements engineering, strategic IS and business planning, and business process reengineering. Students will also learn about change management in requirements engineering context in response to a fast-paced, changing world. Upon completion of the course, each student should have new skills and insights that are immediately applicable to the performance of the requirements engineering project function.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 628 Info Sys Implementation

Addresses issues involved in implementing an information system in the context of a real organization, including ensuring quality in the

delivered system. Focuses on the detailed design, coding, test, and distribution aspects of software system implementation.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 629 Concepts in Artificial Intell

Introduces the concepts, principles, and techniques of artificial intelligence (AI), with emphasis on its application to information systems.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 630 Evaluation of Info Systems

Focuses on the evaluation of software and software system development. Covers a variety of methodologies, techniques, and tools for measuring both software and software development attributes in modern software development organizations. Includes both graphical approaches for representing these attributes and statistical approaches for modeling various software relationships.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 631 Info Technology Integration

Focuses on integration of information technologies from an organizational perspective. Coverage includes IT Product and service selection and evaluation, impact of emerging technologies, standards, and vendor strategies. Emphasizes financial considerations including return on investment, time cost of money, depreciation, and system life.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 632 Info Svcs Design & Eval

Offers perspectives on the design and evaluation of information services and products. Considers the distinguishing features of information organizations and units; the nature of service effectiveness; service quality; market positioning; client-provider relations; needs analysis; information valuation; information economics; information in organizations; and the introduction of information services innovations.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 633 Information Visualization

Introduces concepts and principles of information visualization from both theoretical and practical perspectives. Emphasizes the development of critical thinking and problem solving abilities in the context of information visualization. Provides exposure to current information visualization tools.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 634 Data Mining

This course introduces the concepts and principles of knowledge discovery in databases (KDD), with a focus on the techniques of data

mining and its function in business, governmental, medical or other information-intensive environments.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 635 Scholarly & Professional Comm

Provides an overview of traditional and contemporary communication patterns and the generation and use of information in research, scholarly, and professional communities. Considers models of communication and information-seeking behavior underlying the development of these communities, formal and informal communication networks, and the structure of the literatures produced.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 636 Software Engineering Process I

Focuses on behaviors and activities of individuals developing software with a disciplined software engineering approach. Provides hands-on experience in which students complete programming exercises using a defined software engineering process. Requires students to plan, estimate, measure, and analyze their work, and to define, analyze, and improve development processes and create process documentation.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 637 Software Engr Process II

Focuses on behaviors and activities of teams developing software with a disciplined software engineering approach. Provides hands-on experience in which students complete team activities using a defined software engineering process. Covers topics including planning and estimating for team projects, reviews and inspections, standards, software reuse, and configuration management.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 638 Software Project Management

Focuses on first-line management of software system development. Covers major themes including estimation (software cost factors, estimation models, and risk management), planning (work breakdown, scheduling, staffing, resource allocation, and creation of a project plan), and execution (team building, leadership, motivation, process tracking, control recovery, and communication within and outside the project).

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 640 Managing Information Orgs

Applies theories and techniques of management to libraries, information centers, and information enterprise, concentrating on political processes, leadership, communication, human resources, organizational structure, decision making, planning, and control. Also includes elements of project management.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 643 Information Services In Orgs

Examines various organizational structures and the influence of structure and environment on patterns of information processing and utilization by organizations. Emphasizes the role of function driving the demand for information. Focuses on the structure of information services, resources, and technology as a means of attaining organizational goals. Includes not only traditional business data but all forms of knowledge and emphasizes strategic and tactical uses.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 644 Knowledge Assets Mgt in Orgs

Focuses on the nature, acquisition, and use of knowledge assets and their strategic role in organizations. Examines the role of information professionals in organizing, managing, and providing access to these important assets using formal and informal knowledge management systems.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 646 Information Systems Management

Addresses information technology-enabled change and policy issues in the management of information systems (IS). Stresses systems development, staffing and organization, technology infrastructure, project selection, justification and funding, and data. Studies the issues and their resolution in the context of an IS plan. Emphasizes communication about the issues to senior management.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 648 Healthcare Informatics

The course presents an overview of all aspects of healthcare informatics, including medical, nursing and bioinformatics. It provides an introduction to the applications of information systems in a variety of healthcare environments, including education, research and clinical settings. It includes extensive reading and critical discussion of relevant professional research literature.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 649 Library Programming

Provides an overview of the broad range of cultural, educational, and social library programming initiatives available for children, adolescents, and adults in academic libraries, public libraries, and school library media centers. Teaches community analysis, planning and evaluation. Emphasizes the collaborative nature of developing and implementing library programs.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 650 Public Library Service

Surveys information services provided through public libraries, with attention to governmental and funding issues, determinants of use, extending services to non-users, and cooperation among libraries.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

**INFO 651 Academic Library Service**

Examines the role of library service in higher education, with emphasis on problems of organization, administration, services, and the relationship of the library to the overall educational program.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

**INFO 652 Internet Info Resource Dsgn**

Offers a hands-on introduction to creating sophisticated websites to support users' information needs. Covers website design, implementation, and evaluation. Requires the student to establish a website, compose its text and graphic files, use scripts for interactive application, install a search engine, and create reports on usage.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

**INFO 653 Digital Libraries**

This course introduces research and development in the world of digital libraries. Focuses on intellectual access to digital information resources. Topics include foundations and architectures of digital libraries, searching and resource organizing, knowledge representations and discovery, metadata and standards, interfaces and information visualization, intellectual property rights and electronic publishing.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

**INFO 655 Programming Internet Info Sys**

Provides a hands-on workshop in programming for Internet information systems using an appropriate programming language (Java is used currently). Covers fundamental concepts such as object-oriented programming, client-server programming, multi-threaded programming, graphical user interface design, and application development.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

**INFO 656 Internet Info Systems II**

This course provides additional design and programming skills for the development of Internet information systems with an emphasis in server-side programming. It covers various web servers, applications servers, and other server technologies, as well as tools and methods for creating dynamic web-based information systems. It discusses issues related to the development of server-based information on the web.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

**INFO 657 Digital Library Technologies**

Introduces technologies that enable the design and implementation of digital libraries. Focuses on hands-on activities relating to content description technologies (such as XML) systems technologies, and user interface technologies. Students learn through building components of digital libraries collaboratively.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

**INFO 658 Information Architecture**

Introduces fundamental concepts, methods and theories in Information Architecture for virtual, physical, and hybrid worlds. Focuses on organization, representation, and navigation of conceptual space. Topics include foundations, Web design, cognitive aspects, search, interaction design, knowledge organization, and user experience.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

**INFO 660 Cataloging & Classification I**

Introduces and provides intensive practice in the fundamentals of library cataloging and classification with primary focus on modern printed materials, but also includes reference to other media. Instruction on critical reading, interpretation, and use of current professional standards and documentation for the creation of MARC records. Encompasses discussion of relevant historical and theoretical issues in the construction of contemporary bibliographic databases.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

**INFO 661 Cataloging & Classif II**

Introduces and provides intensive practice in the fundamentals of cataloging nonprint library materials (sound recordings, films/videos, computer files, microforms, graphics), serials, books printed before 1800, and archival/manuscript collections. Provides instruction in RLIN searching. Examines major problems and routines affecting cataloging with copy. Discusses issues related to library automation, actual uses of catalog records, and the emergence of new media.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

**INFO 662 Metadata & Resource Descript**

Introduces the critical roles played by metadata for resource description and discovery. Provides instruction on application and implementation of current metadata schemes and tools. Provides practice in creating metadata records, analyzing the usage of metadata elements and vocabulary schemes, and evaluating the metadata quality of digital repositories.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

**INFO 663 Tech Process In Libraries**

Focuses on management, policy, and organizational issues related to the administration of technical services in libraries. Includes acquisitions, copy cataloging, original cataloging, serials control, circulation, and preservation. Emphasizes management in an automated environment where traditional methods are being supplanted by new technologies and related organizational changes.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

**INFO 664 Library Automation**

Provides an overview of information technology applications in library settings, focusing on underlying concepts and management issues.

Credits: 3.00

College: Information Sci & Technology  
Department: College of Info Science & Tech

#### INFO 665 Collection Development

Introduces the basic steps of collection development, including community analysis, preparation of policy, criteria for selection of materials, acquisition, weeding, and evaluation. Explores a variety of related issues, including the impact of electronic access on collection development.

Credits: 3.00

College: Information Sci & Technology  
Department: College of Info Science & Tech

#### INFO 666 Serial Literature

Provides an overview of serial publishing, including selection, acquisition, handling, and bibliographic control of serials. Covers current trends in serials management, including organization of serials work, manual and automated methods of serials control, resource sharing, and issues in serials public service.

Credits: 3.00

College: Information Sci & Technology  
Department: College of Info Science & Tech

#### INFO 667 Research Collection Dev

Examines the work of subject specialists in large libraries with multinational collections in history, literature, the social sciences, and area studies. Surveys acquisition arrangements, resource-sharing plans, and collection evaluation techniques. Introduces foreign and international resources, including national and trade bibliographies, government documents, archival collections, and microforms, in both English and foreign languages.

Credits: 3.00

College: Information Sci & Technology  
Department: College of Info Science & Tech

#### INFO 668 History of the Book

Examines the metamorphosis of written text from the Western medieval manuscript to the printed book to present-day digital media. Topics include methods of production, intellectual and graphical content, social impact, and the role of church, state, and economic factors.

Credits: 3.00

College: Information Sci & Technology  
Department: College of Info Science & Tech

#### INFO 669 Curatorship Spec Collect

Focuses on the functions of a curator of special collections. Such collections include both modern and historical collections of printed materials, manuscripts and archival collections, and collections of allied materials, including works of art. Gives special attention to the research uses of such materials together with reference to exhibitions, departmental publications, specialized reference sources, collection management, acquisitions, conservation, preservation, funding development, and donors.

Credits: 3.00

College: Information Sci & Technology  
Department: College of Info Science & Tech

#### INFO 672 Resources in the Humanities

Studies the major information resources in the fields of religion, philosophy, the performing arts, the visual arts, language, and literature. Emphasizes user needs, bibliographic organization of the

materials, collection building, and the provision of reference and information services.

Credits: 3.00

College: Information Sci & Technology  
Department: College of Info Science & Tech

#### INFO 673 Resources in Social Sci

Studies major information resources in the social sciences, including history, geography, political science, sociology, anthropology, psychology, demography, economics, and education. Emphasizes bibliographic organization, collection building, user needs, and reference service.

Credits: 3.00

College: Information Sci & Technology  
Department: College of Info Science & Tech

#### INFO 674 Resources in Science & Tech

Studies major information resources in pure and applied sciences, including the physical and biological sciences, engineering and technology, and interdisciplinary subjects. Emphasizes bibliographic organization, collection building, user needs, and reference service.

Credits: 3.00

College: Information Sci & Technology  
Department: College of Info Science & Tech

#### INFO 675 Medical Bibliography

Covers the major types of reference tools, including representative titles in the basic medical sciences and clinical specialties, the history and development of medical bibliography, introduction to online searching, and analysis of the reference interview and of typical reference questions. Covers print and electronic reference tools with an emphasis on the integration of electronic tools (Internet, database and CD-ROMs) into the reference collection. Range of materials includes representative titles from collections in hospital libraries, academic health science libraries, consumer health centers, and special libraries (including corporate and non-profit). Covers medical reference information, including the analysis and synthesis of available resources.

Credits: 3.00

College: Information Sci & Technology  
Department: College of Info Science & Tech

#### INFO 677 Resources in Business

Focuses on meeting user needs for specific types of business information using strategies for identification, evaluation, selection, and use of specific sources. Sources include topical dictionaries and directories; indexes and abstracts; and numeric and full-text databases. Emphasizes the use of value-added print and electronic resources to meet user needs for information related to companies, industries and markets; corporate and international finance and investments; economic and demographic statistics; and one or more of the following topics: accounting, human resources, insurance and risk management, intellectual property, information systems, operations and logistics.

Credits: 3.00

College: Information Sci & Technology  
Department: College of Info Science & Tech

#### INFO 678 Competitive Intelligence

Focuses on the analysis of existing information in order to uncover hidden knowledge about the environment internal and external to (or competing with) an organization. Examines how to analyze and integrate various types of information (patents, financial production, market); how to use the new knowledge in strategic, tactical and

operational decision-making; how to produce reports; and the ethics of competitive intelligence.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 679 Information Ethics

Presents the philosophical foundations of applied ethics and technology with primary focus on the uses and abuses of information, human moral agency in relation to new information and communication technologies, and the meaning of social responsibility in the global information society, including the concepts of global information justice and human rights.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 680 US Government Publications

Studies the nature of United States federal government documents and techniques for their acquisition, organization, and use.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

INFO 681 Legal Bibliography Introduces the fundamentals of legal research, including sources and research strategies.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 683 Resources for Children

Acquaints prospective professionals with the resources published for use by and with children in grades K to 8. Provides an opportunity to develop basic standards for evaluation of resources. Includes recent research concerning children and the central role of resources in the development of their reading/viewing/listening interests and tastes.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 684 Resources for Young Adults

Acquaints prospective professionals with the materials intended for use by and with young adults. Provides an opportunity to develop basic standards for evaluation of materials and to learn about recent research concerning young adults and their information needs, reading interests, tastes, and development.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 688 Instr Role Info Specialist

Examines the instructional role of the information professional. Emphasizes the planning, implementation, and evaluation of instruction for the purpose of information education.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 701 Career Integrated Education I

This course provides relevant off-campus employment for students wanting to strengthen their work skills. It is particularly useful for

students changing careers, for international students hoping to gain work experience in the U.S., and for students seeking to work abroad.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 702 Career Integrated Education II

This course is a continuation of INFO 701. It provides relevant off-campus employment for students wanting to strengthen their work skills. It is particularly useful for students changing careers, for international students hoping to gain work experience in the U.S., and for U.S. students seeking to work abroad.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 710 Information Forensics

Focuses on the principles and practices of the forensic investigation and analysis of information in modern organizations and distributed information systems. Includes studies of information processes, events, time measurement, casual factors, information volatility, technical and procedural forensic methods, rules of evidence and case law.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 720 Data Mining in Bioinformatics

Provides an introduction to data mining in bioinformatics, focusing on methods and applications in biological datasets. Topics include: DNA/protein sequence analysis and alignment techniques, data mining approaches to protein and gene expression analysis, and life science database management.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 731 Org & Soc Issues Hlthcare Info

Presents an overview of sociotechnical issues in healthcare informatics, focusing on patient care and biomedical research settings. Deals with the human, social, and technological aspects of healthcare IT. Focuses on the role of information professionals in applied healthcare IT settings.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 740 Digital Reference Svcs

Presents an overview of digital reference services with hands on experience. Prepares students to become managers of digital reference services by exploring question answering services, developing virtual collections, exploring the state of the art in digital reference, and discussing issues related to digital reference services.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 780 Special Topics

May be repeated for credit if topic varies.

Credits: 2.00 to 12.00

College: Information Sci & Technology

Department: College of Info Science & Tech



#### INFO 782 Issues in Informatics

Examines recent developments in a selected informatics area as a case study. Focuses on research results and leading edge application of information technology in practice. Helps students prepare for success in information science and technology fields.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 799 Independent Study

Provides individual investigation in special areas of information science and technology not regularly covered in the courses offered. Topic for study must be approved, in advance of registration, by the faculty adviser, the instructor involved, and the associate dean. May be repeated for credit if topic varies.

Credits: 2.00 to 12.00

College: Information Sci & Technology

Department: College of Info Science & Tech

#### INFO 811 Applied Research Methods

Provides an overarching understanding of several applied research methodologies that are relevant to decision makers, practitioners and scholars. Stresses identification of the appropriate research methodology for a given problem, as well as the advantages and disadvantages of each. Emphasizes real-world factors associated with the research process.

Credits: 3.00

College: Information Sci & Technology

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#### INFO 812 Research Statistics I

This course provides the knowledge and tools necessary for conducting and understanding many types of empirical studies in the field of information science. It examines the fundamentals of descriptive and inferential statistics, and hypothesis testing.

Credits: 3.00

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#### INFO 813 Quantitative Methods

Introduces research designs and methods of quantitative analysis for various problems in information systems, management of information resources, and scholarly and professional communication. Presents statistical techniques through packaged computer programs.

Credits: 3.00

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#### INFO 816 Qualitative Research Methods

Provides doctoral students with an opportunity to explore and experience qualitative research methods, tools, and techniques, with emphasis on historical, philosophical, and theoretical underpinnings of the qualitative perspective. Concerned with analysis of the social construction and reproduction of human activity. Explores interpretive research methods that try to analyze social sense-making.

Credits: 3.00

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#### INFO 830 Issues in Info Studies

This doctoral seminar course examines a current research topic in library information science or information systems. Students may repeat the course in different research topics.

Credits: 3.00

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#### INFO 861 Topics in Information Science

This course introduces students to the community of practice in information science research by a broad introduction to a common body of knowledge. It helps prepare students to join in the collective work to expand that body of knowledge. It covers a variety of the most important texts and papers in the field of information science. Must have doctoral student status or master student with permission of instructor.

Credits: 3.00

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#### INFO 863 Topics in Information Systems

This course introduces students to the community of practice in information systems research by a broad introduction to a common body of knowledge. It helps prepare students to join in the collective work to expand that body of knowledge. It covers a variety of the most important texts and papers in the field of information systems. Must have doctoral student status or master student with permission of instructor.

Credits: 3.00

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#### INFO 865 Sem in Research Methodology

Centers around the creation of a research proposal. Emphasizes problem identification, research problem statement, hypothesis construction, ethnographic methods of inquiry, validity, and reliability. Must have doctoral student status or master student with permission of instructor.

Credits: 3.00

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#### INFO 866 Seminar Info Sys Research

Examines interdisciplinary information systems theory and research. Combines quantitative and qualitative methods in such areas as conceptual modeling, simulation, and human factors research. Considers research literature in both experimentation and design. Must have doctoral student status or master student with permission of instructor.

Credits: 3.00

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#### INFO 891 Field Study

Designed for students who lack experience in managing and teaching in a media center. Provides supervised field experience in a selected school media center or classroom in the Delaware Valley area. Discussion sessions accompany the on-site experience.

Credits: 3.00

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#### INFO 893 Practicum I

Provides relevant professional experience that will strengthen work skills. Particularly useful for students without prior work experience, career changers, or those exploring possible work environments. Associated academic coursework provides the opportunity to more deeply explore professional issues, and places the practical work experience within the context of larger workplace trends.

Credits: 3.00

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#### INFO 894 Practicum II

Provides relevant professional experience that will strengthen work skills. Particularly useful for students without prior work experience, career changers, or those exploring possible work environments. Associated academic coursework provides the opportunity to more deeply explore professional issues, and places the practical work experience within the context of larger workplace trends.

Credits: 3.00

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#### INFO 895 Workshop

Considers special issues and problems in information science and technology in a series of short courses and workshops.

Credits: 0.00 to 3.00

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#### INFO 998 Ph.D. Dissertation

Provides individual work on an approved topic leading to a doctoral dissertation in information science and technology.

Credits: 1.00 to 12.00

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### Information Tech Leadership Courses

#### ITL 601 Emerging Trends in IT

Explores issues currently affecting the field of information service management and related information technologies. Students research and analyze emerging technology trends and their resulting business implications. This course introduces standard environments and identifies trends in technology support for information services delivery.

Credits: 3.00

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#### ITL 602 IT Infrastructures

Introduces techniques and concepts for managing the corporate infrastructure. Issues discussed will include telecommunications and networking. Understanding and managing security threats and responses in a network environment. managerial level of knowledge and terminology to communicate effectively with technical and operational personnel.

Credits: 3.00

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#### ITL 603 Service Oriented Architecture

Introduces technologies required for the Internet and distributed information systems. Covers the impact of wireless, mobile and

pervasive computing environments on the organization. Explores collaboration, communication, telecommuting tools and security issues. Information System acquisition strategies and software development.

Credits: 3.00

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#### ITL 620 Enterprise Architect & System

Overview of how IT systems support enterprise-wide information architectures and business workflows. Covers standard system architectures, electronic supply chain management and technologies for virtual organizations.

Credits: 3.00

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#### ITL 622 Planning & Program Mgmt Office

Principles of developing a project management office. This includes development of corporate policies, procedures and standards for managing software development projects across the organization. Understand both internal and external factors that can affect a project manager. Also covers strategic acquisition strategies including vendor selection, financial controls and outsourcing.

Credits: 3.00

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#### ITL 624 Info Security & Business

Describes the underlying technologies supporting Information Security, privacy, eBusiness and eCommerce in the modern, wired world. View eBusiness as a part of overall organization strategy. Examines ways of managing threats to information security and how to develop information security strategies.

Credits: 3.00

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#### ITL 640 Org. Aspects of IT Management

Evaluation of the policies and procedures germane to the internal operations and performance of a technology-driven organization. Emphasis is on key challenges including the management of multiple technology projects, software development processes, and communications among technology managers and senior managers, developers, programmers, and customers.

Credits: 3.00

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#### ITL 642 IT Leadership

Principles and techniques of technology and information management for the enterprise. Impact of political processes, leadership, communication, human resources and organizational structure. Governance considerations that link IS to the other parts of the organization. IT and corporate governance.

Credits: 3.00

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#### ITL 644 Management of IT Innovation

Develop a conceptual foundation for managing information technology innovation. It introduces concepts and frameworks for analyzing how

firms can create, commercialize and capture from technology-based products and services.

Credits: 3.00

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ITL 660 Info Mgmt, Policy & Strategy

Information technology-enabled change and policy issues in the management of information systems (IS). Development and implementation of a long-range organizational strategy and key performance indicators for technology. IT change strategies and evaluation. System integration and the use of IT for competitive advantage.

Credits: 3.00

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ITL 662 Bus Intel & Customer Care

Overview of how integrated information management forms the basis of business intelligence and customer care. Discusses the role of CRM systems, data warehouses, data portals, eSystems and similar technologies in a corporate information strategy.

Credits: 3.00

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ITL 664 Comp Intel & Knowledge Mgmt

Credits: 3.00

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