



The Information School

February 2008

Information Technology Course Descriptions

In light of the curricular change in the information technology core requirement, we are providing you with the following course descriptions. We hope this aids you in your course selection and degree planning.

Preparatory Info Tech Electives

- *Recommended for those who need one or more introductory courses to prepare them for the core info tech courses.*
- *Each are offered as 1 credit electives, starting in autumn 2008. They are all taught in distance (online) mode and do not have required on-campus residencies.*

INFX 501 – Concepts in Algorithmic Thinking for Information Professionals (1 cr): Introduction to the algorithmic manipulation of information objects, the mindset and methods of computer programming and application development; presents fundamental programming concepts in the context of information science; explores the concepts of the algorithm, data storage, expressions, syntax, logic, objects, commands, and events. *(Prepares students for all info tech courses)*

INFX 502 – Database Concepts for Information Professionals (1 cr): Introduction to the terminology and concepts of working with relational database management systems. Emphasis given to working with tables and extracting information from data using Structured Query Language (SQL) commands and tools. Prepares students for advanced database design courses, web design, and programming courses. *(Prepares students for INFX 543 and INFX 544)*

INFX 503 – Website Design Concepts for Information Professionals (1 cr): Introduction to the context and construction of websites presenting an integrated understanding of web design principles, information behavior, and technical skills. Emphasis is given to the roll of markup in information display and organization, the development of large sites, web strategy, and site construction. Prepares students for advanced web design courses. *(Prepares students for INFX 542)*

INFX 504 – Networking and Network Applications for Information Professionals (1 cr): Introduction to the concepts, terminology and technologies of digital networks, including how networks operate and the influence networks have on the workplace and society. Prepares students to think critically about the impacts of networking technologies on organizations, work groups and information systems. Prepares students for advanced studies in database technologies, web design and information assurance. *(Prepares students for INFX 546)*

Core Info Tech Courses

- *Required – all MSIM students enrolling in autumn 2008 or later will be required to complete two (2) of the following. IMT540 is required for all students, you may choose one or more from the remaining courses.*

IMT 540 – Design Methods for Interaction and Systems (4 cr): Introduction to the theory and practice of user-centered design. Examines design methods for identifying and describing user needs, specifying and prototyping

new systems, and evaluating the usability of systems. Examines design methodologies such as contextual design and value-sensitive design, giving specific emphasis to human-information interaction.

INFX 542 – Information Systems and Modeling Using XML (4 cr): Principles of information systems including the representation and organization of content, creation of access structures and navigation, and information collection and rendering. Course uses XML and commercial taxonomy management tools as a basis for instruction. Prepares students for further work in information architecture, information organization, advanced Web site creation and information systems architecture.

INFX 543 – Conceptual Database Design (4 cr): Introduction to relational database theory and technology from an information science perspective. Focuses on traditional transactional database theory, architecture and implementation in a user-centered systems context. Introduces set and graph theory, relational algebra, and data warehouses.

INFX 544 – Information Retrieval Systems (4 cr): Covers theories and models in information retrieval (IR) and reviews user-centered and system-centered approaches. Issues involved in the design, development and evaluation of IR systems are examined including: methods and tools for document analysis, retrieval techniques, search engines, interfaces, usability, evaluation.