

# Health Information Mgmt & Tech (HIMT)

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## Courses

### **HIMT 300. Survey of Contemporary Computing. 3 Credits.**

This course provides a basic overview of contemporary information technology and computers. Topics include computer concepts (e.g., hardware, system architectures, operating systems, etc.), communication technologies, Internet technologies, and data organization/structures. Special emphasis placed on database management systems and data warehousing.

Fall and Spring.

### **HIMT 310. Healthcare Systems and Organizations. 3 Credits.**

This course provides an overview of how healthcare and public health are organized and how their services are delivered in the United States (US). Topics to be covered include: public policy (including US health reform initiatives), organization of healthcare systems, components and operation of healthcare organizations including e-health delivery, professional roles and accreditation, legal and regulatory issues including licensure requirements.

Fall and Spring.

### **HIMT 320. Survey of Information Technology in Healthcare. 3 Credits.**

Essential healthcare information technologies (HIT) that are used for healthcare information systems (HISs) are examined. Popular HISs include electronic medical record systems (EMRS), the computerized provider order entry systems, telemedicine, telehealth and e-prescribing.

Fall and Spring.

### **HIMT 330. Healthcare I: Terminology & Body Systems. 3 Credits.**

Specific terminology and vocabulary used by workers in healthcare and public health will be examined. Topics include medical terminology that broadly relates to human anatomy and physiology, body systems and diagnosis, including prefixes, suffixes, roots and combined forms. Topics will also include healthcare taxonomies and nomenclatures (e.g. ICD-9-CM, ICD-10, etc.).

Fall and Spring.

### **HIMT 340. Ethical issues, Security Management and Compliance. 3 Credits.**

This course introduces three broad subjects: 1) evidence-based medical ethics pertaining to healthcare information management, 2) framework of healthcare information security management including security principles, policies and procedures, security management models, risk assessment, and protection mechanisms, 3) healthcare regulations and compliance with focuses on the legislative systems, policies, and legal environment in the U.S. and the existing health information laws, regulations and standards. Also addressed are the elements and development of compliance programs.

Fall and Spring.

### **HIMT 345. Programming and Software Development. 3 Credits.**

Introduction to: object-oriented (OO) programming paradigm, OO systems analysis and design, fundamental data structures, and n-tier software design. Examination of the role of each in the software development process.

Fall and Spring.

### **HIMT 350. Statistics for Healthcare. 3 Credits.**

This is an introductory course in statistical methods for the health sciences. The course will emphasize the principles of statistical reasoning, underlying assumptions, hypothesis testing, and careful interpretation of results. Some topics covered; major study designs, descriptive statistics, graphical displays of data, probability, confidence intervals and tests for means, differences of means, sample size and power, differences of proportions, chi-square tests for categorical variables, regression, multiple regression, and non-parametric statistics.

Fall and Spring.

### **HIMT 355. Principles of Management for HIMT Professionals. 3 Credits.**

This course provides an overview of basic principles involved in management and communication. Topics include basic management principles, communication skills, interpersonal communication competence, negotiation technique, team/consensus building, professional development, and problem solving/decision-making processes.

Fall and Spring.

### **HIMT 360. Healthcare II: Survey of Disease & Treatments. 3 Credits.**

This course further investigates the topics covered in HIMT 330 Health Care I. Based on each body system the course will further expand into the topics of human disease, human health issues and classification of disease/health issues. Diagnostics, Treatment and Clinical procedures that are currently in practice. In addition, the course will incorporate Pharmacotherapeutic concepts (drugs and therapies to treat/prevent/control human disease/health issues), investigating the variety of drugs used for disease treatment for each body system, this will include the current biologicals that are used for treatment. Topics will include how the drugs and biologicals work, their limitations, and the current diversity of available drugs and biologicals.

Fall and Spring.

### **HIMT 365. Healthcare Economics. 3 Credits.**

Applications of microeconomic theory to analyze the behavior of health and health care markets. Topics will include: supply and demand of health care services, private health insurance markets, government provision of health care services and health insurance, and health care policy.

Fall and Spring.

**HIMT 370. Healthcare Systems: Analysis & Design. 3 Credits.**

This is the first course in a two-course sequence that addresses methods and techniques of healthcare information system (IS) analysis and design as performed within the system development life cycle. Included will be techniques for problem definition, requirements gathering, analysis, logical design, selection and evaluation of alternative healthcare information systems solutions from the point of view of the health provider and user. An emphasis is placed on analysis, selection, and evaluation of information systems as they relate to healthcare.

Fall and Spring.

**HIMT 375. Database Structures and Management Systems. 3 Credits.**

Analyze and design databases to support computer-based information systems. Develop and implement relational database management systems using SQL. Topics include: data modeling techniques such as entity-relationship modeling, extended entity-relationship modeling, database constraints, database normalization techniques, and basic and advanced features of database query language SQL, etc.

Fall and Spring.

**HIMT 380. Healthcare Billing, Coding and Reimbursement. 3 Credits.**

This course examines the coding and reimbursement connection; topics include managed care plans, prospective payment systems, Medicare-Medicaid reimbursement, resource-based Relative Value Scale, case mix management, and revenue cycle management.

Fall and Spring.

**HIMT 400. Healthcare Information and Technology - Data. 3 Credits.**

This course explores the sources and data contents of health-care information as well as the proper presentation of it for different usage levels. Topics addressed include: 1) data structure and use of health information (individual, comparative and aggregate), 2) type and content of health record, 3) data quality assessment, 4) secondary data sources, 5) healthcare data sets, 6) Health information archival systems, and 7) National Healthcare Information Infrastructure (NHII). The course will also cover topics in bioinformatics.

Fall and Spring.

**HIMT 410. Healthcare Systems: Implementation and Integration. 3 Credits.**

Covers the back-end stages of healthcare systems development lifecycle through the procurement route: development of technical design specifications, procurement procedures (RFP, RFQ, vendor evaluation and selection, and contracting), systems configuration and integration, installation, conversion, operation, and maintenance. Pre-installation testing and post-conversion auditing and monitoring will be emphasized to address the upcoming requirements of federal certification of EHR systems.

Fall and Spring.

**HIMT 415. Human Resource Management in Healthcare. 3 Credits.**

This course examines the role of HIM staff in managing human resources to facilitate staff recruitment, retention and supervision.

Fall and Spring.

**HIMT 420. Healthcare Systems: Project Management. 3 Credits.**

This course addresses the phenomenal impact information system (IS) projects have had on healthcare delivery. Students learn how healthcare IS projects affect organizations, doctors, patients, and chronic-illness treatments, as well as individuals interested in managing their own healthcare. Concepts and tools for effective healthcare IS project management, process re-engineering and work redesign are introduced. The purpose of this course is to expose students to IS project management activities in healthcare settings. Topics covered include recent healthcare IS project trends, budgeting, scheduling, resource management, scope, risk analysis, and deployment controls. The genesis of healthcare project management is covered using specific cases and examples.

Fall and Spring.

**HIMT 425. Data Warehousing and Mining. 3 Credits.**

Examine the concept of data warehouse and its effectiveness in supporting strategic decision making. Address the process of creating data warehouse/data-mart solutions from the identification of the enterprise informational and analytical needs to producing business intelligence by extracting information from the data warehouse by using data mining methods and models.

Fall and Spring.

**HIMT 430. Quality Assessment and Improvement. 3 Credits.**

This course examines the Quality Assessment and Quality Improvement cycle (Plan, Do, Act, Check) and the role of the HIT/HIM in the process. Tools used in quality and risk management processes will be examined.

Fall and Spring.

**HIMT 435. Data Communications and Networks in Healthcare. 3 Credits.**

This course provides fundamentals of data communications and networking techniques, and examines the linkage of information technology strategies and technological solutions enabling effective communication within and between health care organizations. Major topics include fundamental concepts of data communications and applications, network communication devices, basic technologies of the Local Area Network, Wireless Local Area Network, Wide Area Network, Internet and the Web, the OSI stack, health care information systems standards, and the HIE, RHIN, and the NHIN.

Fall and Spring.

**HIMT 440. Group Processes, Team Building and Leadership. 3 Credits.**

This course introduces students to the necessary group/team processes that are at the root of building, developing, and maintaining medical/healthcare work teams and the effective functioning of such teams. The course also provides an overview of leadership development techniques. Also included is a focus on the uses of various communication technologies in the team building and functioning processes.

Fall and Spring.

**HIMT 445. Application of Leadership & Management in Healthcare Technology. 3 Credits.**

This course assimilates and integrates concepts and applications of management and leadership in the healthcare advancing on the topics covered in HIMT 355, 365 and 415. Topics will include strategic leadership concepts, exploring key factors that impact management and planning, change management, critical organizational behaviors for leadership and management focusing on best practices and organizational accountability and assessment models.

Fall and Spring.

**HIMT 450. Healthcare Information and Technology - Standards. 3 Credits.**

This course will be an introduction to healthcare information technology standards including standards and regulations for documentation, and will cover health information standards. The course will also investigate soft-ware applications and enterprise architecture in health-care and public health organizations.

Fall and Spring.

**HIMT 490. Capstone. 3 Credits.**

This course is capstone course for both tracks of the degree program. Students are required to find an internship site that is related to healthcare and set up a semester long project from which they can gain hands-on experience in the areas of their concentration. Project set-up will be jointly done by the student, site sponsor, and the faculty of this course, whereas internship supervision will be performed by the project supervisor and the course instructor.

Fall and Spring.