

HEALTH INFORMATICS (HLIF)

Courses

HLIF 510. Health-Care Information Systems. 4 Units.

Development and diffusion of information systems in health care. Explores how data, information, and technology support quality patient care. Covers EHRs, consumer health informatics, HIE, health informatics ethics, regulatory movements, system theory, evidenced-based medicine, clinical decisions support, patient safety, and strategic planning for information systems. Introduces system architecture, data standards, data analytics, and health information privacy and security.

HLIF 515. The U.S. Health-Care System. 4 Units.

Analyzes health-care delivery in the U.S., including health-care organizations, health-care professionals, beliefs, values, access, medical technology, regulatory requirements, reimbursement methods, and cost control. Examines the health-care delivery system from the pre-industrial era to future projections. Studies regulatory, social, and ethical issues of privacy in health care, including HIPAA privacy rules and other regulatory issues with privacy.

HLIF 520. Data Management: Modeling and Development. 3 Units.

Explores the concepts of data and the criticality of appropriate data management to successfully model, develop, and implement health-care information systems. Specific topics include database management, data integrity, knowledge management, data mining, data integration, data visualization, data architecture, and data warehousing.

HLIF 525. Management of Health-Care Data and Information. 2 Units.

"Investigates and analyzes standardization movements and reimbursement systems in health informatics. Topics addressed include SDOs, HL7, federal standardization, ANSI, UMLS, EDI, SNOMED CT, and revenue cycle management."

HLIF 526. Quality and Performance Improvement for Health Care. 2 Units.

Explores methods, design, and process for quality improvement within health-care organizations. Topics covered include workflow analysis, error prevention, problem detection, problem solving, change management, and systems evaluation.

HLIF 530. Data Analytics and Decision Support. 3 Units.

"Studies various data sources available for healthcare data analytics, along with direct application of software tools and techniques to extract, transform, analyze, visualize healthcare data. Review of strategies supporting decision support and knowledge management."

HLIF 532. Financial Management in Health Care. 2 Units.

Study of economics and financial management in health-care organizations. Analyses of economic market impacts, various health-care payment mechanisms, ratio analysis, cost-benefit analysis, operational and capital budgeting, and investment strategies.

HLIF 540. Leadership Perspectives and Practice. 3,4 Units.

Examines organizational culture and the various structures, designs, and models as they relate to leadership. Includes specific topics such as change management, personnel management, governance, ethics, group dynamics, and human factor in health informatics. Includes an exploration of dominant theories and methods impacting management and behavior of individuals, groups, and organizations. Three units required of students under the 2024-2025 catalog.

HLIF 545. System Design, Implementation, and Management. 3 Units.

Study of the fundamentals of the system development life cycle (SDLC) —including system analysis assessment, techniques and tools, system design/development strategies, system implementation and operations, and system evaluation.

HLIF 548. Human Computer Interactions. 3 Units.

Evaluates user experiences and human factors related to the design of and interaction with health informatics. Develops application design through a user-centered approach and user research methods.

HLIF 550. Systems Security in Health Care. 2 Units.

Regulatory, social, and ethical issues of privacy and security in health care information systems. HIPAA, breach legislation/reporting requirements, security requirements/defenses, business continuity planning, and other regulatory issues.

HLIF 555. Health-Care Vendor and Project Management. 2,3 Units.

Investigates contemporary health-care information systems, vendor offerings, and effective techniques for establishing effective vendor relationships. Topics include request for information, request for proposals, contract negotiations, and project management. Three units required of students under the 2020-2021 catalog.

HLIF 565. Technical Structures in Health Informatics. 3 Units.

Examines the principles of computer science as related to the development and diffusion of technology supporting health-care information systems. Topics covered include technical infrastructure support of the following: business continuity, daily operations, wireless communication, security, EDI/HIE, networking protocols, system integration, programming languages, and system integration issues. Introduces students to computer programming and software development.

HLIF 570. Professional Portfolio. 2 Units.

Development of a professional e-portfolio that includes a personal video of introduction, the development of personal and professional goals, resume and cover letter writing, major projects completed from each course and from previous work experience, career mapping, reaction papers in response to the University's core values, publications completed, service learning, and other items as developed during the program.

HLIF 575. Capstone Project and Special Topics in Health Informatics. 2 Units.

Summative evaluation based on completion of either a systems application business plan or a data-analytics project utilizing competencies gained in the program. Facility-based or theory-based projects. Preparation and presentation of a complete capstone project.

HLIF 599. Health Informatics Independent Study. 1-4 Units.

Student submits a project or paper on a topic of current interest in an area of health information administration. Regular meetings to provide the student with guidance and evaluation. Elected on the basis of need or interest. May be repeated.