

HEALTH INFORMATICS (HIF)

HIF 6010 - Foundations Health Informatics - 3 cr.

An introduction to the US healthcare system and the role of informatics. Examines clinical, research, and administrative applications of information technology applications used by healthcare professionals. The course will cover the history of the field, an introduction to clinical data, electronic health records, decision support systems, computerized order entry, and consumer applications.

HIF 6210 - Health Information Technology in Practice - 3 cr.

Prepares students to appraise, implement, and optimize Electronic Health Record (EHR) technology to support the utilization and management of clinical information. Students will describe information infrastructure, data, and databases; employ processes for implementing healthcare information systems and clinical decision support tools; relate privacy and security issues to healthcare information; and explain personal health records and EHR applications used in acute, ambulatory, and specialty services.

HIF 6220 - Advanced Biostatistics and Health Analytics - 3 cr.

Examines and applies analytic methods, data handling, and data cleansing techniques to ensure quality analyses. Applies current theoretical models and research to clinical practice to gain new knowledge from data. Requires students to use a myriad of analytic tools for analyzing healthcare data with statistics, data visualization, data mining, and report generation.

Prerequisite Courses: HIM 6508

HIF 6230 - Human Factors and Usability Assessment - 3 cr.

Explore human factors principles and the application of usability assessments for the development and use of health information technology by clinicians and patients. The course covers the role of human factors and human-computer interactions in medicine, usability assessments and user-centered design, and theories of cognition, memory, and technology.

HIF 6240 - Consumer Health Informatics - 2 cr.

Examine the field of consumer health informatics and apply analytic methods, system analysis and design, and research methods to address issues related to patient use of health information for individual decision-making. Students will also apply current theoretical models and research to gain knowledge regarding the information structures that facilitate patient engagement.

HIF 6511 - Health Information Security Systems - 3 cr.

Strategies for designing, implementing, auditing and evaluating the technical, physical and human components of an information security system that adheres to a healthcare organization's legal, ethical and organizational requirements

HIF 6522 - Seminar in Health Informatics - 1 cr.

A capstone seminar in which students present the results of their Final Research Projects and explore current issues relative to the field of Health Informatics in a rapidly changing healthcare delivery system. All health informatics students will conduct a formal presentation of their final research project. Faculty, staff, the student body, and the public will be invited to each presentation. The presentations are held virtually and aired live as well as recorded for later viewing. Enrolled students will present the background, research question/hypotheses, methods, results, discussion, and conclusions based on their research from their final research project.

Prerequisite Courses: HIF 6534

HIF 6534 - Final Applied Research Project - 3 cr.

Working closely with the instructor, each student completes the applied research project and prepares a final manuscript that can be submitted for potential publication in a peer-reviewed journal or conference proceedings. The goal of the final applied research project is to increase students' research competencies through actively engaging in the research process. Not only will this further the student's education, but there is the potential that a student will have their work published and recognized by health informatics researchers and professionals.

Prerequisite Courses: HIF 6522

HIF 6537 - Systems Design and Software Development - 3 cr.

Introduction to computer programming with a focus on the phases of the systems development life cycle. Topics include: preliminary investigation, physical and logical documentation, detailed investigation of requirements and alternative specifications, analysis and design techniques, implementation considerations, development of logical and physical data flow diagrams, data modeling, prototyping, and tools.

HIF 6777 - Topics in Health Informatics - 0-16 cr.

Topics in Health Informatics.