

HEALTH AND BIOMEDICAL INFORMATICS (HBMI)

HBMI 421-0 American Healthcare System (1 Unit)

The course provides knowledge of the key components of health care in the United States—the policy, economic, and societal forces that shape health care delivery. The course serves as an introduction to elements of the American health care system, including the provider components, the financing of health care, the basic structure of public policy making and public health systems, a comparative analysis of the American system to health care systems of other countries, and the legal and regulatory framework within the American health care system functions. In addition to the structural components of the system, the course reviews current issues within the American health care system, including public health, preparedness, quality of health care, health reform, payment mechanisms, and consumerism.

HBMI 422-0 Introduction to Clinical Thinking (1 Unit)

This course provides an introduction to the clinical environment throughout the health center. It is designed for students not previously involved in clinical medicine and those trained in medicine outside the United States. The course features problem-based learning and traditional medical informatics task domains and covers medical terminology and basic pathophysiology. Topics include the clinical setting, eliciting information from patients, synthesizing the history and physical examination, establishing diagnosis, treatment planning, integrating evidence-based medicine, and using an intelligent medical record in a complex environment. This is a technologist-track course for students with little clinical experience.

HBMI 423-0 Decision Support Systems and Health Care (1 Unit)

This course provides an introduction to clinical decision support systems in health information technology. Instruction is given in formal decision analysis techniques as they apply to decisions in the medical domain. Clinical decision support systems are introduced and issues relating to their design and implementation discussed. The mathematical foundations upon which they are based will be examined. Evidence-based guidelines and performance measurement techniques will be presented. A framework for designing and implementing clinical decision support systems will be introduced. Principles learned from this framework will be applied in writing a final paper that describes a prototype decision support system, including justification for its use and a description of steps followed in its design, implementation and performance measurement.

HBMI 499-0 Health and Biomedical Informatics (HBMI) Independent Study (1 Unit)

Independent Study and Research.