HEALTH INFORMATICS (HI)

**HI 41095  SPECIAL TOPICS IN HEALTH INFORMATICS  1-3 Credit Hours**
(Repeatable for credit) Topics could include current or emerging issues in health informatics. Topics will be announced in schedule of classes. Offered irregularly as resources and opportunities permit.

**Prerequisite:** none.
**Schedule Type:** Lecture
**Contact Hours:** 1-3 lecture
**Grade Mode:** Standard Letter

**HI 41096  INDIVIDUAL INVESTIGATION IN HEALTH INFORMATICS  1-3 Credit Hours**
(Repeatable for credit). Research or individual investigation in areas not covered in the existing curriculum for baccalaureate level students at or above the junior level. In-progress (IP) mark permissible.

**Prerequisite:** special approval.
**Schedule Type:** Individual Investigation
**Contact Hours:** 3-9 other
**Grade Mode:** Standard Letter-IP

**HI 60401  HEALTH INFORMATICS MANAGEMENT  3 Credit Hours**
Covers the areas encompassing health informatics management including the planning, selection, deployment, and management of electronic medical records (EMR), management decision-support and tracking systems (DSS), and other health information technologies (HIT).

**Prerequisite:** graduate standing.
**Schedule Type:** Lecture
**Contact Hours:** 3 lecture
**Grade Mode:** Standard Letter

**HI 60402  LEGAL ISSUES IN HEALTH INFORMATICS  3 Credit Hours**
(Slashed with HI 80402) Introduction to the fundamentals of law for Health Informatics and Information Management. Elements of the course include general legal principles and healthcare; legal electronic medical records (EMR); Health Insurance Portability and Accountability Act (HIPAA) privacy rules and security rules; access, requests and disclosure of health information; required reporting and mandatory disclosure laws; risk management and quality improvement; compliance; workforce overview; related ethics and social issues.

**Prerequisite:** HI 60401; and graduate standing.
**Schedule Type:** Lecture
**Contact Hours:** 3 lecture
**Grade Mode:** Standard Letter

**HI 60403  HEALTH INFORMATION SYSTEMS  3 Credit Hours**
Introduction to information systems and their applications in healthcare used for managerial and clinical support. Study the fundamentals of information systems, including Electronic Medical Records (EMR), information security. Understand the role of standardized codes, vocabularies and terminologies used in health information systems. Analysis of management and enterprise systems, identify the key elements to manage information resources effectively and the trends affecting the development of health information systems and networks.

**Prerequisite:** HI 60401; and graduate standing.
**Schedule Type:** Lecture
**Contact Hours:** 3 lecture
**Grade Mode:** Standard Letter

**HI 60410  HEALTH RECORDS MANAGEMENT  3 Credit Hours**
Conceptual foundations and practicum for health records management, including the planning, implementation and operation of electronic medical records (EMR); the management of EMR in management and enterprise systems; identifying, selecting and evaluating EMR and health information systems, applications, and repositories; and issues of data quality, integrity, migration, and interoperability.

**Prerequisite:** HI 60401; and graduate standing.
**Schedule Type:** Lecture
**Contact Hours:** 3 lecture
**Grade Mode:** Standard Letter

**HI 60411  CLINICAL ANALYTICS  3 Credit Hours**
(Slashed with HI 80411) The use of well-defined and well-integrated clinical analytics throughout the healthcare value chain can be transformative. Through careful implementation of health analytics, hospitals can transform unwieldy amalgamations of data into information that can: improve patient outcomes, increase safety, enhance operational efficiency and support public health. Given the immense size of the data challenge, the distinctness and geographic spread of many healthcare-related activities, and the fact that so many healthcare activities are conducted by different entities which must interact with each other, there is really no other way to provide operations management tools necessary to deliver personalized medicine and to control spiraling costs. Since clinical analytics is an immature discipline, we carefully examine the practices of those institutions who are standard setters in the industry.

**Prerequisite:** HI 60401 or MIS 64936; and graduate standing.
**Schedule Type:** Lecture
**Contact Hours:** 3 lecture
**Grade Mode:** Standard Letter

**HI 60412  CLINICAL DECISION SUPPORT  3 Credit Hours**
Provides a practical survey of clinical decision support systems that collect clinical data and enable the transition to clinical knowledge in real world applications intended to improve quality and safety of patient care. Students become familiar with the basic requirements for clinical decision support systems and the challenges associated with the development and deployment of new applications within the healthcare setting.

**Prerequisite:** HI 60401; and graduate standing.
**Schedule Type:** Lecture
**Contact Hours:** 3 lecture
**Grade Mode:** Standard Letter

**HI 60413  CHANGE MANAGEMENT IN HEALTH INFORMATICS  3 Credit Hours**
(Slashed with HI 80413) Designed to cover the process of change management in large healthcare organizations in light of current trends. Topics related to technology requirements, technology implementations, risk assessment and buy-in are among those covered.

**Prerequisite:** HI 60401; and graduate standing.
**Schedule Type:** Lecture
**Contact Hours:** 3 lecture
**Grade Mode:** Standard Letter
HI 60414   HUMAN FACTORS AND USABILITY IN HEALTH INFORMATICS  
3 Credit Hours  
(Slashed with HI 80414) Provides students with the foundational principles of usability and human factors as applied to safety and quality in health informatics technology. Course readings and materials review the concepts of human factors, usability and the cognitive consequences of health information technology on clinical performance and decision making. Attention is given to the role of mobile computing in health care, as well as information visualization. 000); and graduate standing. 
Prerequisite: HI 60401 with a minimum grade of C (2). 
Schedule Type: Lecture 
Contact Hours: 3 lecture 
Grade Mode: Standard Letter 

HI 60415   HEALTH INFORMATICS INQUIRY AND ASSESSMENT  
3 Credit Hours  
(Slashed with HI 80415) Provides a foundation for understanding research in health informatics with a focus on user and experience design research. Through lectures, readings, discussions and assignments, students review user research methods, data collection techniques and communication strategies within the healthcare context. Students then apply this knowledge to creating a research plan for assessing health information technology and communicating results to key organizational stakeholders. 
Prerequisite: HI 60401 with a minimum C (2.000) grade; and graduate standing. 
Schedule Type: Lecture 
Contact Hours: 3 lecture 
Grade Mode: Standard Letter 

HI 60416   HEALTH INFORMATICS ISSUES: POLICY, POLITICS AND ETHICS  
3 Credit Hours  
This course uses a policy analysis lens to critically examine issues related to the use of information technology in healthcare from an ethical, political and regulatory perspective. The primary focus will be on the United States, but international approaches will also be discussed. Legislation affecting Health Information Technology area will be examined including the American Reinvestment and Recovery Act, HITECH section; Affordable Care Act and Health Insurance Portability and Accountability Act (HIPAA) of 1996. Topics and issues related to Health Informatics including structure of health administrative and delivery systems, assessment of population health, models of health care delivery, access and quality of care will also be discussed. 
Prerequisite: HI 60401; and graduate standing. 
Schedule Type: Lecture 
Contact Hours: 3 lecture 
Grade Mode: Standard Letter 

HI 60417   SEMINAR IN HEALTH INFORMATICS  
1-3 Credit Hours  
(Repeatable for credit) Advanced research by students who are qualified to examine problems of certain special areas related to concentrations of study in health informatics. 
Prerequisite: graduate standing. 
Schedule Type: Seminar 
Contact Hours: 1-3 other 
Grade Mode: Standard Letter 

HI 60418   HUMAN FACTORS AND USABILITY IN HEALTH INFORMATICS  
3 Credit Hours  
(Slashed with HI 80418) Provides students with the foundational principles of usability and human factors as applied to safety and quality in health informatics technology. Course readings and materials review the concepts of human factors, usability and the cognitive consequences of health information technology on clinical performance and decision making. Attention is given to the role of mobile computing in health care, as well as information visualization. 000); and graduate standing. 
Prerequisite: HI 60401 with a minimum grade of C (2). 
Schedule Type: Lecture 
Contact Hours: 3 lecture 
Grade Mode: Standard Letter 

HI 60419   HEALTH INFORMATICS INQUIRY AND ASSESSMENT  
3 Credit Hours  
(Slashed with HI 80419) Provides a foundation for understanding research in health informatics with a focus on user and experience design research. Through lectures, readings, discussions and assignments, students review user research methods, data collection techniques and communication strategies within the healthcare context. Students then apply this knowledge to creating a research plan for assessing health information technology and communicating results to key organizational stakeholders. 
Prerequisite: HI 60401 with a minimum C (2.000) grade; and graduate standing. 
Schedule Type: Lecture 
Contact Hours: 3 lecture 
Grade Mode: Standard Letter 

HI 60420   HEALTH INFORMATICS ISSUES: POLICY, POLITICS AND ETHICS  
3 Credit Hours  
This course uses a policy analysis lens to critically examine issues related to the use of information technology in healthcare from an ethical, political and regulatory perspective. The primary focus will be on the United States, but international approaches will also be discussed. Legislation affecting Health Information Technology area will be examined including the American Reinvestment and Recovery Act, HITECH section; Affordable Care Act and Health Insurance Portability and Accountability Act (HIPAA) of 1996. Topics and issues related to Health Informatics including structure of health administrative and delivery systems, assessment of population health, models of health care delivery, access and quality of care will also be discussed. 
Prerequisite: HI 60401; and graduate standing. 
Schedule Type: Lecture 
Contact Hours: 3 lecture 
Grade Mode: Standard Letter 

HI 60421   SEMINAR IN HEALTH INFORMATICS  
1-3 Credit Hours  
(Repeatable for credit) Advanced research by students who are qualified to examine problems of certain special areas related to concentrations of study in health informatics. 
Prerequisite: graduate standing. 
Schedule Type: Seminar 
Contact Hours: 1-3 other 
Grade Mode: Standard Letter
HI 66098  MASTER'S PROJECT IN HEALTH INFORMATICS  3 Credit Hours
Provides a means for the application of the knowledge, research and competencies learned through study in health informatics to the development of an information system, product, setting or service. Students must have completed a minimum 30 credit hours towards the MS-HI program prior to registration. Satisfactory/unsatisfactory (S/U) graded.
Prerequisite: HI 60401, HI 60402, HI 60403, HI 60410, HI 60411, KM 60301 and LIS 60636; and a minimum cumulative 3.000 GPA; and special approval.
Schedule Type: Master's Project
Contact Hours: 3 other
Grade Mode: Satisfactory/Unsatisfactory-IP

HI 66198  MASTER'S RESEARCH PAPER IN HEALTH INFORMATICS  3 Credit Hours
Under the advisement of a faculty member, students will complete a research paper that serves as a culminating experience for the M.S.-HI degree. Cumulative GPA of 3.000 is required prior to enrolling in the course. Satisfactory/unsatisfactory (S/U) graded. Students must have completed a minimum of 30 credit hours the MS-HI program prior to registration.
Prerequisite: HI 60401, HI 60402, HI 60403, HI 60410, HI 60411, KM 60301 and LIS 60636; and a minimum cumulative 3.000 GPA; and graduate standing and special approval.
Schedule Type: Master's Project
Contact Hours: 3 other
Grade Mode: Satisfactory/Unsatisfactory-IP

HI 66199  THESIS I  2-6 Credit Hours
Thesis students must register for a total of 6 hours, 2 to 6 hours in a single semester distributed over several semesters if desired. Satisfactory/unsatisfactory (S/U) graded. Students must have completed a minimum 30 credit hours towards the MS-HI program prior to registration.
Prerequisite: HI 60401, HI 60402, HI 60403, HI 60410, HI 60411, KM 60301 and LIS 60636; and a 3.000 cumulative GPA; and graduate standing and special approval.
Schedule Type: Masters Thesis
Contact Hours: 2-6 other
Grade Mode: Satisfactory/Unsatisfactory-IP

HI 66299  THESIS II  2 Credit Hours
Thesis students must continue registration each semester until all degree requirements are met. Satisfactory/unsatisfactory (S/U) graded.
Prerequisite: HI 66199; and graduate standing and special approval.
Schedule Type: Masters Thesis
Contact Hours: 2 other
Grade Mode: Satisfactory/Unsatisfactory-IP

HI 80401  HEALTH INFORMATICS MANAGEMENT  3 Credit Hours
Covers the areas encompassing Health informatics management including the planning, selection, deployment, and management of electronic medical records (EMR), management decision-support and tracking systems (DSS), and other health information technologies (HIT).
Prerequisite: doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HI 80402  LEGAL ISSUES IN HEALTH INFORMATICS  3 Credit Hours
(Slashed with HI 60402) Introduction to the fundamentals of law for Health informatics and Information Management. Elements of the course include general legal principles and healthcare; legal electronic medical records (EMR); Health Insurance Portability and Accountability Act (HIPAA) privacy rules and security rules; access, requests and disclosure of health information; required reporting and mandatory disclosure laws; risk management and quality improvement; compliance; workforce overview; related ethics and social issues.
Prerequisite: HI 80401; and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HI 80403  HEALTH INFORMATION SYSTEMS  3 Credit Hours
Introduction to information systems and their applications in healthcare used for managerial and clinical support. Study the fundamentals of information systems, including Electronic Medical Records (EMR), information security. Understand the role of standardized codes, vocabularies and terminologies used in health information systems. Analysis of management and enterprise systems, identify the key elements to manage information resources effectively and the trends affecting the development of health information systems and networks.
Prerequisite: HI 80401; and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HI 80410  HEALTH RECORDS MANAGEMENT  3 Credit Hours
Conceptual foundations and practicum for health records management, including the planning, implementation and operation of electronic medical records (EMR); the management of EMR in management and enterprise systems; identifying, selecting and evaluating EMR and health information systems, applications, and repositories; and issues of data quality, integrity, migration, and interoperability.
Prerequisite: HI 80401; and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HI 80411  CLINICAL ANALYTICS  3 Credit Hours
(Slashed with HI 60411) The use of well-defined and well integrated clinical analytics throughout the healthcare value chain can be transformative. Through careful implementation of health analytics, hospitals can transform unwieldy amalgamations of data into information that can: Improve patient outcomes, increase safety, enhance operational efficiency and support public health. Given the immense size of the data challenge, the distinctness and geographic spread of many healthcare-related activities, and the fact that so many healthcare activities are conducted by different entities which must interact with each other, there is really no other way to provide operations management tools necessary to deliver personalized medicine and to control spiraling costs. Since clinical analytics is an immature discipline, we carefully examine the practices of those institutions who are standard setters in the industry.
Prerequisite: HI 80401; and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
HI 80412  CLINICAL DECISION SUPPORT    3 Credit Hours
(Slashed with HI 60412) Provides a practical survey of clinical decision support systems that collect clinical data and enable the transition to clinical knowledge in real world applications intended to improve quality and safety of patient care. Students become familiar with the basic requirements for clinical decision support systems and the challenges associated with the development and deployment of new applications within the healthcare setting.
Prerequisite: HI 80401; and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HI 80413  CHANGE MANAGEMENT IN HEALTH INFORMATICS    3 Credit Hours
(Slashed with HI 60413) Designed to cover the process of change management in large healthcare organizations in light of current trends. Topics related to technology requirements, technology implementations, risk assessment, end user computing and buy-in are among those covered.
Prerequisite: HI 80401 with a minimum C grade; and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HI 80414  HUMAN FACTORS AND USABILITY IN HEALTH INFORMATICS    3 Credit Hours
(Slashed with HI 60414) Provides students with the foundational principles of usability and human factors as applied to safety and quality in health informatics technology. Course readings and materials review the concepts of human factors, usability, and the cognitive consequences of health information technology on clinical performance and decision making. Attention is given to the role of mobile computing in health care, as well as information visualization.
Prerequisite: HI 80401 with a minimum grade of C (2.000); and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HI 80415  HEALTH INFORMATICS INQUIRY AND ASSESSMENT    3 Credit Hours
(Slashed with HI 60415) This course will provide a foundation for understanding research in health informatics with a focus on user and experience design research. Through course lectures, readings, discussions and assignments, students will review user research methods, data collection techniques and communication strategies within the healthcare context. Students will then apply this knowledge to creating a research plan for assessing health information technology and communicating results to key organizational stakeholders.
Prerequisite: HI 80401 with a minimum C grade; and doctoral standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

HI 80691  SEMINAR IN HEALTH INFORMATICS    1-3 Credit Hours
(Repeatable for credit) Advanced research by students who are qualified to examine problems of certain special areas related to concentrations of study in health informatics.
Prerequisite: doctoral standing.
Schedule Type: Seminar
Contact Hours: 1-3 other
Grade Mode: Standard Letter

HI 81095  SPECIAL TOPICS IN HEALTH INFORMATICS    1-3 Credit Hours
(Repeatable for credit) Offered irregularly as resources and or opportunities permit. Topics could include current or emerging issues in health informatics. Specific topics are announced in the Schedule of Classes.
Prerequisite: doctoral standing.
Schedule Type: Lecture
Contact Hours: 1-3 lecture
Grade Mode: Standard Letter

HI 81096  INDIVIDUAL INVESTIGATION IN HEALTH INFORMATICS    1-3 Credit Hours
Research or individual investigation for doctoral level students.
Prerequisite: doctoral standing and special approval.
Schedule Type: Individual Investigation
Contact Hours: 3-9 other
Grade Mode: Standard Letter-IP