Health Care Informatics
Course Descriptions

HCIN 540 Introduction to Health Care Information Management (3)
Provides students with necessary skills to understand the basis for health care informatics. Emphasizes basic understanding of computer hardware, network architecture, clinical application of electronic health records, and health care software applications. Includes relevant regulatory, patient privacy, security, and reimbursement issues. Examines current trends in meaningful use and electronic health record (EHR) certification as a foundation for understanding emerging issues in health care informatics.

HCIN 541 Introduction to Health Care Delivery Systems (3)
Provides an overview of the health care delivery system, professional roles, care delivery models, and relevant regulatory environment in the United States. Overviews common chronic and acute disease states that drive the U.S. healthcare system to provide the student with context for care delivery models. Intended for non-clinician students or individuals who lack significant professional health care employment experience.

HCIN 542 Systems Analysis and Design for Health Care Informatics (3)
Prepares students in the planning, analysis, design, and implementation of computer-based information and technology systems. Includes systems development life cycle, project management skills, requirement analysis and specification, feasibility and cost-benefit analysis, logical and physical design, prototyping, system validation, deployment, human factors, and post-implementation review.

HCIN 543 Database Design and Knowledge Management (3)
Provides opportunities to gain advanced skills in data and knowledge management. Addresses applied skills in database design, data structure, modeling, and development of database management systems to resolve problems in health care informatics and research settings. Also focuses on development of fundamental skills in knowledge management and knowledge engineering as applied to the health care environment. Provides an overview of national health care databases such as National Database of Nursing Quality Indicators (NDNQI) and Centers for Medicare and Medicaid Services (CMS) Core measures and data mining techniques. Promotes skills in accessing clinical databases to resolve selected clinical problems.

HCIN 544 Advanced Health Care Information Management (3)
Provides information and skills necessary for leadership in informatics roles in health care systems. Emphasizes design, implementation, and evaluation of electronic health record systems and clinical decision support systems. Also addresses regulatory, reimbursement, ethical issues, and emerging technology in health care informatics.

HCIN 545 Residency in Health Care Informatics Capstone (3)
Provides an integrative field experience to synthesize and apply knowledge attained in the HCIN core courses. Includes related practices and seminar experiences that foster achievement of career goals related to health care informatics.
HCIN 550 Health Care Six Sigma, Green Belt (3)
Employs the structured Six Sigma “DMAIC” methodology: Define, Measure, Analyze, Improve, and Control to introduce principles, tools, and techniques to improve processes within a health care organization. Enables students to apply the Six Sigma model to improve such systems as: patient throughput, clinical diagnostics reporting, and care delivery redesign. Defines tools and techniques of Six Sigma in order to successfully develop, launch, and transition a project through each phase terminating with an evaluation phase.

HCIN 551 Introduction to Geohealth (3)
Enhances the student’s familiarity and builds competence in using geographic information systems (GIS) applied to health surveillance and research. Provides the student interactive experiences to map clinic data and to conduct geographic modeling decisions. Incorporates an active learning environment to provide students an opportunity to develop a practical understanding of GIS software.

HCIN 552 Clinical Documentation: Electronic Medical Record Systems (3)
Introduces theory and applied practice of clinical documentation systems. Includes hands on experience with the use of Epic and Cerner electronic medical record systems (EMR). Chronicles historical trends in the development and evolution of clinical documentation systems. Explores hardware/software development requirements for EMRs and application of EMR data for: quality, risk assessment, billing, and research applications. Includes overview of clinical devices that assist in medication administration such as BCMA (Bar Code Medication Administration). Applies problem-based learning to the development of clinical rules and alert systems for both Clinical Decision Support (CDS) and CPOE (computerized Physician Order entry) systems. Course emphasizes regulatory requirements for electronic medical records to include: HIPPA, Meaningful Use Requirements, security applications, and federal breach reporting.

HCIN 553 Clinical Documentation Systems: Specialist Role (3)
Provide a basic understanding of the electronic medical record and how digital billing systems are evolving to meet the clinical documentation needs of health care organizations. Fosters skills in applying diagnostic coding standards to meet quality, regulatory and billing requirements, including: code book formats; coding techniques; formats of the ICD, DRG, and CPT manuals; health insurance; billing, reimbursement, and collections. Course examines federal regulations covering billing and patient privacy (HIPPA).

HCIN 554 Telehealth and Emerging Technology (3)
Provides an introduction to the emerging discipline of telehealth. Provides a historical perspective of remote monitoring of patients using various types of telehealth, including video conferencing, telephonic, and home based sensors. Includes an overview of relevant hardware and software requirements for a telehealth program. Includes federal and state regulations covering telehealth practice and reimbursement models by Medicare, Medicaid and other insurers. Includes consumer grade health monitoring devices and emerging health care technology. Prerequisite: HCIN 540

HCIN 555 Health Care Six Sigma, Black Belt (3)
This is the second course in the Health Care Six Sigma Course series. Builds upon skills and knowledge acquired during the Six Sigma Green Belt course. Develops team leadership knowledge and applied skills using the quality and performance improvement methodology, “DMAIC” model (Define, Measure, Analyze, Improve, and Control) applied to an actual health care project. Prerequisite: HCIN 550
HCIN 560 Introduction to Healthcare Simulation (3)
Provides an overview of the fundamentals and exploration of health care simulation concepts. Innovative teaching strategies and technology are presented including opportunities to gain “hands-on” experience using multiple simulation methods such as task trainers, hi and lo-fidelity mannequins, and standardized patients within active learning scenarios. Emphasizes basic understanding of entire continuum of planning, executing, and debriefing a successful simulation incorporating creation of cases, resource planning, event management, development of competency checklists, and facilitation of reflective learning.

ENLC 500 Health Care Leadership, Values, and Social Justice (3)
Examines leadership theories, corporate ethics, values-focused strategies and principals of social and health care justice that can be actualized across the spectrum of health care settings. Synthesis of the literature is required to support development of clinical project relevant to a health care setting.

ENLC 553 Financial Management in Health Care Systems (3)
Provides a forum for the exploration and evaluation of the financial environment of the health care industry and how it specifically affects the role of the nurse manager, the nurse executive, the advanced practice nurse and the nurse entrepreneur. Additionally, the course will emphasize the development of practical financial analysis skills that will provide students with a foundation for immediate application within the health care delivery system.

ENLC 556 Management of Health System Care Delivery and Outcomes (3)
Focuses on the process of health care delivery from a systems perspective and emphasizes continuous process improvement as crucial to achieving high quality outcomes. Addresses health system outcome measurement and evaluation and analysis of research on organizational effectiveness.

ENLC 557 Strategic Planning and Management of Health Systems (3)
Emphasizes strategic planning and management as requisite to growth and survival of health care systems. Acquaints students with the language, processes, tools, and techniques of strategic planning and marketing that will enable them to contribute effectively to strategic thinking and action in health care systems.

MSNC 507 Statistics (3)
Provides students with the necessary skills to perform statistical analysis of data in order to present information in a meaningful way. Emphasizes basic understanding of probability concepts, common probability distributions, and inferential statistical methods. Includes identification of data requirements and statistical method to answer specific research questions. Incorporates SPSS statistical software as well as statistical calculations. Explores methods to display data and findings. Assists students to interpret SPSS output, and effectively present findings. Also focuses on critical review of scientific manuscripts and interpretation of findings.

MSNC 511 Evidence Based Practice: Role of Theory and Research (3)
Explores and critiques the theoretical foundations of nursing science as a basis for the development of research. Emphasis is placed on the relationship of theory and research to the knowledge base and practice of nursing.

MSNC 512 Influencing the Health Care Environment: Policy and Systems (3)
Provides an understanding of nursing’s leadership role in the analysis and evaluation of policy, organization, and financing of health care. Focusing on the organization of health care systems, the political and economic forces that influence health care delivery, and the formulation of policies affecting health care.