



Minnesota e-Health Initiative Health Informatics Education & Training Resources

*Information about health informatics education programs, courses,
seminars and conferences.*

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University of Minnesota School of Nursing
and the

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Introduction

The Minnesota Department of Health, Center for Health Informatics and the Minnesota e-Health Initiative Communications, Education and Collaboration (CEC) Workgroup collaborated with University Of Minnesota School Of Nursing on to inventory health informatics education and training resources. This project was completed by five students (Bhuna Ayyar, Adriane Douglas, Meena Gasperino, Aimee Hamel, and Sue LaMotte) participating in the Nursing Health Informatics course during the spring, 2008 semester.

The Minnesota e-Health Initiative Health Informatics Education & Training Resources include information about health informatics education programs, courses, seminars and conferences for the Minnesota health care workforce. These resources are also intended to support the section on workforce development in the Statewide Implementation Plan. The Statewide Implementation Plan and other e-Health resources can be found at: www.health.state.mn.us/e-health/

Health Informatics Education Programs For Minnesota Health Care Providers

Program	Format	Website	Description
Centers for Disease Control and Prevention (CDC)			
Public Health Informatics Fellowship Program	In Person Interview	http://www.cdc.gov/EPO/PHIFP/	“Public Health Informatics Fellowship Program (PHIFP) is a 2-year applied fellowship for persons with at least a master's degree, training and experience in a health-related profession and information or computer science or technology (http://www.cdc.gov/EPO/PHIFP/ , May 7, 2008).”
College of St. Catherine			
Associate of Applied Science Degree – Health Information Specialist 1-800-945-4599 career-info@stkate.edu	In Person	www.stkate.edu/minneapolis/him.html	“You will use computerized systems to become competent in five areas: information manager, coding specialist, quality assurance specialist, supervisory manager and cancer registry specialist. When you graduate, you will be eligible to take the National Certification Exam of the American Health Information Management Association. Upon successful completion of the exam, you will be credentialed and ready to practice as a registered health information technician (RHIT) (http://www.stkate.edu/minneapolis/him.html).”

Program	Format	Website	Description
College of St. Scholastica			
Master of Arts Information Technology Leadership	In Person	http://www.css.edu/x2110.xml	"...program prepares you to implement advanced software systems and emphasizes the use of IT to solve business issues in the struggles companies have applying new technology in the workplace (www.css.edu/x2110.xml , March 3, 2008)."
Master of Health Information Management	In Person	http://www.css.edu/x2112.xml	"...curriculum focuses on emerging frameworks for creating integrated health care information, data management and decision support systems (www.css.edu/x2112.xml , March 3, 2008)."
Healthcare Informatics & Information Management Certificates: 1) Healthcare Informatics 2) Nursing Informatics 3) Project Management 4) EHR Strategies 5) Revenue Management	Online	http://www.css.edu/x2121.xml	"The College of St. Scholastica offers five graduate level certificates in Healthcare Informatics. These certificate tracks are designed for distance delivery and can be completed within one year. These courses may also be applied to the MA in Health Information Management degree (www.css.edu/x2121.xml , March 3, 2008)."
DeVry University- Edina, MN			
Associate of Applied Science in Health Information Technology (866) 338-7934 (866) DEVRY-34	Online	http://www.devry.edu/programs/health_information_technology/about.jsp	"DeVry's Health Information Technology program prepares graduates to work with applications systems and manage electronic health information databases. Ever cognizant of the importance of information accuracy, privacy and security. HIT professionals may be involved in ensuring that the design and use of information systems support patient safety. They work with nurses, physicians and other healthcare providers in a variety of settings such as hospitals, physician practices, long-term-care facilities, home healthcare agencies, insurance and managed care organizations, government agencies and vendor firms (http://www.devry.edu/uscatalog/US_Catalog_Programs_Courses.pdf , April 20, 2008)."
Herzing College- Minneapolis, MN			
Bachelor of Science in	Online	http://www.herzing.edu/school.php?pr	"This program prepares students with the necessary skills and academic

Program	Format	Website	Description
Health Information Management (763) 535-3000		rogram=268	knowledge for entry-level or management training positions in health information management. These positions require a general understanding of business principles, a thorough understanding of the content of medical records, as well as extensive training in anatomy, physiology, disease processes, and medical terminology. The program provides the student with the knowledge and understanding to manage medical records systems and personnel engaged in the analysis of medical records and the assignment of codes to classify diagnoses and procedures (http://www.herzing.edu/school.php?program=268 , April 20, 2008).”
Northwestern University			
School of Continuing Education Master of Science in Medical Informatics 1-877-664-3347	Online or In Person	http://www.scs.northwestern.edu/grad/medical-informatics/	“The study of medical informatics blends healthcare management and information systems. The MMI program provides a balance of both conceptual and applied knowledge, preparing graduates for exceptional career paths in the field of medical information management (http://www.medinformatics.northwestern.edu/ , March 16, 2008).”
Rasmussen College			
Associate’s in Health Information Technology	Online or In Person	http://www.rasmussen.edu/online/online-health-info-tech-degree.asp	“A career as a Health Information Technician places you right where the expanding arena of health care meets the cutting edge of information technology. This is the perfect career choice for anyone who wants to work in a hospital, clinic, or doctor’s office setting while completing detailed, important work. The Rasmussen College Health Information Technician program is accredited by the Committee on Allied Health Education and Accreditation (CAHEA) in cooperation with the American Health Information Management Association (AHIMA) Council on Accreditation (http://rasmussen.edu-degree.com/ , May 6, 2008).”
University of Illinois			
Master of Science in Health Care Informatics 1-866-674-4842	Online	http://www.uic.edu/gcat/AHHIM.shtml	“The Department of Biomedical and Health Information Sciences (BHIS) offers work leading to an online Master of Science in Health Informatics. Health Informatics is the science of healthcare-related information, encompassing clinical care and clinical, financial, IT, and enterprise management. BHIS participates in two joint-degree programs: the MS in Nursing Administration/ MS in Health Informatics and the Doctor of Pharmacy/MS in Health Informatics. A post-master’s IBHE-approved certificate in health informatics is available for healthcare and IT professionals who already have a master’s degree. A post-baccalaureate campus certificate in health informatics is available for healthcare and IT professionals who



Program	Format	Website	Description
			have a baccalaureate degree. BHIS also offers the MS in Biomedical Visualization (http://www.uic.edu/gcat/AHHIM.shtml , March 16, 2008)."
Master of Science in Nursing/Master of Science in Health Informatics	Online	http://www.uic.edu/gcat/AHHIM.shtml	See above.
Master of Science in Pharmacy/Master of Science in Health Informatics	Online	http://www.uic.edu/gcat/AHHIM.shtml	See above.
Master of Public Health in Public Health Informatics	Online	http://www.uic.edu/sph/phi/sections/mph_overview.htm	<p>"Graduates of the program will acquire the following skills and knowledge after completion of the program:</p> <p>A knowledge of the basic principles of public health; the ability to specify the requirements for the development or adaptation of public health related information systems; knowledge of health data definitions and standards, as well as privacy and confidentiality issues; ability to plan, specify and manage the implementation of public health information systems projects; knowledge of the existence, structure, and uses of public health and health databases and networks; an understanding of the basic functions and operations of information technologies that have significant application in public health practice such as geographic information systems, web-based information dissemination, and data mining; skill in information technology planning and procurement related to public health information systems (http://www.uic.edu/sph/phi/sections/mph_overview.htm, March 16, 2008)."</p>
Certificate in Public Health Informatics	Online	http://www.uic.edu/sph/phi/sections/certificate_overview.htm	<p>"The certificate program involves a 5 unit course of study based on five public health information management courses and an integrative paper on a topic in health informatics. The certificate program is directed at developing the following competencies:</p> <p>The ability to specify the requirements for the development or adaptation of public health-related information systems; the ability to plan, specify, and manage the implementation of public health information system projects; familiarity with health data definitions and standards; an understanding of the basic functions and operations of information technologies</p>

Program	Format	Website	Description
			that have significant application to public health practice such as geographic information systems and the web-based information dissemination (http://www.uic.edu/sph/phi/sections/certificate_overview.htm , March 16, 2008)."
University of Minnesota			
National Library of Medicine (NLM) Training Program M.S. & PhD Program	In Person (some courses available online)	M.S.: http://www.hinfgrad.umn.edu/mhi/mhi.html PhD: http://www.hinfgrad.umn.edu/aboutus/msphd.html	"Three programs of study are offered, under the administration of the Graduate School . These lead to the doctor of philosophy (Ph.D.) degree or two types of master of science (M.S.) degrees; Plan A, requiring a thesis; and Plan B, which substitutes additional course work and research reports for the thesis (http://www.hinfgrad.umn.edu/mhi/MD-MHI.html , 16, 2008)." MIH: "The program emphasizes the role of informatics trained professionals as liaisons who brings both a background of medicine as well as knowledge of information technology to the task of solving health care problems. The curriculum consists of 32 credits of coursework (http://www.hinfgrad.umn.edu/mhi/mhi.html , March 16, 2008)."
MD Masters of Health Informatics	In Person (some courses available online)	http://www.hinfgrad.umn.edu/mhi/MD-MHI.html	MD MIH: "It provides a single year in addition to the four years of training for the Medical Degree that will prepare medical students to understand the applications of information technology in medicine and prepare them for leadership positions in the area. The joint degree program provides exactly the same training as the MHI program with the exception of the Capstone course which will be replaced by an equivalent elective Medical School clerkship (http://www.hinfgrad.umn.edu/mhi/MD-MHI.html , March 16, 2008)."

Health Informatics Courses For MN Health Care Providers

Course	Search	Description/Website	Cost	Credits
American Health Information Management (AHIMA)				
Introduction to Clinical Terminology Systems	Front Line Staff Sr. Level Staff Supervisory and Management	“The purpose of this course is to familiarize the student with clinical terminologies and medical vocabulary systems, the purpose and use of each system, and their relationships to other codified data sets in the healthcare industry (https://campus.ahima.org/abo/catalog/lms/Index.aspx?CategoryId=191 , April 3, 2008).”	\$515	NA
eHIM & Electronic Records	Front Line Staff Sr. Level Staff Supervisory and Management	Various courses https://campus.ahima.org/abo/catalog/lms/Index.aspx?CategoryId=167	\$96-720	NA
American Medical Informatics Association (AMIA)				
Introduction to Healthcare Informatics Standards	Front Line Staff Sr. Level Staff Supervisory and	“Designed to explore the landscape of healthcare informatics standards and focus on the benefits that the adoption of standards might bring toward successful transformation of healthcare in the United States. This course uses case-based scenarios and examples to demonstrate how standards impact common clinician and patient activities and interactions.”	\$45 AMIA Members \$90 Non-members	<u>CEUs?</u>

Course	Search	Description/Website	Cost	Credits
	Management	"The learning objectives designed for individuals who complete this course are: Describe the importance of healthcare informatics standards. Identify situations where healthcare informatics standards can positively impact clinical care. Describe how healthcare informatics standards support many common administrative and clinical functions in various healthcare situations. Recognize the challenges to implementing healthcare informatics standards (http://www.amia.org/e-learning/ihis/ , April 3, 2008)."		
College of St. Scholastica				
HIM 6501 Technology Applications in Health Care	Sr. Level Staff Supervisory and Management	"Current and emerging technology applications and data standards in the healthcare industry including the appropriate use of data networks. Legacy systems, technologies that supports the evolution of the electronic health record (EHR), image and signal-based information systems, as well as Internet and intranet applications are explored. Emphasis is on systems integration, systems security and the processes for evaluating and selecting applications that address organizational goals and functional requirements. Prerequisite: Admission to a HIM graduate program or permission of the department (http://academics.css.edu/catalog/Y05-07/MasterHIM.shtml#courseDescriptions , March 3, 2008). " www.css.edu/x2121.xml	\$490/credit hr.	3
HIM 6502 Development of Computerized Health Information Systems	Sr. Level Staff Supervisory and Management	"Deals with information systems theory, health information systems strategic planning, computer based patient record theory, infrastructure, and applications; migration path development, the regulatory environment and future trends. Prerequisite: Admission to a HIM graduate program or permission of the department (http://academics.css.edu/catalog/Y05-07/MasterHIM.shtml#courseDescriptions , March 3, 2008)."	\$490/credit hr.	3
HIM 6505 Database Methods for Clinical Information Management	Sr. Level Staff	"Database theory, methodologies for database design and issues related to database management. Emphasis is on requirements and methodologies for assuring data integrity and security in healthcare	\$490/credit hr.	3



Course	Search	Description/Website	Cost	Credits
	Supervisory and Management	enterprise information systems, specifically in relationship to the database environment. Prerequisites: Admission to a HIM graduate program or permission of the department (http://academics.css.edu/catalog/Y05-07/MasterHIM.shtml#courseDescriptions , March 3, 2008)."		
HIM 6507 Project Management	Sr. Level Staff Supervisory and Management	"Project management, including the development of a project charter with emphasis on developing the competencies and skills required to successfully lead teams of clerical, technical and professional specialists through workflow and work process redesign activities within a healthcare organization or system. Criteria and techniques for evaluating the features, functionality and usability of project management (PM) software packages; advanced level skills in using a PM application to create a project plan, schedule tasks and resources effectively, communicate with stakeholders, as well as track and report progress for both simple and complex projects. Prerequisites: Admission to a HIM graduate program or permission of department (http://academics.css.edu/catalog/Y05-07/MasterHIM.shtml#courseDescriptions , March 3, 2008)."	\$490/credit hr.	3
HIM 6508 Knowledge Management in Healthcare	Sr. Level Staff Supervisory and Management	"Support of health care providers and administrators in clinical/administrative decision making by integrating clinical, financial and administrative data from an organization's healthcare information system(s). Emphasis is on the design and development of data warehousing applications, as well as the requisite data mining skills required, to support both strategic and operational decision-making within an healthcare enterprise. Prerequisites: HIM 6505 or permission of department (http://academics.css.edu/catalog/Y05-07/MasterHIM.shtml#courseDescriptions , March 3, 2008)."	\$490/credit hr.	2
HIM 6509 Medical Vocabularies and Classification Systems	Front Line Staff Sr. Level Staff Supervisory and	"The representation of clinical data through the use of medical vocabularies and clinical classification systems. Emphasis is on developing expertise in identifying appropriate clinical classification systems and medical vocabularies, identifying their appropriate uses and sources, and applying them within and among health information systems to promote effective communication. Prerequisite: HIM 6501 or permission of department (http://academics.css.edu/catalog/Y05-	\$490/credit hr.	3



Course	Search	Description/Website	Cost	Credits
	Management	07/MasterHIM.shtml#courseDescriptions , March 3, 2008)."		
HIM 6511 Health Information Security Systems	Sr. Level Staff Supervisory and Management	"Strategies for designing, implementing, auditing and evaluating the technical, physical and human components of an information security system that maintains a patient's privacy and adheres to a healthcare organization's legal, ethical and organizational requirements Prerequisites: Acceptance to a HIM graduate program or permission of the department (http://academics.css.edu/catalog/Y05-07/MasterHIM.shtml#courseDescriptions , March 3, 2008)."	\$490/credit hr.	3
HIM 6518 Healthcare Data Mining	Sr. Level Staff	"Selection and application of computer-based analytic techniques to query healthcare data warehouses, to discover patterns and associations in these data, and to predict future trends and behaviors from these patterns. Prerequisite: HIM 6508 (http://academics.css.edu/catalog/Y05-07/MasterHIM.shtml#courseDescriptions , March 3, 2008)."	\$490/credit hr	1
HIM 6530 Clinical Workflow and Process Redesign	Front Line Staff Sr. Level Staff Supervisory and Management	"Integrates ancillary and clinical processes with the flow of quality information throughout a healthcare facility to allow efficient decision-making by healthcare professionals. Prerequisites: HIM 6502 or permission of the department (http://academics.css.edu/catalog/Y05-07/MasterHIM.shtml#courseDescriptions , March 3, 2008)."	\$490/credit hr.	3
HIM 6531 Best Practices/Implementation Strategies for the EHR	Front Line Staff Sr. Level Staff Supervisory and Management	"Creates and uses rules and clinical protocols/tools for the EHR; develops training methodologies; uses case studies to identify best practices in EHR implementation. Prerequisites: HIM 6502 or permission of the department (http://academics.css.edu/catalog/Y05-07/MasterHIM.shtml#courseDescriptions , March 3, 2008)."	\$490/credit hr.	3
HIM 6545 Corporate Compliance in the Healthcare Industry	Supervisory and Management	"This course will address both the managerial and legal aspects of health care corporate compliance. Essential elements of a compliance program will be presented. Special focus will be placed	490/credit hr	3



Course	Search	Description/Website	Cost	Credits
		on various pieces of federal legislation and enforcement initiatives conducted by the U.S. Department of Justice and the Office of Inspector General (OIG) in the Department of Health and Human Services. Prerequisites: Admission to a HIM graduate program or permission of the department (http://academics.css.edu/catalog/Y05-07/MasterHIM.shtml#courseDescriptions , March 3, 2008)."		
DeVry University, Edina, MN				
HIT-120 Introduction to Health Services and Information Systems	Front Line Staff Sr. Level Staff Supervisory and Management	"This course covers history, organization and current issues on the U.S. healthcare delivery system. Interrelationships among system components and care providers are explored. Licensing, accrediting and regulatory compliance activities are discussed, as well as the importance of financial and quality management, safety and security, and the role of health information professionals. The evolution, major application types, and emerging trends in health information systems are explored (http://www.devry.edu/uscatalog/US_Catalog_Programs_Courses.pdf , April 20, 2008)." http://www.devry.edu/programs/health_information_technology/about.jsp	\$515/credit hr (1-11 credits) \$310/credit hr (12+ credits)	4
HIT-140 Health Information Process	Front Line Staff Sr. Level Staff Supervisory and Management	"This course introduces health information functions such as content and format of records, retention, and storage requirements, indexes and registries, and forms design. Relationships among departments and clinical providers within a healthcare system are explored. Analysis of the application of technology to health information processes includes the roles and functions of hardware, software and communications components. Fundamentals of database management and networks are applied to health information examples. Prerequisite: HIT-120 (http://www.devry.edu/uscatalog/US_Catalog_Programs_Courses.pdf , April 20, 2008)." http://www.devry.edu/programs/health_information_technology/about.jsp	\$515/credit hr (1-11 credits) \$310/credit hr (12+ credits)	4

Course	Search	Description/Website	Cost	Credits
HIT-200 International Classification of Diseases Coding with Lab	Sr. Level Staff Supervisory and Management	<p>“This course covers the history and development of clinical vocabularies and classification systems. Principles and guidelines for using the International Classification of Diseases (ICD-9-CM or current version) in coding diagnoses and procedures in an inpatient setting are covered. Severity of illness and case-mix analysis systems are introduced. Exercises and examples of actual patient records allow students to practice skills in coding and sequencing of diagnoses using software tools. The application of coding principles to electronic record systems is explored. Prerequisite: BIOS-260 (http://www.devry.edu/uscatalog/US_Catalog_Programs_Courses.pdf, April 20, 2008).”</p> <p>http://www.devry.edu/programs/health_information_technology/about.jsp</p>	<p>\$515/credit hr (1-11 credits)</p> <p>\$310/credit hr (12+ credits)</p>	4
HIT-202 International Classification of Diseases Coding I with Lab	Sr. Level Staff Supervisory and Management	<p>“This course, the first in a two-course sequence, introduces history and development of clinical vocabularies and classification systems. Principles and guidelines for using the International Classification of Diseases (ICD-9-CM or current version) to code diagnoses and procedures in an inpatient setting are introduced. Disease and procedure coding is presented for selected body system conditions. Examples of patient records and exercises using coding manuals and software tools provide practice in coding and sequencing diagnoses and procedures. Application of coding principles to electronic record systems is explored. Prerequisite: BIOS-260 (http://www.devry.edu/uscatalog/US_Catalog_Programs_Courses.pdf, April 20, 2008).”</p> <p>http://www.devry.edu/programs/health_information_technology/about.jsp</p>	<p>\$515/credit hr (1-11 credits)</p> <p>\$310/credit hr (12+ credits)</p>	2
HIT-204 International Classification of Diseases Coding II with Lab	Sr. Level Staff Supervisory and Management	<p>“This course builds on skill in using the International Classification of Diseases (ICD-9-CM) or current version) to code diagnoses and procedures. Coding of conditions and related procedures not addressed in the previous course is covered, as are E codes, Late Effects and V codes. Examples of patient records and exercises using coding manuals and software tools provide further practice in coding and sequencing diagnoses and procedures. Issues of coding</p>	<p>\$515/credit hr (1-11 credits)</p> <p>\$310/credit hr (12+ credits)</p>	2



Course	Search	Description/Website	Cost	Credits
		ethics and data quality, as well as application of coding principles to electronic record systems, are explored. Prerequisite: HIT-202 (http://www.devry.edu/uscatalog/US_Catalog_Programs_Courses.pdf , April 20, 2008)." http://www.devry.edu/programs/health_information_technology/about.jsp		
HIT-210 Current Procedural Terminology with Lab	Sr. Level Staff Supervisory and Management	"Knowledge of clinical classification systems is expanded through presentation of the principles of Current Procedural Terminology (CPT-4 or most current version) as used to code procedures performed by healthcare providers. Practice exercises allow students to apply what they learn by assigning procedure codes and applying guidelines for assignment of Evaluation and Management (E/M) codes and modifiers to case examples. The purpose and use of the Healthcare Common Procedure Coding System (HCPCS) are reviewed. Application of coding principles to an electronic record system is explored. Prerequisite: HIT-200 or HIT-202 (http://www.devry.edu/uscatalog/US_Catalog_Programs_Courses.pdf , April 20, 2008)." http://www.devry.edu/programs/health_information_technology/about.jsp	\$515/credit hr (1-11 credits) \$310/credit hr (12+ credits)	3
HIT-220 Legal and Regulatory Issues in Health Information	Front Line Staff Sr. Level Staff Supervisory and Management	"Legal and regulatory issues in healthcare are pursued, with emphasis on their application to healthcare information services and documentation of care. Students explore the rights and responsibilities of providers, employees, payers and patients in a healthcare context. Legal terminology pertaining to civil liability and the judicial and legislative processes is covered. Laws and regulations addressing release of information and retention of records are examined, as are the legal and regulatory issues surrounding confidentiality of information. Prerequisite: HIT-120 (http://www.devry.edu/uscatalog/US_Catalog_Programs_Courses.pdf , April 20, 2008)." http://www.devry.edu/programs/health_information_technology/about.jsp	\$515/credit hr (1-11 credits) \$310/credit hr (12+ credits)	2

Course	Search	Description/Website	Cost	Credits
HIT-225 Data Applications and Healthcare Quality with Lab	Sr. level Staff Supervisory and Management	<p>"Building on knowledge acquired in previous courses, use of information technologies for data search and access are explored in the context of quality assessment. Principles of clinical quality, utilization review and risk management are introduced, along with organizational approaches, regulatory and accreditation implications of quality assessment activities. Methods, tools and procedures for analyzing data for variations and deficiencies are examined and used. Research techniques and statistical methods are applied to transform data into effective informational displays and reports to support a quality improvement program. Case studies and projects reinforce learning. Prerequisite: BIS-155 and HIT-140 (http://www.devry.edu/uscatalog/US_Catalog_Programs_Courses.pdf, April 20, 2008.)"</p> <p>http://www.devry.edu/programs/health_information_technology/about.jsp</p>	<p>\$515/credit hr (1-11 credits)</p> <p>\$310/credit hr (12+ credits)</p>	4
HIT-230 Health Insurance and Reimbursement	Sr. level Staff Supervisory and Management	<p>"Students explore reimbursement and payment methodologies applicable to healthcare provided in various settings in the United States. Forms, processes, practices and the roles of health information professionals are examined. Concepts related to insurance products, third-party and prospective payment and managed care organizations are explored. Issues of data exchange among patient, provider and insurer are analyzed in terms of organizational policy, regulatory issues and information technology operating systems. Management of the chargemaster and the importance of coding integrity are emphasized. Prerequisite(s): HIT-140 and HIT-200, or HIT-202 (http://www.devry.edu/uscatalog/US_Catalog_Programs_Courses.pdf, April 20, 2008.)"</p> <p>http://www.devry.edu/programs/health_information_technology/about.jsp</p>	<p>\$515/credit hr (1-11 credits)</p> <p>\$310/credit hr (12+ credits)</p>	3
HIT-270 Health Information Practicum	Sr. Level Staff Supervisory	<p>"Students are provided a supervised opportunity to gain practice experience in a health information practice setting in an approved organization. Skills in areas such as record retrieval, data abstraction and analysis are practiced; knowledge of record</p>	<p>\$515/credit hr (1-11 credits)</p> <p>\$310/credit hr</p>	4



Course	Search	Description/Website	Cost	Credits
	and Management	retention and release of information is applied. Application of coding skills and observation of supervisory and planning activities are documented. Students prepare a written report and present a summary of their practical learning experience in class. Prerequisite: Completion of, or current enrollment in, all other courses in the program (http://www.devry.edu/uscatalog/US_Catalog_Programs_Courses.pdf , April 20, 2008).” http://www.devry.edu/programs/health_information_technology/about.jsp	(12+ credits)	
Herzing College – Minneapolis, MN				
HI 310 Principles of Health Information Management	Sr. level Staff Supervisory and Management	“This course provides an overview of health information practice and practitioners from a manager’s perspective, HIM professional associations, the content and standards of health records, the planning for the development of manual and computerized health record systems, storage and retrieval of manual and computerized records, and the management and design of medical word processing systems. This course introduces healthcare information standards (ANSI, ASTM, LOINC, UMLS, MESH, etc.); an overview of healthcare taxonomies. Clinical vocabularies, terminologies and nomenclatures (ICD-9-CM, ICD-10, CPT, SNOMED-CT, DSM-IV, ect.) and discussion of severity of illness systems. Prerequisites: MC 173 and MC 174 (http://www.herzing.edu/upload/mediafiles/Herzing_College_2007_2008_Catalog.pdf , April 20, 2008).”	~\$340/credit hr.	3
HI 320 Health Care Data	Sr. Level Staff	“This course provides students with an advanced understanding of the management of data in healthcare organizations including uniform data sets and healthcare informatics standards for health data collection, evaluation of coded and statistical data and quality assurance of data, Diagnosis-Related Groups (DRG) and case mix systems, data collection for enterprise, reportable and specialized databases, data mining of healthcare data, research methods and healthcare research support. In addition, this course will include all aspects of data content and	~\$340/credit hr.	3



Course	Search	Description/Website	Cost	Credits
		collection including structure and use of health information, clinical and health care data sets, epidemiology, vital statistics, data quality assessment and integrity, National Healthcare Information Infrastructure (NHII), and secondary data sources. 3.0 credit hours. Prerequisites: MC 173 Intermediate Diagnosis Coding and MC 174 Intermediate Procedure Coding (http://www.herzing.edu/upload/mediafiles/Herzing_College_2007_2008_Catalog.pdf , April 20, 2008)."		
MC 171 Basic Diagnosis Coding	Sr. Level Staff Supervisory and Management	"Basic Diagnosis Coding is an introduction to the ICD-9-CM data set used for reporting diagnoses. This course will also include instruction on how to classify and index diagnosis in the health care setting. The various uses for diagnosis codes will be discussed, as well. 3.0 credit hours. Prerequisite: SC 245 Anatomy and Physiology II, MS 144 Medical Terminology, and MS 146 Pathophysiology and Pharmacology (http://www.herzing.edu/upload/mediafiles/Herzing_College_2007_2008_Catalog.pdf , April 20, 2008)."	~\$340/credit hr.	3
MC 172 Basic Procedure Coding	Sr. Level Staff Supervisory and Management	"Basic Procedure Coding helps students describe all types of health care services, treatments, and procedures provided to patients in both inpatient and outpatient facilities, as well as ancillary departments such as imaging centers and pathology/laboratories. 3.0 credit hours. Prerequisite: SC 245 Anatomy and Physiology II, MS 144 Medical Terminology, and MS 146 Pathophysiology and Pharmacology (http://www.herzing.edu/upload/mediafiles/Herzing_College_2007_2008_Catalog.pdf , April 20, 2008)."	~\$340/credit hr.	3
HI 440 Health Care Database Design and Security	Sr. Level Staff Supervisory and Management	"This is a course in the design and implementation of databases specifically designed to store and process health care data information and file structures, systems development, human factors and user/interface design, data warehousing, data storage and retrieval, and systems life cycle. Basic security principles of effective security policies including HIPAA's security rule, risk assessment, user	~\$340/credit hr.	3

Course	Search	Description/Website	Cost	Credits
		tracking, permissions, audit and control systems, and data recovery as also included. 3.0 credit hours. Prerequisites: MC 173 Intermediate Diagnosis Coding and MC 174 Intermediate Procedure Coding (http://www.herzing.edu/upload/medifiles/Herzing_College_2007_2008_Catalog.pdf , April 20, 2008).” http://www.herzing.edu/school.php?program=268		
MC 173 Intermediate Diagnosis Coding	Sr. Level Staff Supervisory and Management	“Intermediate Diagnosis Coding is a continuation of Basic Diagnosis Coding with advanced instruction on ICD-9-CM chapter-specific guidelines (specialty coding). Abstracting skills will continue to be reinforced. An overview of ICD-10-CM will be included to provide an introduction to this new code set. 3.0 credit hours. Prerequisite: MC 171 Basic Diagnosis Coding (http://www.herzing.edu/upload/medifiles/Herzing_College_2007_2008_Catalog.pdf , April 20, 2008).”	~\$340/credit hr.	3
MC 174 Intermediate Procedure Coding	Sr. Level Staff Supervisory and Management	“Intermediate Procedure Coding continues to teach students how to identify all types of health care services, treatments, and procedures provided to patients in both inpatient and outpatient facilities, as well as ancillary departments such as imaging centers and pathology/laboratories. In addition, how to properly apply HCPCS level II codes, as well as ICD-9-CM volume 3 procedure codes will be covered. An introduction to ICD-10-PCS will be provided. 3.0 credit hours. Prerequisite: MC 172 Basic Procedure Coding (http://www.herzing.edu/upload/medifiles/Herzing_College_2007_2008_Catalog.pdf , April 20, 2008).”	~\$340/credit hr.	3
	Intermediate			
	Undergraduate			
	Online			
HI 440 Health Care	Sr. Level	“This is a course in the design and implementation of databases	~\$340/credit	3

Course	Search	Description/Website	Cost	Credits
Database Design and Security	Staff Supervisory and Management	specifically designed to store and process health care data information and file structures, systems development, human factors and user/interface design, data warehousing, data storage and retrieval, and systems life cycle. Basic security principles of effective security policies including HIPAA's security rule, risk assessment, user tracking, permissions, audit and control systems, and data recovery as also included. 3.0 credit hours. Prerequisites: MC 173 Intermediate Diagnosis Coding and MC 174 Intermediate Procedure Coding (http://www.herzing.edu/upload/mediafiles/Herzing_College_2007_2008_Catalog.pdf , April 20, 2008). http://www.herzing.edu/school.php?program=268	hr.	
	Advanced			
	Undergraduate			
	Online			
Northwestern University				
CIS317 Introduction to Databases	Sr. level Staff Supervisory and Management	"This course covers the fundamentals of database design and management. Topics that are covered include the principles and methodologies of database design, database application development, normalization, referential integrity, security, relational database models, and database languages. Principles are applied by performing written assignments and a project using an SQL database system Entry-track course for students in the Medical Informatics (MMI) program (for students with minimal computing background) (http://www.scs.northwestern.edu/grad/courses/?Department=CIS&Course=317-0 , March 16, 2008)." http://www.scs.northwestern.edu/grad/medical-informatics/	\$2,922/course	NA
	Beginner			
	Graduate			

Course	Search	Description/Website	Cost	Credits
	Online or In person			
CIS 313 Telecommunications and Computer Networks	Sr. Level Staff Supervisory and Management	<p>“This course provides an overview of telecommunications and computer networks. Course work will include the study of signals and bandwidth concepts, spectra, basics of electronics, information and coding, modulation, multiplexing, transmission systems, transmission media, analog versus digital communications, computer networks, and switching techniques. <i>Pre-admission course.</i> Entry-track course for students in the Medical Informatics (MMI) program (for students with minimal computing background) (http://www.scs.northwestern.edu/grad/courses/?Department=CIS&Course=313-0, March 16, 2008).”</p> <p>http://www.scs.northwestern.edu/grad/medical-informatics/</p>	\$2,922/course	NA
	Intermediate			
	Graduate			
	Online			
MED INF 401 American Health Care System	Front Line Staff Sr. level Staff Supervisory and Management	<p>“This course covers the components of the U.S. health care system, including the federal government's role in health care, health industry management, cost and quality issues, managed care, reimbursement mechanisms, legal and regulatory issues, profit vs. non-profit care, the role of technology and technology assessment, and compares the U.S. system with international health care systems. This is an entry track course for students with little clinical experience and should be completed before attempting core course work beyond MED INF 403 (http://www.scs.northwestern.edu/grad/courses/?Program=MMI, March 16, 2008).”</p> <p>http://www.scs.northwestern.edu/grad/medical-informatics/</p>	\$2,922/course	NA
	Beginner			
	Graduate			
	Online or In person			

Course	Search	Description/Website	Cost	Credits
MED INF 402 Introduction to Clinical Thinking	Front Line Staff Sr. level Staff Supervisory and Management	<p>"This course is a survey of fundamental concepts and activities on information technology as applied to health care. Topics include computer-based medical records, knowledge-bases systems, telehealth, decision theory and decision support, human-computer interfaces, systems integration, the digital library, and educational applications. Department-specific applications such as pathology, radiology, psychiatry, and intensive care are also discussed. Should be taken within first two terms, preferably as a first core course. Prerequisite: CIS 317 (if required by admissions committee) or equivalent knowledge/experience, or permission of instructor (http://www.scs.northwestern.edu/grad/courses/?Program=MMI, March 16, 2008)."</p> <p>http://www.scs.northwestern.edu/grad/medical-informatics/</p>	\$2,922/course	NA
	Beginner			
	Graduate			
	Online or In person			
MED INF 405 HIT Integration, Interoperability and Standards	Sr. Level Staff Supervisory and Management	<p>"This course will provide the details of health care technology standards and interoperability. The value proposition of standards will be presented. The course will review health information models and look at the IHE Initiative, HL7, DICOM, CCOW, CorbaMED and other medical standards, and cover the role of non-medical standards in medical informatics (HTTP, XML, etc.). The course will also cover multi-institutional issues and telemedicine, e-commerce, and Health Insurance Portability and Accountability Act (HIPAA) standards compliance (http://www.scs.northwestern.edu/grad/courses/?Program=MMI, March 16, 2008)."</p> <p>http://www.scs.northwestern.edu/grad/medical-informatics/</p>	\$2,922/course	NA
	Advanced			
	Graduate			
	Online or In person			

Course	Search	Description/Website	Cost	Credits
MED INF 404-DL Health Care Enterprise Operations	Front Line Staff	<p>“This course examines the entire information technology needs of every part of hospital organization and management, including patient access services, ambulatory care, clinical practice and organization, nursing services, managing facilities and resources, personnel and staffing, and finance. <i>Prerequisite: MED INF 401 or permission of instructor,</i> http://www.scs.northwestern.edu/grad/courses/?Program=MMI, March 16, 2008).”</p> <p>http://www.scs.northwestern.edu/grad/medical-informatics/</p>	\$2,922/course	NA
	Sr. level Staff			
	Supervisory and Management			
	Intermediate			
	Graduate			
	Online			
MED INF 405 HIT Integration, Interoperability and Standards	Front Lie Staff	<p>“This course will provide the details of health care technology standards and interoperability. The value proposition of standards will be presented. The course will review health information models and look at the IHE Initiative, HL7, DICOM, CCOW, CorbaMED and other medical standards, and cover the role of non-medical standards in medical informatics (HTTP, XML, etc.). The course will also cover multi-institutional issues and telemedicine, e-commerce, and Health Insurance Portability and Accountability Act (HIPAA) standards compliance (http://www.scs.northwestern.edu/grad/courses/?Program=MMI, March 16, 2008).”</p> <p>http://www.scs.northwestern.edu/grad/medical-informatics/</p>	\$2,922/course	NA
	Sr. level Staff			
	Supervisory and Management			
	Advanced			
	Graduate			
	Online			
MED INF 406-DL Decision Support Systems and Health Care	Sr. Level Staff	<p>“This course provides an introduction to decision analysis with an emphasis on medical decision-making and elements of human cognition under uncertainty. Topics covered in the course include structuring decision problems and developing creative decision options, quantifying uncertainty and preferences, and combining them to arrive at optimal decisions. The course also provides the</p>	\$2,922/course	NA

Course	Search	Description/Website	Cost	Credits
		foundation needed to apply the methods of decision analysis in decision support systems and intelligent systems. Students will become familiar with the graphical display of medical information, decision analysis and modeling, evidence-based medicine, Bayes' theorem, knowledge-based systems, learning systems, lexicons, coding and structured data entry, and data mining techniques. <i>Prerequisite: It is highly recommended that students take the biostatistics requirement before taking this course</i> (http://www.scs.northwestern.edu/grad/courses/?Program=MMI , March 16, 2008).”		
	Advanced			
	Graduate			
	Online			
MED INF 407-DL Legal, Ethical and Social Issues	Front Line Staff Sr. Level Staff Supervisory and Management	“This course addresses the legal, ethical and social issues in healthcare informatics, and will equip students with the knowledge and analytic tools needed to spot those key issues and thereby better protect the student and their employer, while working in the medical informatics field. The healthcare industry is highly regulated and this course also covers regulatory informatics requirements as they apply to work with healthcare data and information management systems. The course will also cover topics, such as HIPAA privacy and security, fraud & abuse, confidentiality, antitrust law, intellectual property, The Joint Commission, disclosure, and compliance programs (http://www.scs.northwestern.edu/grad/courses/?Program=MMI , March 16, 2008).” http://www.scs.northwestern.edu/grad/medical-informatics/	\$2,922/course	NA
	Intermediate			
	Graduate			
	Online			
MED INF 408-DL Medical Technology Acquisition	Sr. Level Staff	“This is a practical course in how to acquire and assess new medical technology, either as a vendor who needs to know how to meet the	\$2,922/course	NA

Course	Search	Description/Website	Cost	Credits
and Assessment	Supervisory and Management	expectations of customers and their acquisition requirements, or as a customer/practitioner who must know how to validate technology selections and implementations. Topics covered will include cost analysis and justification, economic models, capital purchase, leasing strategies, the ASP or risk-sharing model, purchase agreements and contracts, writing an RFP, analyzing a RFP response, and the industry business trends (http://www.scs.northwestern.edu/grad/courses/?Program=MMI , March 16, 2008).” http://www.scs.northwestern.edu/grad/medical-informatics/		
	Advanced			
	Graduate			
	Online			
MED INF 409-DL Biostatistics and Medical Informatics	Sr. Level Staff	“The biostatistics course is designed for the biomedical researcher. Topics include: descriptive statistics, hypothesis testing, estimation, t-tests, chi-squared tests, analysis of variance, linear regression, correlation, nonparametric tests, survival analysis and odds ratio. Biomedical applications are discussed for each topic, as well as overall application of statistical methods in the informatics field. <i>This course is the biostats requirement for students in the distance learning MMI program. On-campus students take PUB HLTH 302</i> (http://www.scs.northwestern.edu/grad/courses/?Program=MMI , March 16, 2008).” http://www.scs.northwestern.edu/grad/medical-informatics/	\$2,922/course	NA
	Advanced			
	Graduate			
	Online			
MED INF 498-DL Capstone Project	Front Line Staff Sr. Level Staff	“The capstone project course is the culmination of the MMI program and demonstrates to faculty a student’s mastery of the curriculum and core competencies in the medical informatics field. Students, working in small groups, complete a comprehensive project provided by instructor at beginning of course. Students are individually assessed and graded throughout duration of class. Students may	\$2,922/course	NA

Course	Search	Description/Website	Cost	Credits
	Supervisory and Management	choose this course or registration in the 590 individual thesis research to fulfill their capstone requirement. <i>Pre-requisite: completion of all required coursework for the MMI degree</i> (http://www.scs.northwestern.edu/grad/courses/?Program=MMI , March 16, 2008).” http://www.scs.northwestern.edu/grad/medical-informatics/		
	Advanced			
	Graduate			
	Online			
Oregon Health and Science University				
AMIA 10X10	Front Line Staff Sr. Level Staff Supervisory and Management	“The goal of the OHSU 10x10 offering is to provide a detailed overview of informatics to those who will work at the interface of health care and information technology. It also aims to provide an entry point for those wishing further study (and career development) in the field. The course is offered in two parts: an 11-unit Web-based component followed by an intensive one-day in-person session held in conjunction with the 2008 AMIA Spring Congress (Phoenix, AZ; May 29-31, 2008). The in-person session will take place the day before the meeting, May 28, 2008, from 9 am - 4 pm. The Web-based portion is provided through readings, lectures, interactive discussion, and self-assessment tests. The in-person session will bring attendees together to integrate the material, allow presentation of course projects, and meet leaders in the field as well as other students (http://www.amia.org/10x10/partners/ohsu/).”	\$2,000	11
	Beginner			
	Continuing Education			
	Online or In Person			
Stanford				
AMIA 10x10	Sr. Level Staff	“This course will introduce the basic computational issues and methods used in molecular biology through a series of core lectures. At the completion of the course, participants will have a basic	\$2,000	



Course	Search	Description/Website	Cost	Credits
		understanding of how various computational algorithms have been used to solve key biological problems by the manipulation of biomedical data sources (http://www.amia.org/10x10/partners/stanford/description.asp , April 3, 2008).”		
	Advanced			
	Continuing Education			
	Online			
BIOMEDIN 210. Introduction to Biomedical Informatics: Fundamental Methods; (Same as CS 270.)	Sr. Level Staff	“Issues in the modeling, design, and implementation of computational systems for use in biomedicine. Topics: basic knowledge representation, controlled terminologies in medicine and biological science, fundamental algorithms, information dissemination and retrieval, knowledge acquisition, and ontologies. Emphasis is on the principles of modeling data and knowledge in biomedicine and on translation of resulting models into useful automated systems. Recommended: principles of object-oriented systems (http://bmi.stanford.edu/corecourses.htm , March 18, 2008).”		
	Advanced			
	Undergraduate			
	Online			
University of Alabama at Birmingham				
AMIA 10x10	Front Line Staff Supervisory and Management	“Students will be able to discuss the role of information and communication technologies (ICT) in healthcare delivery including their role in improving the quality, safety and efficiency of healthcare delivery. Students will be able to discuss the historical antecedents of the present use of ICT, as well as the current and likely future uses of healthcare ICT (http://www.amia.org/10x10/partners/uab/description2008-01.asp , April 2, 2008).”	\$2,000	
	Beginner			
	Continuing Education			



Course	Search	Description/Website	Cost	Credits
	Online			
University of Illinois at Chicago				
AMIA 10x10	Front Line Staff Sr. Level Staff Supervisory and Management	“The University of Illinois at Chicago contribution to the AMIA 10x10 is a one-semester course that provides an overview of the health informatics field, emphasizing key issues and challenges for the field. This program is of particular value to clinical practitioners, as well as IT professionals, who are seeking to expand their knowledge of the health care information technology industry. The course has been taught at UIC for more than five years to both graduate and advanced undergraduate students. No prerequisites are required (http://www.amia.org/10x10/partners/uic/description.asp , April 3, 2008.”	\$2,000	?
	Beginner			
	Continuing Education			
	Online			
BHIS 437/ HPA 437 Health Care Data	Frontline staff Sr. Level Staff Supervisory and Management	“Review of fundamentals constituting a health care information system. How data is transformed into information and then again transformed into knowledge through integrated computer systems (http://www.uic.edu/sph/phi/sections/mps_coursesdescriptions.htm , March 16, 2008).” BHIS - http://www.uic.edu/gcat/AHHIM.shtml HPA - http://www.uic.edu/sph/phi/	\$635/cr (HPA437) BHIS – based on number of registered hour credits	
	Beginner			
	Graduate			
	Online			
BHIS499 Information Sources in Biomedical & Health Information	Front Line Staff	“Prepares students to locate, interpret and evaluate pertinent research information sources. Includes discussion on writing literature reviews. Assignments require the use of a computer with	Based on number of registered	1

Course	Search	Description/Website	Cost	Credits
Sciences	Sr. Level Staff Supervisory and Management	Internet access. <i>Prerequisite(s)</i> : Junior standing or above required; or consent of the instructor (http://www.uic.edu/ucac/courses/BHIS.html , March 16, 2008).” http://www.uic.edu/gcat/AHHIM.shtml	hour credits.	
	Beginner			
	Graduate			
	In person			
BHIS 503 Communication Skills in Health Informatics	Front Line Staff Sr. Level Staff Supervisory and Management	“An application course in which students assess and practice effective written and oral methods of communication skills necessary for health informatics professionals. <i>Prerequisite(s)</i> : Consent of the instructor (http://www.uic.edu/ucac/courses/BHIS.html , March 16, 2008).” http://www.uic.edu/gcat/AHHIM.shtml	Based on number of registered hour credits.	2
	Beginner			
	Graduate			
	In person			
HPA 465 – Health Information Systems and Decision Support Systems	Sr. Level Staff Supervisory and Management	“Introduction to public health informatics; computer-assisted management information and decision support systems in healthcare organizations; planning, analysis, development and evaluation of information systems; design of databases; data and information flow; reports creation; and uses of microcomputers (http://www.uic.edu/sph/phi/sections/mph_coursedescriptions.htm ,	\$635/cr	4



Course	Search	Description/Website	Cost	Credits
		March 16, 2008)." http://www.uic.edu/sph/phi/		
	Advanced			
	Graduate			
	Online			
BHIS 505 – Legal and Social Issues in Health Informatics	Front Line Staff Sr. Level Staff Supervisory and Management	“Examination of the legal and ethical issues involved in computerized health information systems (http://www.uic.edu/ucate/courses/BHIS.html , March 16, 2008).” http://www.uic.edu/gcat/AHHIM.shtml	\$635/cr	3
	Intermediate			
	Graduate			
	Online			
BHIS/ HPA 510 – Survey of Health Care Information Systems	Front Line Staff Sr. Level Staff Supervisory and Management	“Examination, through case studies, of current and future information technologies and systems, in health care organizations and in health science libraries (http://www.uic.edu/ucate/courses/BHIS.html , March 16, 2008).” BHIS - http://www.uic.edu/gcat/AHHIM.shtml HPA - http://www.uic.edu/sph/phi/	\$635/cr	4
	Intermediate			
	Graduate			
	Online			
HPA 465 – Health Information and Decision Support Systems	Sr. Level Staff Supervisory and Management	“Introduction to public health informatics; computer-assisted management information and decision support systems in healthcare organizations; planning, analysis, development and evaluation of information systems; design of databases; data and information flow; reports creation; and uses of microcomputers	\$635/cr	4



Course	Search	Description/Website	Cost	Credits
		(http://www.uic.edu/sph/phi/sections/mph_coursedescriptions.htm , March 16, 2008)." http://www.uic.edu/sph/phi/		
	Advanced			
	Graduate			
	Online			
BHIS 515/ HPA 520 Management of Health Care Communication Systems	Front Line Staff Sr. Level Staff Supervisory and Management	"Examination and management of data communications in and between health care facilities including examination of issues, standards, technologies, and system configurations (http://www.uic.edu/ucate/courses/BHIS.html , March 16, 2008)." http://www.uic.edu/gcat/AHHIM.shtml	\$635/cr	4
	Intermediate			
	Graduate			
	Online (only)			
BHIS 525/ HPA 540 Social and Organizational Issues in Health Informatics	Front Line Staff Sr. Level Staff Supervisory and Management	"Examines the impact of information systems on the health care organization and applies theory through case study analysis (http://www.uic.edu/ucate/courses/BHIS.html , March 16, 2008)." BHIS - http://www.uic.edu/gcat/AHHIM.shtml HPA - http://www.uic.edu/sph/phi/	Based on number of registered hour credits.	4
	Intermediate			
	Graduate			
	Online			
BHIS 530 Topics in Health Informatics 4 hours.	Front Line Staff Supervisory	"Current theories and methods in health informatics. Same as HPA 550. Taught online only. A UIC netid is required. <i>Prerequisite(s)</i> : BHIS 510 or HPA 510; and BHIS 515 or HPA 520, or BHIS 520 or HPA 531, or BHIS 525 or HPA 540; and graduate standing and	Based on number of registered hour credits.	4

Course	Search	Description/Website	Cost	Credits
	and Management	consent of the instructor (http://www.uic.edu/ucate/courses/BHIS.html , March 16, 2008)." http://www.uic.edu/gcat/AHHIM.shtml		
	Intermediate			
	Graduate			
	Online			
BHIS 537 Health Care I.T. Vendor Management 3 hours.	Sr. Level Staff Supervisory and Management	"Examines the environment and activities necessary to plan, select, contract, and implement systems from suppliers in the healthcare I.T. industry. <i>Prerequisite(s)</i> : BHIS 510 or consent of the instructor (http://www.uic.edu/ucate/courses/BHIS.html , March 16, 2008)." http://www.uic.edu/gcat/AHHIM.shtml	Based on number of registered hour credits.	3
	Advanced			
	Graduate			
	In Person			
BHIS 546 Leadership Development in Health Informatics 3 hours.	Supervisory and Management	"Students will analyze, evaluate and practice the competencies necessary for leadership unique to the health informatics profession. <i>Prerequisite(s)</i> : Consent of the instructor (http://www.uic.edu/ucate/courses/BHIS.html , March 16, 2008)." http://www.uic.edu/gcat/AHHIM.shtml	Based on number of registered hour credits.	3
	Advanced			
	Graduate			
	In Person			
HPA 563 – WEB-Based Public Health Informatics	Front Line Staff Sr. Level Staff Supervisory and Management	"Examination of web based applications in public health practice and factors in the design of web-based public health education and database systems (http://www.uic.edu/sph/phi/sections/mph_coursedescriptions.htm ., March 16, 2008)." http://www.uic.edu/sph/phi/	\$635/cr	4

Course	Search	Description/Website	Cost	Credits
	Beginner			
	Graduate			
	Online			
HPA 564 – Applications of Geographic Information Systems in Public Health	Front Line Staff Sr. Level Staff Supervisory and Management	“Examination of GIS applications in public health and the process of designing a GIS based public health investigation (http://www.uic.edu/sph/phi/sections/mph_coursedescriptions.htm ., March 16, 2008).” http://www.uic.edu/sph/phi/	\$635/cr	3
	Advanced			
	Graduate			
	Online			
HPA 565 – Data Mining in Public Health	Front Line Staff Sr. Level Staff	“Review of strategic decision systems and an introduction to the theory and practice of data mining in public health. Case studies in public health data mining will be assessed (http://www.uic.edu/sph/phi/sections/mph_coursedescriptions.htm ., March 16, 2008).” http://www.uic.edu/sph/phi/	\$635/cr	3
	Intermediate			
	Graduate			
	Online			
University of MN				
NURS 3115 Health Informatics: Clinical & Public Health	Front Line Staff Sr. Level Staff Supervisory and	“Clinical and public health informatics. Principles/theories of informatics. Clinical/public health data, standards, information systems. Knowledge development, integration into systems. Informatics research. Legal, political, and ethical issues influencing informatics (http://onestop2.umn.edu/courses/courses.jsp?designator=NURS&submit=Show+the+courses&institution=UMNTC , March 16, 2008).”		2



Course	Search	Description/Website	Cost	Credits
	Management	www.umn.edu/		
	Beginning			
	Graduate			
	Online			
NURS 5115 Interprofessional Healthcare Informatics	Front Line Staff Sr. Level Staff Supervisory and Management	“Implications of informatics for practice, including nursing, public health, and health care in general. Electronic health record issues. Ethical, legislative, political, and global/future informatics issues (http://onestop2.umn.edu/courses/courses.jsp?designator=NURS&submit=Show+the+courses&institution=UMNTC , March 16, 2008).” www.umn.edu/		3
	Intermediate			
	Graduate			
	Online			
NURS 5116 Consumer/ Self-Care Informatics	Front Line Staff Supervisory and Management	“This course examines issues from the consumer’s perspective in the acquisition, understanding, use or provision of health information. Online strategies for improving health are examined. The impact on consumer-provider relationships, as well as ethical and legal issues is explored (individual project for second credit) (http://onestop2.umn.edu/courses/courses.jsp?designator=NURS&submit=Show+the+courses&institution=UMNTC , March 16, 2008).” www.umn.edu/		1-2
	Intermediate			
	Graduate			
	Online			
HInf 5430 Health Informatics I	Front Line Staff Sr. Level Staff	“History/challenges of health informatics. Structure of healthcare delivery system. Electronic medical records. Clinical information systems. Basics of information, computation, communication. Data management in health settings. Added value of information systems in health care, Ethical and legal considerations		4

Course	Search	Description/Website	Cost	Credits
	Supervisory and Management	http://onestop2.umn.edu/courses/courses.jsp?designator=HINF&sbmit=Show+the+courses&institution=UMNTC , March 16, 2008).		
	Advanced			
	Graduate			
	In Person			
HInf 5431 Health Informatics II	Sr. Level Staff Supervisory and Management	“Topics related to health care information systems. System integration and communications. System selection/deployment. Current technologies/architectures. Security. Special topics such as telemedicine http://onestop2.umn.edu/courses/courses.jsp?designator=HINF&sbmit=Show+the+courses&institution=UMNTC , March 16, 2008).”		4
	Advanced			
	Graduate			
	In person			
HInf 5436: Health Informatics Seminar	Front Line Staff Sr. Level Staff Supervisory and Management	“Presentation and discussion of research problems, current literature and topics of interest in Health Informatics http://onestop2.umn.edu/courses/courses.jsp?designator=HINF&sbmit=Show+the+courses&institution=UMNTC , March 16, 2008).”		1
	Intermediate			
	Graduate			
	In person			
HInf 5494: Topics in Health Care Informatics	Front Line Staff Sr. Level Staff	“Individual or group studies in health informatics http://onestop2.umn.edu/courses/courses.jsp?designator=HINF&sbmit=Show+the+courses&institution=UMNTC , March 16, 2008).”		1-6

Course	Search	Description/Website	Cost	Credits
	Supervisory and Management			
	Intermediate			
	Graduate			
	Independent			
HInf 8405/8406 Advanced Topics in Health Informatics I & II	Sr. Level Staff Supervisory and Management	“Computer systems design for health sciences, small computer concepts/use, computers for clinical services, computer-aided medical decision making, biomedical image processing, pattern recognition. Case studies from health sciences (http://onestop2.umn.edu/courses/courses.jsp?designator=HINF&sbmit=Show+the+courses&institution=UMNTC , March 16, 2008).”		3
	Advanced			
	Graduate			
HInf 8492 Advanced Readings in Health Informatics	Front Line Staff Sr. Level Staff Supervisory and Management	“Directed readings in topics of current or theoretical interest in medical informatics (http://onestop2.umn.edu/courses/courses.jsp?designator=HINF&sbmit=Show+the+courses&institution=UMNTC , March 16, 2008).”		1-6
	Advanced			
	Graduate			
	Independent (per arrangement)			
N8115 Informatics Research Methods	Front Line Staff Supervisory and	This seminar is designed to stimulate and direct thoughts around selected problem focused topics related to nursing and health informatics theory, measurement, ethical and policy issues in health informatics. This seminar will foster interdisciplinary, cross institutional relationships and the interpersonal dynamics that		3




Course	Search	Description/Website	Cost	Credits
	Management	support trust-building exchanges between and among participants. (http://onestop2.umn.edu/courses/courses.jsp?designator=NURS&submit=Show+the+courses&institution=UMNTC , March 16, 2008)."		
	Intermediate			
	Graduate			
	Online			
N8193 Clinical Decision Support Theory & Application 2 F2F	Sr. Level Staff Supervisory and Management	Principals and concepts of knowledge management and decision making for support of clinical practice are examined. Students design a CDS intervention and examine the legal, ethical and practical issues related to its build implementation and maintenance. (http://onestop2.umn.edu/courses/courses.jsp?designator=NURS&submit=Show+the+courses&institution=UMNTC , March 16, 2008)."		3
	Advanced			
	Graduate			
	?			
University of Texas				
HI 5310 Foundations of Health Information Sciences I	Sr. Level Staff Supervisory and Management	<p>"This course provides an overview of topics, concepts, theories and methods that form the foundations of health information sciences. It gives students the fundamental knowledge and skills to pursue further study in health informatics."</p> <p>"Foundations I presents a general framework for health information science as the construction and use of symbolic, mathematical, and computational models for solving problems throughout the range of biomedical science, from genetics, to clinical care, to public health. It covers concepts, theories and methods that deal with how biomedical information is acquired, discovered, represented, managed, organized, communicated, retrieved, and processed. It also provides an overview of the primary research and application areas in health information science. This course will be taught every</p>	Based on residency	3



Course	Search	Description/Website	Cost	Credits
		semester as a web based course. Must get approval code from Student Affairs (http://www.shis.uth.tmc.edu/education/coursecatalog.2006-07-14.5551903411/hi-5310-foundations-of-health-information-sciences-j , March 18, 2008).”		
	Intermediate			
	Graduate			
	Online			
Information Technology for Biomedicine	Sr. Level Staff Supervisory and Management	“This course is intended to provide an overview of principles and concepts of information technology with a focus on biomedical applications. The first portion of the course will be an introduction to computing hardware and software including architecture, distributed and parallel computing, operating systems, database concepts, data communications & networking. The rest of the course will focus on applications of IT in biomedicine such as electronic health records, biomedical imaging, and bioinformatics. Required approval from Student Affairs (http://www.shis.uth.tmc.edu/education/coursecatalog.2006-07-14.5551903411/hi-5312-information-technology-for-biomedicine , March 18, 2008).”	Based on Residency	3
	Intermediate			
	Graduate			
	Online			
HI 5001 Special Topics: Introduction to Health Data and Electronic Health Records	Front Line Staff Sr. Level Staff Supervisory and Management	“This course will focus on Health Information and Electronic Health Records. Health Information is collected and entered by a wide variety of professionals and in some cases by the patient or client. This information is captured in a variety of formats, from pre-structured lists to narrative paragraphs. The data is used in a variety of different ways by a wide variety of users. In many cases the person who enters the data is the prime user of the data. In other cases one person enters the data, which in turn is used by others, e.g. the clinician may enter a diagnosis which is then interpreted by a coder for use in billing.” “This course will examine how health data are collected, how they	Based on residency	3



Course	Search	Description/Website	Cost	Credits
		are used and the impact of electronic records on the health data. The course will review standards, and standards development, languages used, and issues related to information processing in healthcare. The course will review the impact of electronic records on health and healthcare including legal, financial and clinical design issues (http://www.shis.uth.tmc.edu/education/coursecatalog.2006-07-14.5551903411/hi-5001-special-topics-introduction-to-health-data-and-electronic-health-records , March 18, 2008)."		
	Beginner			
	Graduate			
	Online			
HI 6309 Healthcare Interface Design	Sr. Level Staff Supervisory and Management	"This is an introduction to Project management that is structured for students who have begun to run their own projects. This is project based to develop managers for large healthcare projects. These projects can include a system implementation, evaluation of an existing system, or other large project. Prerequisites Consent of instructor (http://www.shis.uth.tmc.edu/education/coursecatalog.2006-07-14.5551903411/hi-6309-healthcare-interface-design , March 18, 2008)."	Based on residency	3
	Advanced			
	Graduate			
	Online			

Health Informatics Seminars/Conferences for Minnesota Health Care Providers

Conference / Seminar	Website	Target Audience	Tuition	Description
Minnesota e-Health Initiative Annual Summit	http://www.health.state.mn.us/e-health/index.html			
Minnesota Health Information Management Association (MHIMA)	http://www.mnhima.org/ http://www.mnhima.org/events/calendarofevents.html#	Variety – many diverse topics; billing & coding, technology, public health, etc	\$375 non-member \$275 member	3 day program; free seminar one of the days that is free of charge : AHIMA Personal Health Record Consumer Education Campaign Training;
Public Health Informatics Institute (PHII)				displays other seminars – none hosted by them
National eHealth Initiative	 The logo for the National eHealth Initiative Annual Conference, held in Washington, DC from December 4-5, 2008. It features the text 'eHEALTH INITIATIVE' in blue and white, 'Annual Conference' in white on a blue background, and 'Washington, DC December 4-5, 2008' in orange and white.	Multiple, diverse stakeholders-- hospitals, healthcare organizations, clinician groups, consumer/patient groups, employers and purchasers, health plans, healthcare information technology organizations, manufacturers, public health agencies, academic/research institutions, and public sector stakeholders	\$595 - \$995	The eHealth Initiative and the Foundation for eHealth Initiative are independent, non-profit affiliated organizations whose missions are to drive improvement in the quality, safety, and efficiency of healthcare through information and information technology; many offerings; annual conferences (12/08)
Technology Informatics Guiding Educational Reform (TIGER) Initiative	https://tigersummit.com 1. Standards and Interoperability 2. Healthcare IT National Agenda/HIT Policy 3. Informatics Competencies 4. Education and Faculty Development 5. Staff Development/Continuing Education			While the TIGER Initiative started out as a grass-roots effort to engage with all stakeholders that are committed to a common “vision” of ideal EHR-enabled nursing practice, today more than 120 diverse organizations have joined the effort to collaborate on nine important topics. Each of the nine teams has developed a wiki that explains their goals, activities, and progress. While the TIGER Initiative started out as a grass-roots effort to engage with all stakeholders that are committed to a common “vision” of ideal EHR-enabled nursing practice, today more than 120 diverse organizations have joined the effort to

Conference / Seminar	Website	Target Audience	Tuition	Description
	6. Usability/Clinical Application Design 7. Virtual Demonstration Center 8. Leadership Development 9. Consumer Empowerment/Personal Health Record			collaborate on nine important topics. Each of the nine teams has developed a wiki that explains their goals, activities, and progress. National and local summits held
Public Health Information Network (PHIN)	Visit the PHIN 2007 Conference website >>	physicians, nurses, certified health education specialists, and other health professionals	\$200 - \$500	Aug 2008: <i>Public Health Informatics: Collaboration at the Crossroads</i>
Stratis Health: DOQ-IT Quality Resources Kit: Doctor's Office Quality - Information Technology DOQ-IT	http://www.doqit-tx.org/  <p>Half Day Forums on EMR Adoption & Use EMR Physician Forums ROAD SHOW™ September 18 - Omni San Antonio Hotel <small><click here for more informations></small></p>	small- and medium-sized primary care practices		Various forums
National Center for Public Health Informatics (NCPHI)	Events	Public health professionals and information technology support staff involved in health monitoring (surveillance) and epidemiological response activities.		 Division of Integrated Surveillance Systems & Services <i>Integrated Surveillance Seminar Series</i> More >> ; this is listed for 2008
American Medical Informatics Association (AMIA)		varies		<ul style="list-style-type: none"> • Annual Symposium • Spring Congress • Summit on Translational Bioinformatics • e-Learning Center

Conference / Seminar	Website	Target Audience	Tuition	Description
				<ul style="list-style-type: none"> • 10x10 • Podcasts & Media • Upcoming Meetings • Meeting Archives
CDC Public Health Information Network				The CDC Public Health Information Network (PHIN) is a national initiative to improve the capacity of public health to use and exchange information electronically; offer many educ opportunites and seminars
Healthcare Information and Management Systems Society (HIMSS)	http://www.himss-mn.org/himsscalendar/himsscalendar.html			healthcare industry's membership organization exclusively focused on providing leadership for the optimal use of healthcare information technology (IT) and management systems for the betterment of human health.
HIMSS – MN Chapter	http://www.himss-mn.org/ http://www.himss-mn.org/calendar/calendar.html			Minnesota Chapter (MN HIMSS); annual meetings and other offerings
IP3 Seminar: "Strategy to Reality: Don't Look Back"	http://www.ip3seminars.com/security/register.php	Security; MHIMA members	\$150	2-Day IT Security Forum to Deepen Your Defenses June 3 & 4, 2008
IP3 Many training & educational resources	http://www.ip3inc.com/	Related to IT security		IP3's mission is to grow the Information Assurance and IT Security industry faster than it would or could, in our absence.