Health Records Information Technology

Overview

The Health Records Information Technology program is in the process of discontinuance and will not be accepting new students.

The Health Records IT certificates are designed to quickly train students in the kind of computerized health information systems that are being installed by hospitals, medical and dental offices across the country. These IT systems make it possible for health care providers to better manage patient care through secure use and sharing of health information in electronic form. The electronic systems are replacing inefficient paper records and allow health providers to quickly review and update a patient's medical history, which can be shared electronically as patients move to other health systems and/or to other geographic locations. Students completing these programs will support the IT systems that are in place in various health care related facilities.

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Certificate of Achievement

Health Records IT Technical Support Specialist Certificate

Students who complete this certificate will be prepared to support, on an ongoing basis, the technology deployed in clinical and public health settings. Workers in this role maintain systems in clinical and public health settings, including patching and upgrading of software. They also provide one-on-one support, in a traditional “help desk” model, to individual users with questions or problems.

Catalog Date: January 1, 2021

Certificate Requirements

COURSE CODE	COURSE TITLE	UNITS
CISA 320	Introduction to Database Management	1
CISC 308	Exploring Computer Environments and the Internet	1
CISC 310	Introduction to Computer Information Science	3
CISC 356	Introduction to Local Area Networks	1.5
AH 110	Medical Language for Health-Care Providers	3
HRIT 142	Installation and Maintenance of Health Records IT Systems	2
CISS 310	Network Security Fundamentals	3
HRIT 132	Configuring Electronic Health Records (EHRs)	2
HRIT 144	Working with Health Records IT Systems	2
CISN 490	Networking Helpdesk Practicum	3
Total Units:		**21.5**

Student Learning Outcomes

Upon completion of this program, the student will be able to:

- Interact with end users to diagnose IT problems and implement solutions.
- Document IT problems and evaluate the effectiveness of problem resolution.
- Support systems security and standards.
- Assist end users with the execution of audits and related privacy and security functions.
- Incorporate usability principles into ongoing software configuration and implementation.
- Ensure that the hardware/software “fail-over” and related capabilities are appropriately implemented to minimize system downtime.
- Ensure that privacy and security functions are appropriately configured and activated in hardware and software.
- Interact with the vendors as needed to rectify technical problems that occur during the deployment process.
- Work with the vendor and other sources of information to find the solution to a user’s question or problem as needed.
- Describe the purpose of typical networking hardware and software.
- Summarize the mechanisms used to make network data continuously available.
- Analyze fundamental security concepts.

- Demonstrate effective communication skills.
- Review the skills for troubleshooting computer problems.
- Examine common support problems.

Career Information

Technical Support Staff or Software Support Staff

Health Records Information Technology (HRIT) Courses

HRIT 102 The Culture of Health Care

Units: 2
Hours: 36 hours LEC
Prerequisite: None.
Catalog Date: January 1, 2021

This course addresses job expectations in a health care setting. It covers how care is organized inside a practice setting, privacy laws, and professional and ethical issues encountered in the workplace.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

- ANALYZE THE MAJOR TYPES OF CLINICAL PERSONNEL INVOLVED IN HEALTH CARE, INCLUDING THEIR EDUCATION AND TRAINING, CERTIFICATION AND LICENSURE, AND TYPICAL ROLES IN HEALTH CARE (SLO #01)
- Categorize common medical specialties and sub-specialties
- Assess doctors and nurses (their education, training, certification, licensure, and roles)
- Describe the major types of settings in which health care occurs including ambulatory care, acute and emergency care, hospital based and critical care, and community health and public health settings.
- UNCOVER THE MAJOR TYPES OF SETTINGS IN WHICH HEALTH CARE OCCURS INCLUDING AMBULATORY CARE, ACUTE AND EMERGENCY CARE, HOSPITAL BASED AND CRITICAL CARE, AND COMMUNITY HEALTH AND PUBLIC HEALTH SETTINGS (SLO #02)
- Distinguish between outpatient care and secondary care
- COMPARE THE MAJOR PROCESSES OF INFORMATION GATHERING, ANALYSIS, AND DOCUMENTATION USED BY CLINICIANS TO DETECT, UNDERSTAND, AND PREVENT OR TREAT DISEASES (SLO #03)
- Critique the classic paradigm (one doctor, one patient, one problem, one episode)
- Compare the differences between nursing assessment, intervention, and judgment
- EXAMINE THE ROLE OF COMMUNITY HEALTH AND PUBLIC HEALTH IN MANAGING ILLNESS OUTBREAKS, EPIDEMICS, AND PANDEMICS (SLO #04)
- INSPECT THE ROLE OF MEDICAL ETHICS AND PROFESSIONAL VALUES IN CARE DELIVERY INCLUDING SUCH ISSUES AS PRIVACY (INCLUDING HIPAA), ETHICAL CONFLICTS, AND HEALTH DISPARITIES (SLO #05)
- Critique the Oath of Geneva
- Compare the principles of medical ethics (autonomy, beneficence, non-maleficence and justice)
- Evaluate some common ethical conflicts (privacy and confidentiality, end of life care, death with dignity, disparities in health care, 'rationing' of care and clinician religious and conscientious objection)
- ANALYZE COMMON FORMS OF QUALITY MEASUREMENT, PERFORMANCE IMPROVEMENT, AND INCENTIVE PAYMENT SCHEMES MEANT TO INFLUENCE CARE DELIVERY (SLO #06)
- Examine quality measurement, performance improvement, and incentive payment schemes meant to influence care delivery
- Evaluate socio-technical aspects of medicine
- Rate the interaction and interdependence of social and technical issues, such as the "resistance to change"

HRIT 132 Configuring Electronic Health Records (EHRs)

Units: 2
Hours: 27 hours LEC; 27 hours LAB
Prerequisite: AH 110 with a grade of "C" or better
Catalog Date: January 1, 2021

This course offers a practical experience with a laboratory component, addressing approaches to assessing, selecting, and configuring EHRs to meet the specific needs of customers and end-users.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

- EXPLAIN THE IMPORTANCE OF MIGRATING TO AN ELECTRONIC HEALTH RECORD (EHR) SYSTEM (SLO #01).
- Describe the migration to the electronic health record.
- Determine the appropriate members for a steering committee, who are planning to move to electronic health records.
- Define the steps in a basic strategic management plan.

- RELATE THE IMPORTANCE OF MEANINGFUL USE TO DEFINE THIS FIELD (SLO #02).
- Understand the process and purpose of EHR certification and the work of CCHIT and other possible certifying bodies.
- Understand how the exchange of electronic health data relates to meaningful use.
- Understand how clinical quality measures relate to meaningful use.
- DEFINE A CLINICAL DECISION SUPPORT (CDS) SYSTEM (SLO #03).
- Define what is meant by clinical decision support (CDS) systems.
- Discuss key factors in the development of CDS for clinical and administrative use.
- Given a case study, analyze the issues related to provider fatigue related to alerts and reminders.
- EVALUATION OF AN EHR SYSTEM AND SELECTION CRITERIA FOR A HOSPITAL AND A DOCTOR'S OFFICE (SLO #04).
- Analyze/interpret user specification requirements against vendor specifications.
- Assess interpersonal skills between IT and user.
- Discuss/role-play the interaction between IT and user for successful development of user data entry screens and templates.
- Discuss key issues in electronic health record development and implementation affecting acute care.
- Discuss key issues in electronic health record development and implementation affecting long term care including interchange of health information with acute care.
- Discuss key issues in electronic health record development and implementation affecting ambulatory care including interoperability with acute care, ASP and community offerings for an EHR.
- Discuss key issues in electronic health record development in other health care settings including physician practice, home health and hospice, behavioral health, and health departments.

HRIT 140 Introduction to Health Records Management Information Systems

Units: 2
Hours: 36 hours LEC
Prerequisite: None.
Catalog Date: January 1, 2021

This course is an introduction to health records IT standards, health-related data structures, software applications, and enterprise architecture in health care and public health organizations.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

- RECOMMEND SOME GENERAL FUNCTIONS, PURPOSES AND BENEFITS OF HEALTH INFORMATION SYSTEMS, WHY THEY ARE NEEDED, AND THE BENEFITS THEY PROVIDE IN DIFFERENT HEALTHCARE AND PUBLIC HEALTH SETTINGS (SLO #01)
- Detect how health informaticians process data into information and knowledge for health care tasks with the support of information technology to improve patient care
- Critique the professional roles and skills of health informaticians
- Recommend some good information management, information technology and informatics systems
- INVESTIGATE THE SIGNIFICANT DEVELOPMENTS AND FEDERAL INITIATIVES THAT HAVE INFLUENCED THE EVOLUTION AND ADOPTION OF HEALTH INFORMATION SYSTEMS (SLO #02)
- COMPARE AND CONTRAST THE DIFFERENT TYPES OF HEALTH INFORMATION SYSTEMS IN TERMS OF THEIR ABILITY TO SUPPORT THE REQUIREMENTS OF A HEALTH CARE ENTERPRISE (SLO #03)
- Define the concept of an information system in general and characteristics of an information system and a health information system in particular
- Examine the challenges presented by emerging trends in information technology (e.g., mobility, web services, the Internet, Intranet, and wireless computing), social media, and global communications
- Discuss the advantages and disadvantages of using the Internet as a platform for health care applications
- MEASURE HOW ELECTRONIC HEALTH RECORDS AFFECT PATIENT SAFETY, QUALITY, EFFICIENCY AND PATIENT CARE, PRODUCTIVITY, AND REPORTING OUTCOMES (SLO #04)
- Compare and contrast the similarities and differences between an electronic medical record (EMR) and electronic health record (EHR)
- Explain how the use of an EHR can affect patient care safety, efficiency of care practices, and patient outcomes
- Outline issues regarding governmental regulation of EHR systems such as meaningful use of interoperable health information technology and a qualified EHR
- Identify how ongoing developments in biomedical informatics can affect future uses and challenges related to health information systems
- Research how the Institute of Medicine’s 'Vision for 21st Century Health Care' and 'Wellness' may impact health management information systems
- PROPOSE STRATEGIES TO MINIMIZE MAJOR BARRIERS TO THE ADOPTION OF ELECTRONIC HEALTH RECORDS (SLO #05)
- Examine the purposes, processes, storage concerns, and management issues related to the use of imaging systems in healthcare
- Analyze the purpose, attributes and functions of patient monitoring systems
- Analyze how the integration of data from many sources assists health care professionals in making clinical decisions
- Examine the role of smart technology and links to health information systems for use in the home
- EMPLOY THE PRINCIPLES OF HEALTHCARE DATA EXCHANGE AND STANDARDS, WORKFLOW DESIGN AND ASSESSMENT, AND THEIR RELATIONSHIP TO PATIENT CARE (SLO #06)
- Discuss how current and emerging technologies may influence consumer health informatics
- Explore the strategies used by healthcare organizations to ensure integration of front-end clinical data collection, back-end billing functions
- Explain how automation tools (such as scheduling system support tools) need to be and are being integrated in health information systems
- Describe the significance of information systems in promoting the health of the public and communities
- Examine how a national health information infrastructure is related to homeland security
- Explore how public health related large-scale strategies and other federal initiatives are likely to shape the development of an HAI Information Architecture

HRIT 142 Installation and Maintenance of Health Records IT Systems

Units: 2
Hours: 27 hours LEC; 27 hours LAB
Prerequisite: CISA 320 and CISC 356 with grades of "C" or better
Catalog Date: January 1, 2021

This course covers the installation and maintenance of a Health IT system, including testing prior to implementation. Introduction to principles underlying system configuration is also covered.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

- DESCRIBE THE USE OF CLIENT AND SERVER HARDWARE TO ACCESS AND STORE EHRS (SLO #01).
- Describe network needs to access and store EHRs.
- Identify application software and back-end data storage software in a Health IT System.
- DEFINE COTS (COMMERCIAL OFF-THE-SHELF) AND IN-HOUSE/HOMEGROWN SYSTEMS AND DESCRIBE THEIR RELATIVE ADVANTAGES AND DISADVANTAGES (SLO #02).
- Estimate costs and consider advantages and disadvantages of purchasing versus licensing hardware and software.
- Explain vendor documentation of system functionality and requirements.
- Determine whether systems meet ARRA “Meaningful Use” criteria.
- Compare and rank vendor systems.
- Evaluate and select system based on requirements and certification needs.
- IDENTIFY POSSIBLE STEPS TO CHOOSING AN EHR SYSTEM (SLO #03).
- Gather functional requirements from institution and users.
- Document use-cases and relate them to functional requirements.
- Prioritize functional requirements, including grouping as essential versus desired.
- Identify minimum and recommended software and hardware requirements.
- CREATE PROJECT PLAN FOR SYSTEM DESIGN AND IMPLEMENTATION, INCLUDING DATA MIGRATION AND CONVERSION (SLO #04).
- DEFINE THE STEPS OF THE SOFTWARE DEVELOPMENT LIFE CYCLE (SDLC) AND THE PURPOSE AND IMPORTANCE OF EACH ONE (SLO #05).
- Map project plan to SDLC model.
- Choose a popular, commonly-known software application and describe how it might have gone through the SDLC.
- IDENTIFY REGULATORY REQUIREMENTS, SUCH AS HIPAA, FOR EHRS AND INTEGRATE THEM INTO THE PROJECT PLAN (SLO #06).
- Identify best practices for OS and network system security installation and patches (such as those provided by vendors, SANS, and ISC2) and integrate into project plan.
- Provide training for system users regarding the methods and importance of security compliance.
- IDENTIFY AND IMPLEMENT AN EFFECTIVE TROUBLESHOOTING PROCEDURE FOR REPORTING, EVALUATING, FIXING, DEPLOYING, AND FOLLOWUP OF ERRORS, PROBLEMS, OR LIMITATIONS FOR THE SYSTEM (SLO #07).
- Develop a process for communicating requirements and supplying updates between vendors/developer and users.
- Create a baseline for system performance measurement and comparison for troubleshooting.
- PERFORM SYSTEM TESTING AND VALIDATION (SLO #08).
- Gather user feedback and performance baseline for system validation and testing
- Document problems with their resolution status.
- Create, execute, and document a test plan.

HRIT 144 Working with Health Records IT Systems

Units: 2
Hours: 27 hours LEC; 27 hours LAB
Prerequisite: HCIT 142 with a grade of "C" or better
Catalog Date: January 1, 2021

Students will work with simulated systems or real systems with simulated data. As they play the role of practitioners using these systems, they will learn what is happening “under the hood.” They will experience threats to security and appreciate the need for standards, high levels of usability, and how errors can occur.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

- UNDERSTAND THE COMPONENTS OF A HEALTH IT SYSTEM (SLO #01).
- Define a system and relate systems concepts to HIT
- Discuss specific examples of settings where Health IT is used (acute, rural, public health, clinic, office, patient home, etc.).
- Identify common components of a clinical HIT system.
- Demonstrate beginning level competency in maneuvering the demonstration EHRS.
- IDENTIFY THE FUNCTIONS OF A HEALTH IT SYSTEM (SLO #02).
- Identify the health IT functions that support a generic ambulatory patient care process.
- Identify the health IT functions that support a generic inpatient care process.
- DISCUSS THE WAY INFORMATION IS EXCHANGED IN A HEALTH IT SYSTEM (SLO #03).
- Identify common elements of the HIT system.

- Explain the need for standards and why they exist.
- Define and differentiate between messaging standards and terminology standards.
- Compare current efforts to facilitate health information exchange between providers, communities, regions, & nation. (basic level definitions/descriptions – NHIN, HIEs, etc.).
- UNDERSTAND THE EFFECTIVENESS OF A HEALTH IT SYSTEM (SLO #04).
- Identify characteristics of an effective HIT system.
- Define and provide examples of how evidence-based practice can be supported in HIT Systems.
- List and contrast different types of reports/queries (predefined vs. ad hoc) required for internal and external reporting.
- DEFINE THE USEABILITY OF A HEALTH IT SYSTEM (SLO #05).
- Define usability in relation to HIT systems.
- Explain the impact of HIT usability on user satisfaction, adoption, and workarounds in error rates or unintended consequences.
- Provide alternatives to HIT usability bottlenecks.
- RECITE ISSUES RELATED TO PRIVACY, SECURITY, AND CONFIDENTIALITY IN A HEALTH IT SYSTEM (SLO #06).
- Explain and illustrate privacy, security, and confidentiality in HIT settings.
- Identify common threats encountered when using HIT.
- Formulate strategies to minimize threats to privacy, security, and confidentiality in HIT systems.