

HIM-1432: COMPUTER SYSTEMS IN HEALTH INFORMATION MANAGEMENT

Cuyahoga Community College

Viewing: HIM-1432 : Computer Systems in Health Information Management

Board of Trustees:

March 2023

Academic Term:

Fall 2023

Subject Code

HIM - Health Information Management

Course Number:

1432

Title:

Computer Systems in Health Information Management

Catalog Description:

Introduction to using and understanding the Electronic Health Record (EHR), various computerized healthcare software systems. Includes a history of computers in health care and utilizes software in the completion of Health Information Management processes.

Credit Hour(s):

3

Lecture Hour(s):

2

Lab Hour(s):

2

Requisites

Prerequisite and Corequisite

IT-1090 Computer Applications or IT-109H Honors Computer Applications, and HIM-1311 Legal Aspects of Health Care, and HIM-1301 Introduction to Health Information Management.

Outcomes

Course Outcome(s):

Recognize different aspects of computer hardware in healthcare.

Objective(s):

1. Accurately select events on a timeline representing the history of computers.
2. Define major elements of a computer's construction including by not limited to: the Central Processing Unit, the motherboard, memory, case, speed and size.
3. Distinguish between the usage of different computer peripherals in healthcare.
4. Accurately matches various common computer functionality terms to their definition or use.

Course Outcome(s):

Compare and contrast several health information systems, including but not limited to, Encoder, Master Patient Index (MPI), Electronic Health Record (EHR), Electronic Data Management Systems (EDMS), Release of Information (ROI) and Data Analysis.

Objective(s):

1. Distinguish between common and unique data elements found in health information systems.
2. Match health information systems with their intended functionality, purpose, and use.
3. Troubleshoot common errors or flags found while working in the electronic medical record.
4. Use several different health information systems to identify workflow steps in various healthcare roles.

5. Summarize privacy and security components in using health information systems.
6. Identify multiple ways to search for patients in an information system.

Course Outcome(s):

Illustrate different ways to use general software applications in healthcare.

Objective(s):

- a. Research software to include history, evolution and common uses.
- b. Explain, verbally or in written format, three or more ways to apply software applications to healthcare.
- c. Utilizes software in the completion of Health Information Management processes.

Course Outcome(s):

Recommend compliance of health record content related to completion, privacy, security, and integrity.

Objective(s):

- a. Apply policies, regulations, and standards to the management of information.
- b. Identify policies and strategies to achieve data integrity.
- c. Determine compliance of health record content within the health organization.
- d. Evaluate data dictionaries and data sets for compliance with governance standards
- e. Apply health informatics concepts to the management of health information
- f. Describe the concepts of managing data

Methods of Evaluation:

- a. Class discussions
- b. Participation in the AHIMA (American Health Information Management Association) Virtual Lab (vLab) System
- c. Homework assignments
- d. Quizzes
- e. Final exam

Course Content Outline:

- a. Fundamentals of computers and Information Systems
 - i. What are the basic concepts of a computer and information system
 1. Components
 2. Activities
 - ii. Types of Computers and information systems
 - iii. Evolution of computer and information systems
 - iv. Trends in Information Technology (IT)
 1. Software and programming languages
 - v. Database management
 - vi. Transition to an EHR from paper
 - vii. Telecommunications and the internet
 - viii. Management of information technology
- b. Electronic Health Records (EHR) overview
 - i. What are electronic health records
 - ii. Why are electronic health records important
 - iii. Who or what are the forces driving the Electronic health Record
 - iv. Utilizing an Electronic health Record
 - v. Flow of medical information into the electronic patient chart
 - vi. Workflow of an office using an Electronic health Record
 - vii. Transition to an Electronic health Record from paper records
 - viii. Electronic health Record implementation levels

- ix. Compare and contrast the difference in an Electronic health Record as compared between an inpatient record or and outpatient account.
- x. Physician order entry
- c. AHIMA Virtual Lab introduction and hands-on-activities for each of the following types of systems:
 - i. Electronic Health Record (EHR)
 - ii. Electronic Data Management System (EDMS)
 - iii. Release of Information (ROI)
 - 1. ROI workflow process
 - 2. ROI authorization forms
 - 3. ROI process
 - a. Receiving an authorization
 - b. Verifying validity of authorization
 - c. Finding medical records
 - d. Sending correspondence letter
 - e. Tracking the process
 - iv. Master Patient Index (MPI)
 - 1. Patient registration workflow
 - 2. Assignment of Medical Record Number (MRN) and possible issues with duplicate assignment
 - 3. Algorithms used to determine duplicate MRN's
 - a. Deterministic or exact match
 - b. Rules-based (fuzzy logic)
 - c. Probabilistic
 - 4. Definition of duplicate, overlay, multiple/overlap
 - 5. Creation of duplicate MRN
 - 6. Identification of duplicate MRNs based on reports
 - 7. Multiple ways to search for patients in MPI
 - v. Encoder coding system
 - 1. EHR vs. EDMS system
 - 2. HIM workflow process using an EDMS system
 - a. Prepping
 - b. Scanning
 - c. Indexing
 - d. Storage of paper records
 - 3. HIM workflow process using an EHR system
 - 4. Benefits of scanning before completion vs. scanning after completion.
 - vi. Data Analytics
 - vii. Chart analysis
 - viii. Chart tracking
 - ix. Cover the following software application topics to include history, evaluation and common uses in healthcare / Health Information Management (HIM):
 - 1. documents
 - 2. spreadsheets
 - 3. presentation
 - 4. databases
 - 5. collaborative software
 - 6. Project Management
 - 7. email
 - 8. calendar
 - 9. Application software (Apps).

Resources

Sayles, Nanette and Gordon, Leslie. *Health Information Management Technology: An Applied Approach*. Sixth. Chicago: AHIMA, 2020.

Sayles, Nanette. *Introduction to Information Systems for Health Information Technology*. 4th ed. Chicago, IL: AHIMA, 2021.

Resources Other

American Health Information Management Association (AHIMA) [*Virtual Lab Enrollment*](#).

American Health Information Management Association ([*AHIMA*](#)) [*Journal Articles*](#)

[*For-the-Record*](#) magazine articles

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