Health Science Career Cluster
Essentials of Health Information Technology
Course Number: 25.49500

Course Description:
Health IT is a growing and expanding industry in Georgia and across the country; therefore, the course takes an overall look at the current state of healthcare in the United States. Students will analyze the larger role that technology and information technology play in the healthcare system, the impact that technology has on the healthcare field, and which careers will be available due to these changes. Terminology utilized in Health IT will be discussed, including Electronic Medical Records (EMR), Electronic Health Records (EHR), Health Informatics, and Health Information Management (HIM). The impact of the American Recovery and Reinvestment Act (ARRA), Health Information Technology for Economic and Clinical Health Act (HITECH), and future legislation act will be evaluated. Students will also investigate the advancement of mobile technology (mhealth) and telemedicine, as well as the benefits. Classrooms should be equipped with technology to embrace the Health IT environment. The prerequisite for this course is Introduction to Healthcare.

Course Standard 1

HS-EHIT-1
Demonstrate employability skills required by business and industry.
The following elements should be integrated throughout the content of this course.
- 1.1 Communicate effectively through writing, speaking, listening, reading, and interpersonal abilities.
- 1.2 Demonstrate creativity with multiple approaches to ask challenging questions resulting in innovative procedures, methods, and products.
- 1.3 Exhibit critical thinking and problem solving skills to locate, analyze, and apply information in career planning and employment situations.
- 1.4 Model work readiness traits required for success in the workplace including integrity, honesty, accountability, punctuality, time management, and respect for diversity.
- 1.5 Apply the appropriate skill sets to be productive in a changing, technological, and diverse workplace to be able to work independently, interpret data, and apply team work skills.
- 1.6 Present a professional image through appearance, behavior, and language.

Course Standard 2

HS-EHIT-2
Evaluate the overall state of healthcare in the United States and the role technology and information technology plays.
- 2.1 Describe the dynamics of the present state of healthcare in the United States.
- 2.2 Research the history of healthcare in the United States from various viewpoints, including morbidity (infectious and chronic disease), care (low teach, high tech, and personalized), payer (fee for service, employer, government), incentives (procedure based, outcome based), care model (poorly coordinated and episodic, patient centric), and Health IT adoption.
- 2.3 Explain the discrepancy between the healthcare expenditure (GDP) and outcome, including U.S. healthcare rankings by the World Health Organization .

2.4 Describe the inefficiencies, duplication of procedures, and sources of errors or mistakes, including the number of injuries and deaths per year.
2.5 Describe the role of information technology in healthcare.
2.6 Explain the constructive and corrective role that IT can play in healthcare.
2.7 Investigate and cite specific examples of the expanding role and use of IT in healthcare over the past decade.
2.8 Compare and contrast the increasing uses of IT impacting healthcare for patients, facilities, and medical personnel.

Course Standard 3

HS-EHIT-3
Evaluate career opportunities in Health IT, and the education and training required.
3.1 Investigate the career opportunities associated with the widespread implementation of Health IT within United States healthcare settings.
3.2 Evaluate the education and training needed to pursue a career in Health IT and other technology- based careers in healthcare.
3.3 Review careers related to various areas of discipline within Health IT, including: physician, clinical, payer, hospital, government, pharmacies, etc.
3.4 Research and conduct a presentation on career options available in Health IT, including expanding career opportunities and future career growth.
3.5 Explore technology-proficient skills needed and the training required for Health IT industry personnel.

Course Standard 4

HS-EHIT-4
Research the ARRA (American Recovery and Reinvestment Act), the HITECH Act (Health Information Technology Act), and other current legislation and the impact on healthcare.
4.1 Investigate the ARRA and the HITECH act and the impact on the current healthcare system.
4.2 Evaluate the objectives and requirements of ARRA and the HITECH Acts.
4.3 Evaluate the influence of privacy and security requirements, including the societal impact.
4.4 Investigate creative ways to address the social views and economic impact of the healthcare regulations.

Course Standard 5

HS-EHIT-5:
Assess the benefits and challenges of Electronic Health Records (EHR) implementation and the interoperability and coordination of care.
5.1 Explain the definition of EHR and the importance as a component of HITECH.
5.2 Describe the benefits of widespread EHR implementation.
5.3 Evaluate interoperability and the coordination of care.
5.3 Explain the differences between an Electronic Health Record (her) and an Electronic Medical Record (EMR).
5.4 Describe the challenges associated with EHR implementation.
5.5 Explain the positive impact of EHR on the quality and cost containment elements of the U.S. healthcare system.
5.6 Review the technology make-up of the EHR system, including accessibility, maintenance, and future growth for EHR.

Course Standard 6

HS-EHIT-6
Discuss key factors, developments, and influences on the evolution of Health IT beginning with the 1950s.
6.1   Research the evolutionary history of the United States Health IT system.
6.2   Explain the transition from a purely financial/administrative focus to today's EHR patient focus.
6.3   Describe the evolutionary change agent.
6.4   Evaluate the gradual introduction of financial, administrative, clinical, departmental, and hospital-wide systems.
6.5   Identify the major Health IT landmarks during the evolutionary process.
6.6   Assess the role of the intermediate systems, such as CMR, CPR, and EMR by describing the similarities and differences.

Course Standard 7

HS-EHIT-7
Examine the guidelines and rules that govern the implementation and usage of Electronic Health Records.
7.1   Explain the guidelines and rules governing the implementation of EHR.
7.2   Describe the role of the Office of the National Coordinator (ONC).
7.3   Explain the concept of Meaningful Use, including the goals and associated requirements.
7.4   Describe the requirements for meeting the Meaningful Use and the applicable conditions for each stage.
7.5   Investigate the creation of EHR, including the reason for creation and the intended use.
7.6   Present the technology used and required to create and maintain HER, including local medical facility use to patient access.

Course Standard 8

HS-EHIT-8
Evaluate the organizational structure of healthcare and the continuum of care relating to medical records and pay structure for services.
8.1   Describe the continuum of care, including primary care and associated services, secondary care and associated services, and tertiary care.
8.2   Describe the differences between types of hospitals.
8.3   Explain the role of alternative care facilities.
8.4   Evaluate the pay structure for healthcare.
8.5   Explain how patient medical records are kept throughout the continuum of care.

Course Standard 9

HS-EHIT-9
Demonstrate the usage of terminologies and classification in healthcare.
9.1   Discuss the important terminologies and concepts in healthcare including:
   • Current Procedural Terminology (CPT codes)
   • International Classification of Disease (ICD codes)
   • Diagnostic Related Group code (DRG codes)
   • Health Level 7 (HL-7) communication standards
   • SNOMED CT (Systematized Nomenclature of Medicine Clinical Terms)
9.2   Explain the differences between terminologies and classifications in healthcare.
9.3   Utilize commonly used acronyms and terminologies in Health IT.

Course Standard 10

HS-EHIT-10
Examine and explain IT services in hospitals and the major functional categories.
  10.1 Differentiate between hospital-based IT and provider-office IT systems.
  10.2 Explain the basic hospital IT infrastructure.
  10.3 Describe a hospital IT organization and leadership.
  10.4 Explain the variety of IT services in a hospital.
  10.5 Investigate the major functional categories of Health IT in hospitals and the related administrative, financial, and clinical applications.

Course Standard 11

HS-EHIT-11
Research the use of mobile technology and other medical devices in healthcare (mhealth) and the benefits to patients and healthcare providers.
  11.1 Examine how the use of mhealth can result in lower healthcare costs.
  11.2 Explore various methods of remote monitoring, including cardiac and diabetic conditions.
  11.3 Investigate how mobile technology is utilized by pharmacies to promote patient compliance and examine the impact of E-prescribing.
  11.4 Examine the usage of mobile apps to encourage healthy lifestyles and preventative care.
  11.5 Research the current trends in mhealth and the different practices in healthcare.

Course Standard 12

HS-EHIT-12
Explore the benefits and applications of telemedicine and telehealth.
  12.1 Research the expanding usage of telehealth and telemedicine.
  12.2 Differentiate between telemedicine and telehealth, including the services provided.
  12.3 Investigate the benefits of telehealth to various audiences.
  12.4 Examine the clinical applications, including telemedicine consultation and examination.
  12.5 Evaluate how telemedicine can be utilized in school-based clinics.