JEFFERSON COLLEGE

COURSE SYLLABUS

HIT 220

Electronic Health Systems

3 Credit Hours

Prepared by:
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HIT 220 Electronic Health Systems

I. CATALOGUE DESCRIPTION

A. Prerequisite: ENG 101 with a grade of “C” or better and HIT 110 with a grade of “C” or better.

B. Credit hour award: 3

C. Description: This course emphasizes the role of information technology in healthcare, describes key elements of health information systems, defines the electronic health record (EHR), and establishes the context of the EHR within the scope of health information technology (HIT). (F)

II. EXPECTED LEARNING OUTCOMES/CORRESPONDING ASSESSMENT MEASURES

<table>
<thead>
<tr>
<th>Expected Learning Outcomes</th>
<th>Assessment Measures</th>
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<tr>
<td>Review how the healthcare/public health information infrastructure is used to collect,</td>
<td>Class Discussion/Activity Summative</td>
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<td>process, maintain, and disseminate data.</td>
<td>Examination</td>
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<td>Describe how societal, organizational, and individual factors influence, and are</td>
<td>Class Discussion/Activity Written Project/Paper</td>
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<td>influenced by, healthcare/public health communications.</td>
<td>Summative Examination</td>
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<td>Examine the influences of social, organizational, and individual factors on the use of</td>
<td>Class Discussion/Activity Summative</td>
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<td>information technology by end users.</td>
<td>Examination</td>
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<tr>
<td>Apply legal and ethical principles to the use of information technology and resources in</td>
<td>Class Discussion/Activity Written Project/Paper</td>
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<td>healthcare/public health settings.</td>
<td>Summative Examination</td>
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<tr>
<td>Plan with communication and informatics specialists in the process of design,</td>
<td>Class Discussion/Activity Written Project/Paper</td>
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<td>implementation, and evaluation of healthcare/public health programs.</td>
<td>Summative Examination</td>
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<td>Demonstrate effective written and oral skills for communicating with different</td>
<td>Class Discussion/Activity Written Project/Paper</td>
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<td>audiences in the context of electronic health systems.</td>
<td>Summative Examination</td>
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<tr>
<td>Use information technology to access, evaluate, and interpret</td>
<td>Written Project/Paper</td>
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<td>healthcare/public health data.</td>
<td>Summative Examination</td>
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<td>Outline a better understanding about the theoretical and practical opportunities and</td>
<td>Class Discussion/Activity Written Project/Paper</td>
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<td>challenges in implementing and utilizing patient-centered eHealth applications.</td>
<td>Summative Examination</td>
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<td>Review the role of HIPAA as it applies to various types of electronic records.</td>
<td>Class Discussion/Activity Summative</td>
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<td>Prepare for the costs and benefits of implementing EHR and PHR solutions into practice</td>
<td>Class Discussion/Activity Written Project/Paper</td>
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<td>settings.</td>
<td>Summative Examination</td>
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<tr>
<td>Review eHealth Solutions for reducing errors and transforming healthcare quality.</td>
<td>Class Discussion/Activity Summative</td>
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<tr>
<td>Outline best practices and guidelines for the use of eHealth applications (e.g.</td>
<td>Class Discussion/Activity Written Project/Paper</td>
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<td>Electronic health records [EHRs], Personal health records [PHRs].</td>
<td>Summative Examination</td>
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<tr>
<td>Predict future trends in patient-centered computing and eHealth.</td>
<td>Class Discussion/Activity Written Project/Paper</td>
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<td>Interpret consumers’ perspectives on eHealth applications and technologies and their</td>
<td>Class Discussion/Activity Written Project/Paper</td>
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<td>viewpoints about the impact on healthcare costs, quality and</td>
<td>Summative Examination</td>
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III. OUTLINE OF TOPICS

A. Introduction to Computers
   1. History of Computers in Healthcare
   2. Impact of Computers
   3. Hardware/Software
   4. Communication and Internet Technologies

B. System Selection and Implementation
   1. Planning
   2. Organization of a Project
   3. Project Identification
   4. System Analysis
   5. System Selection
   6. Contract Negotiation
   7. System Design
   8. System Implementation
   9. Conversion/Training/Testing Plan
  10. Conversion/Go-live/System Evaluation/Post-Implementation

D. Computers in HIM
   2. Encoder/Grouper
   3. Cancer and other Registries
   4. Chart Locator
   5. Birth Certificate
   6. Chart Deficiency
   7. Transcription
   8. Data Quality Indicator
   9. Dictation System

E. Administrative Information Systems
   1. Financial Information System
   2. Human Resources Information System
   3. Decision Support System
   4. Master Patient Index
   5. Patient Registration
   6. Scheduling System
   7. Practice Management
   8. Materials Management System
   9. Facilities Management

F. Clinical Information Systems
   1. Radiology Information System
2. Laboratory Information System
3. Nursing Information System
4. Pharmacy Information System
5. Patient Monitoring System/ Telehealth
6. Smart Cards
7. Impact of Clinical Information Systems on HIM

G. Electronic Health Record
1. Components of EHR
2. Benefits of the HER/ Barriers to the EHR
3. Functionality/ Signatures
4. Classification Systems/ Standards/ Vocabulary Standards
5. Messaging Standards
6. Data Structures
7. EHR Tools/ Legal Issues/ EHR Data
8. Interoperability/ Transition Period
9. Impact on HIM

H. Speech Recognition
1. History of Speech Recognition
2. Benefits of Speech Recognition
3. Speech Recognition Software
4. Speech Pattern Issues
5. Computer Usage with Speech Recognition
6. Issues with Speech Recognition
7. Speech Recognition Principles
8. Voice Extensible Markup Language

I. Role of HIM Professionals in Information Systems
1. Roles by Work Setting
2. Roles by Function

J. The Future of Computers in Healthcare
1. Evolving Technologies
2. Emerging Technologies

IV. METHOD(S) OF INSTRUCTION

A. Lecture

B. Readings from textbook

C. Supplemental handouts

D. Peer interactive activities/ discussions in classroom.

V. REQUIRED TEXTBOOK

Sayles, Nanette (2011). Introduction to Computer Systems for Health Information
VI. REQUIRED MATERIALS

A. Textbook

B. A computer with internet access (available through the Jefferson College Labs)

C. Paper, notebooks, pens, pencils with erasers

VII. SUPPLEMENTAL REFERENCES

A. Class Handouts

B. Current internet resources
   1. On-line reference materials
   2. American Health Information Management (AHIMA) web-site

VIII. METHOD OF EVALUATION

A. Summative Written Examinations- These examinations will be based primarily on textbook readings and may include multiple choice, fill-in-the-blank, short answer, and essay questions.

B. Written Project/ Papers

C. Grading Scale:
   A = 90-100%
   B = 80-89.9%
   C = 70-79.9%
   D = 60-69.9%
   F = 0-59.9%

*A strict point system will be run for this course.

IX. ADA STATEMENT

Any student requiring special accommodations should inform the instructor and the Coordinator of Disability Support Services (Library: phone 636-797-3000, ext. 3169).

X. ACADEMIC HONESTY STATEMENT

All students are responsible for complying with campus policies as stated in the Student Handbook. Any student who cheats or plagiarizes will be subject to dismissal from the Health Information Technology program and will be referred to the college for disciplinary action. (See College website, http://www.jeffco.edu).

XI. OUTSIDE OF CLASS ACADEMICALLY-RELATED ACTIVITIES

The US Department of Education mandates that students be made aware of expectations regarding coursework to be completed outside the classroom. Students are expected to
spend substantial time outside of class meetings engaging in academically-related activities such as reading, studying, and completing assignments. Specifically, time spent on academically-related activities outside of class combined with time spent in class meetings is expected to be a minimum of 37.5 hours over the duration of the term for each credit hour.