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

Class Discussion/Activity
Written Project/Paper
Summative Examination

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/jeffco/index.php?option=com_weblinks&catid=26&Itemid=84)