Spring 2014 Course Plan

Healthcare Information Systems
(32 .607)

College of Health Sciences
Department of Community Health & Sustainability
Health Informatics and Management

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This is the introductory, first-recommended course in health informatics. It provides a broad-ranging overview of the healthcare information systems industry, its history, recent developments and continuing challenges, as well as a practical understanding of healthcare information systems acquisition and implementation. Topics include meaningful use, EMR, CPOE and health information exchange.

Textbook


Be sure to get the third edition. The second edition is much different, and not up to date. The book should be available from the South Campus Bookstore but you may find less costly alternatives online.

Face-to-Face Classes

The course is taught on a “blended” basis, with both face-to-face and “synchronous” online classes. The face-to-face classes meet from 9:00 am to 12 noon on six Saturdays, with each class scheduled two or three weeks apart (see Face-to-Face Class Calendar below). You have reading assignments for all but the last class

- **Wager Reading Assignment.** For all but the last class, you will read several chapters from our textbook.

- **Other Reading Assignment.** For many classes, you will also have other reading assignments, and these are available as PDF documents from Blackboard.

- **In-Class Reports.** For the first four classes, selected students will research special topics (e.g., job opportunities in health information technology) and, using PowerPoint, present their findings individually to the class. Each student will do this once.
All face-to-face classes will be recorded, and the recordings will be available from Blackboard. If you are not able to attend a class, you must listen to the recording and prepare a one-page report reflecting on what you learned.

Online Classes

With exception of spring recess week, the class meets online from 7:30 to 9:00 pm on the Monday evenings following each Saturday that the class is not meeting face-to-face. The online classes will be recorded and available from Blackboard. If you are not available to participate in an online class, you must listen to the recording on your own schedule and prepare a brief report.

You will have reading assignments for each online class. Prior to class, you will complete a supplemental research assignment and post your findings to Blackboard’s discussion board. All postings will be available for review and comment by the entire class, and you are required to read everyone’s post in preparation for class. I recommend that you draft postings offline in Word and then “cut and paste” your narrative into the posting message box and save. Please do not attach your posting as a Word document.

Discussion board postings are due on the prior Saturday evening so that everyone will have time to read all posts. Unless pre-approved, you will be penalized for late submission. Each discussion board posting assignment will be graded on a 10-point scale but up to two points “extra credit” will be awarded to anyone providing unusually expansive or well-researched reports.

The online classes are conducted using Blackboard Collaborate, an Internet-based communications facility accessed through Blackboard. To use Collaborate, you will need a computer microphone and speaker (or headset). To avoid feedback, a noise-cancelling microphone is recommended. Any webcam sold today also includes a noise-cancelling microphone.

The procedures for posting to Blackboard will be demonstrated during the first face-to-face class. If needed, technical support is available.

Special Project Report

A special project is required as follows:

Consider that you are an information technology consultant. You have been hired to evaluate the vendor information system alternatives and select a new healthcare information system for a hospital, clinical department or other provider entity. You will prepare a consulting report that includes the following:

1) **Situation Analysis.** Describe the "real" or hypothetical work environment, provider objectives and current information systems configuration as well as any unmet needs or issues.

2) **Functional Requirements.** List or otherwise characterize the key functional requirements to be met by a new or upgraded health information system.
3) **Evaluate Vendor Alternatives.** Describe and evaluate two to four vendor alternatives. Indicate pros, cons and unresolved issues for each alternative. Give special attention to the “human factors” considerations.

4) **Provisional Recommendation.** Given the information available to you, what do you recommend as next steps? Options include doing nothing, upgrading the current system, negotiating with one or more vendors, acquiring more information, and evaluating other vendor alternatives. Be specific and indicate your rationales for each recommendation.

Students are encouraged to come forward with their own project ideas and then secure approval. Otherwise, I will work with you to “brainstorm” alternatives.

Much or most of the information required for this assignment should be available from the Web. However, you may also wish to obtain product information through your own or another organization. You may also interview one or more individuals with relevant experience and expertise.

Your consultant’s report should be written as a single-spaced business-type report, about ten pages in length. The report will have:

- No less than seven (7) pages of narrative, including all four subsections indicated above;
- A table comparing features of the vendor alternatives; and
- A graphic representation depicting the functional requirements or work environment.

Anyone using "real" information should "blind" his or her report such that institutional confidentiality is protected.

You will also develop a PowerPoint presentation. During the last face-to-face class, you will present your findings as if briefing your client.

**Grading**

Grades will be assigned using the following weights:

- 15%--Class Attendance
- 15%--Class Participation
- 10%--In-Class Report
- 30%--Supplemental Research Assignments
- 30%--Special Project

If you miss more than one face-to-face class, your grade for the entire course will be reduced.
Grading will follow the following scheme:

<table>
<thead>
<tr>
<th>Grade</th>
<th>GPA Equivalent</th>
<th>Numeric Range</th>
<th>Grade</th>
<th>GPA Equivalent</th>
<th>Numeric Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.0</td>
<td>93-100</td>
<td>C</td>
<td>2.0</td>
<td>73-76</td>
</tr>
<tr>
<td>A-</td>
<td>3.7</td>
<td>90-92</td>
<td>C-</td>
<td>1.7</td>
<td>7072</td>
</tr>
<tr>
<td>B+</td>
<td>3.3</td>
<td>87-89</td>
<td>D+</td>
<td>1.3</td>
<td>65-69</td>
</tr>
<tr>
<td>B</td>
<td>3.0</td>
<td>83-86</td>
<td>D</td>
<td>1.0</td>
<td>60-64</td>
</tr>
<tr>
<td>B-</td>
<td>2.7</td>
<td>80-82</td>
<td>F</td>
<td>0.0</td>
<td>&gt;60</td>
</tr>
<tr>
<td>C+</td>
<td>2.3</td>
<td>77-79</td>
<td></td>
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**Academic Integrity**

There is a University policy regarding academic integrity. For details, see the Academic Integrity Policy at [http://www.uml.edu/Catalog/Graduate/Policies/Academic-Integrity.aspx](http://www.uml.edu/Catalog/Graduate/Policies/Academic-Integrity.aspx). It is your responsibility to review and understand this policy.
## Face-to-Face Class Calendar

<table>
<thead>
<tr>
<th>Class Date</th>
<th>Wager Reading Assignment</th>
<th>Other Reading Assignment</th>
<th>Student Reports</th>
</tr>
</thead>
</table>
| January 25   | Ch. 1: Introduction to Health Care Information  
               Ch. 2: Health Care Data Quality  
               Ch. 3: Health Care Information Regulations, Laws and Standards  
               Appendix A: Overview of the Health Care IT Industry | *Centricity Brochure*                                                                   | *Four Healthcare IT Associations* |
| February 8   | Ch. 4: History and Evolution of Health Care Information Systems  
               Ch. 5: Clinical Information Systems  
               Ch. 7: System Acquisition | *IT Purchasing Strategies*                                                               | *HIT Jobs*                  |
| March 1      | Ch. 8 Systems Implementation and Support  
               Ch. 9: Technologies That Support Health Care Information Systems  
               Ch. 10: Health Care Information System Standards | *Redesign and Implementation of a Multifacility CIS*  
               *Could IBM's 'Watson' Supercomputer Be The Future Of U.S. Healthcare Information Technology?* | *EHR Vendors*               |
| March 29     | Ch. 12: Organizing Information Technology Services  
               Ch. 13: IT Alignment and Strategic Planning  
               Ch. 14: Strategy Considerations | *Ten Commandments of Effective Clinical Decision Support*                                  | *Other HIT Vendors*         |
| April 12     | Ch. 15: IT Governance and Management  
               Ch. 16: Management's Role in Major IT Initiatives  
               Ch. 17: Assessing and Achieving Value in Health Care Information Systems | *Healthcare information technology and economics*                                          | *Guest Speaker*             |
<p>| May 3        |                                                                                         |                                                                                         | <em>Special Project Reports</em>   |</p>
<table>
<thead>
<tr>
<th>Class Date</th>
<th>Reading Assignment</th>
<th>Supplemental Research Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 3</td>
<td><em>Health Information Technology: Benefits and Problems</em></td>
<td>As you see it, what are the issues, benefits and challenges involved in expanding the use of information technology in healthcare?</td>
</tr>
</tbody>
</table>
| February 17| Ch. 6: Federal Efforts to Enhance Quality of Patient Care through the Use of Health Information Technology  
10 Steps to Securing the Federal EHR Incentive Payment for Eligible Professionals | Investigate the status of “meaningful use” implementation. Where are we with “meaningful use?” Are we on track? How important will the “meaningful use” initiative be to the future of healthcare? Provide evidence. |
| February 24| *Is the industry ready for personal health records?*  
*Patient Portals: Express Lane on the Health Information Highway* | Investigate and report on patient engagement with healthcare information systems and health information exchange. |
| March 10   | *EHR Implementation with Minimal Practice Disruption*                                 | What have we learned from the recent EMR implementation experience? What works, what doesn’t work, and why? |
| March 24   | Ch. 11: Security of Health Care Information Systems  
*Healthcare Information Security* | Investigate and describe a recent breach in healthcare information security, and answer how to avoid such breaches in the future. |
| April 7    | Ch. 18: Health IT Leadership: A Compendium of Case Studies                            | Describe the barriers confronted in implementing a new health care information system, using an actual case example drawn from the literature, your own experience or an interview. |
| April 21   | Appendix C: International Adoption and Use of Health Information Technology           | Investigate and report on HIT development in another country.                                      |
| April 28   |                                                                                      | “Chef’s choice.” Any new HIT topic that you wish to explore.                                       |