



THE CATHOLIC UNIVERSITY OF AMERICA
SCHOOL OF LIBRARY AND INFORMATION SCIENCE

HIT 871 – Health Informatics
Fall 2012

Mondays, 7:00 – 9:30 p.m.

Meeting Dates: August 27 – December 3, 2012

No Class Dates: October 8

Location: Leahy 51

Instructor contact information:

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(202) 390-4433

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Office Hours: By appointment, please contact instructor to schedule.

Course Description

This course introduces students to the concepts and practices of health informatics in various health care environments. It examines how health information technology can address healthcare problems, support the information needs and communication patterns of healthcare professionals, and bridge the gap between research and practice.

Instructional Methods

Lecture, class discussion, group dynamics

Required Text

Hoyt, R.E. et al (2010). *Medical Informatics: A Practical Guide for Healthcare and Information Technology Professionals, Fourth Edition*. Lulu.com

ISBN: 9780557634392

Other reading materials will be handed out in class.

Course Goals

The purpose of this course is to allow students to prepare themselves to function in and understand the U.S. health care environment which is data-driven, evidence-based, and fully electronic and will increasingly integrate research and clinical practice in an interdisciplinary manner that reaches from the bench to the bedside.

Goals for Student Learning

At the conclusion of the course, the student will:

- Define health informatics and describe the scope of the field and variety of applications

- Identify HIT policies and standards as they relate to US health care policy, systems interoperability, and potential obstacles to system implementations.
- Understand the applications underlying/enhancing the IT infrastructure
- List the major components and purposes of EHR
- Discuss the ethical issues of EHR usage
- Identify human factor issues in implementation
- Define the principles of eScience
- Describe the role of collaborative workspaces and CTSA programs in the delivery of research from the bench to the bedside
- Define computational biology and list databases and resources used in bioinformatics.
- Identify future health care innovations from this field
- Identify roles for informatics applications in public health/population-based medicine
- Describe the role of informatics applications in patient/consumer centered care
- Recognize roles for librarians and IT professionals in the field of health informatics
- Synthesize principles and policies of health care informatics in the practice setting.

Course Requirements

Class attendance and participation: Completing assigned reading and engaging in discussion is essential to understanding course material. Students must attend announced class sessions and be active in discussions throughout the course.

Assignments: Two (2) written papers are required. The papers are to be between three to five pages in length (double-spaced) and must be written using APA format. Topics and details are listed under Assignments.

Discussion Questions: Two (2) discussion questions will be presented each week and must be answered every Thursday and Saturday respectively. Each answer will require a minimum of 200 words and must incorporate at least two (2) external references (articles from textbooks, journals, magazines) to back up your responses. Remember to include citations where needed and references at the end of each response.

Presentation: Students are required to complete a health informatics-related presentation that will be due on December 3, 2012. Details of the project will be discussed during the first class session. Students will form groups and must choose their topic for the presentation no later than September 24, 2012.

Examinations: Six (6) quizzes are scheduled. Each quiz will consist of multiple-choice and/or true-false questions.

Expectations and policies

Academic honesty: Academic honesty is expected of all CUA students. Faculty are required to initiate the imposition of sanctions when they find violations of academic honesty, such as plagiarism, improper use of a student's own work, cheating, and fabrication.

The following sanctions are presented in the University procedures related to Student Academic Dishonesty (from <http://policies.cua.edu/academicundergrad/integrityprocedures.cfm>): "The presumed sanction for undergraduate students for academic dishonesty will be failure for the course. There may be circumstances, however, where, perhaps because of an undergraduate student's past record, a more serious sanction, such as suspension or expulsion, would be appropriate. In the context of graduate studies, the expectations for academic honesty are greater, and therefore the presumed sanction for dishonesty is likely to be more severe, e.g., expulsion. ...In the more unusual case, mitigating circumstances may exist that would warrant a lesser sanction than the presumed sanction."

Please review the complete texts of the University policy and procedures regarding Student Academic Dishonesty, including requirements for appeals, at <http://policies.cua.edu/academicundergrad/integrity.cfm> and <http://policies.cua.edu/academicundergrad/integrity.cfm>.

Other Policies or Expectations. Please show courtesy and respect toward faculty, staff and fellow students. This should include being present in class, listening objectively to ideas presented by others, and generally contributing to a positive learning environment. **Please do not use cell phones or other**

electronic communication devices in class. Be prepared to contribute to class discussion by completing reading assignments before class.

Timeliness: Late assignments will be penalized 10% for each 24 hour period. Make-ups for quizzes will not be given without written justification and notification prior to the exam. Assignments must be turned in electronically by midnight of the due date. Discussion questions and Assignment over 3 days late will NOT be accepted.

Accommodations for students with disabilities: Any student who feels s/he may need an accommodation based on the impact of a disability should contact the instructor privately to discuss specific needs. Please contact Disability Support Services (at 202 319-5211, room 207 Pryzbyla Center) to coordinate reasonable accommodations for students with documented disabilities. To read about the services and policies, please visit the website: <http://disabilitysupport.cua.edu>.

Assessment

- Class attendance and participation (10%)
- Assignments (20%)
- Discussion questions (10%)
- Quizzes (20%)
- Final examination (20%)
- Presentation (20%)

University grades:

The University grading system is available at

<http://policies.cua.edu/academicundergrad//gradesfull.cfm#II> for undergraduates and

<http://policies.cua.edu/academicgrad//gradesfull.cfm#iii> for graduate students.

Reports of grades in courses are available at the end of each term on <http://cardinalstation.cua.edu> .

Grading System

GRADE	MEANING	SCALE	NUMERICAL EQUIVALENT
A	Excellent	93 – 100%	4.00
A-		90 – 92	3.70
B+	Good	87 – 89	3.30
B		83 – 86	3.00
B-		80 – 82	2.70
C+	Satisfactory	77 – 79	2.30
C		73 – 76	2.00
C-		70 – 72	1.79
D		60 – 69	1.00
F	Failing	< 60	0.00
I	Incomplete		
W	Withdrawal		
F	Administrative Failure		

Course Schedule:

Week	Date	Topic	Readings/Events
1	08/27/2012	Introduction to health medical informatics	
2	09/10/2012	Medical Informatics: An Overview	Read Chapter 1 (pgs.1-34) Quiz 1
3	09/17/2012	Health Information Technology: HIEs & Architectures	Read Chapters 4 & 5 (pgs. 89-118)
4	09/24/2012	Healthcare Privacy & Security: HIPAA; HITECH Act, & Meaningful Use	Read Chapter 7 (pgs. 128-142) Quiz 2 Final Selection of topics for Group Presentation
5	10/01/2012	Healthcare Applications – Mobile Technology Online Medical Resources	Read Chapters 9 – 11 (pgs. 164-217) Assignment 1 Due
6	10/09/2012	Evidence Based Practice Clinical Practice Guidelines Disease Management & Disease Registries	Read Chapters 12 – 14 (pgs. 218-256) Quiz 3
7	10/15/2012	EHRs & Practice Management Systems	Read Chapters 2 & 3 (pgs. 35-88)
8	10/22/2012	Public & Consumer Health Informatics	Read Chapters 8 & 21 (pgs. 143-163; 340-351) Quiz 4
9	10/29/2012	Bioinformatics & E-Research	Read Chapters 20 & 22 (pgs. 330-339; 352-360)
10	11/05/2012	Patient Safety and Quality Improvement through health information technology	Read Chapters 15 & 16 (pgs. 257-288) Quiz 5
11	11/12/2012	e-Prescribing	Read Chapter 17 (pgs. 289-302) Assignment 2 Due
12	11/19/2012	Picture Archiving and Communication Systems (PACS)	Read Chapter 19 (pgs. 322-329) Quiz 6
13	11/26/2012	Emerging Trends in Health Information Technology	Read Chapter 23 (pgs. 361-377) Presentations Due
14	12/03/2012	FINAL EXAMS	

Assignments & Presentation

Assignment 1:

Write a term paper entitled, “**The U.S. Health Care System: An Ever Growing Problem**”. Discuss three of the biggest issues facing the U.S. Health Care System and which of these problems might be solved by using computer technology and information systems? Include citations and references where appropriate.

Due Date: September 24, 2012

Assignment 2:

Write a term paper entitled, “**Future Trends in Health Care**”. Discuss what tomorrow’s outlook may be with the emergence of new health related technologies, breakthroughs in bio-technology and advancements in robotics. Use at least two journal reports for references and include citations where appropriate.

Due Date: November 12, 2012

Presentation (Group Output) due November 26, 2012
Topics to be discussed further in class

Resources

AHRQ National Resource Center for Health IT
<http://healthit.ahrq.gov/>

The Office of the National Coordinator for Health Information Technology
<http://healthit.hhs.gov/>

Health IT Stimulus News
<http://www.ihealthbeat.org>

OpenClinical
<http://www.openclinical.org>

CPOE: <http://www.cpo.e.org>

Certification Commission for Health Information Technology (CCHIT)
<http://www.cchit.org/>

American Medical Informatics Association (AMIA)
<http://www.amia.org/>

Health Information and Management System Society (HIMSS)
<http://www.himss.org/>

International Medical Informatics Association (IMIA)
<http://www.imia.org>

Health Level 7 (HL7): <http://www.hl7.org/>