# LIS4930.726F13

## Fall 2013

# Information Discovery in Health Information Management Systems

## Clinton Daniel, MS MIS

ONLINE - Canvas

## Contact Information:

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## Course Description and Objectives:

Electronic health records (EHRs) are a key component of the information technology revolution occurring in healthcare. Information stored in EHRs is valuable for practitioners and researchers from the areas of medicine, public health, nursing, law, and health insurance. There are many challenges associated with information stored in Health Information Management Systems such as: data quality, data integration, ethical, legal, and social issues, privacy concerns, search capabilities, knowledge discovery, and data analytics. This course attempts to engage the student in the discipline of information discovery in Health Information Management Systems.

## Text:

**Information Discovery on Electronic Health Records**, Edited by Vagelis Hristidis, Chapman & Hall/CRC Press, 2010, ISBN: 978-1-4200-9038-3. This is a required text and was chosen because it covers the majority of topics comprehensively and succinctly. You are expected to use this book throughout the course.

## Prerequisites:

None

## Grading:

Your grade for this class will be based on the results of your online exams and homework assignments.

***Exams:*** There will be two exams given during the semester (Mid-Term and Final). These exams will cover content that is included in the Homework assignments. In most cases, as you go through the homework assignments online (Canvas) there will be references to the content required to study for the Mid-Term and Final exams. You will use these assignments as study guides for the exams. Mid-Term exam will only include content up to that point. The Final Exam will only include content from Mid-Term to Final.

***Homework:*** All homework will be assigned using the online Canvas system. It will include a variety of written papers, multiple choice, and essay type assignments. When taking the multiple choice and essay assignments, feedback will automatically be given to you after most questions that provides a valuable study guide for the mid-term and final exams. Homework Assignments will be located on the “Assignments” section in the Canvas. Assignments will show up on the Canvas (as scheduled) throughout the semester to keep you on task. A tentative schedule of assignments and exams is located on the last page of this syllabus. If changes are required to the schedule, an updated schedule will be posted in the “Syllabus” section of the Canvas and an Announcement will be posted in the “Announcements” section.

***Podcasts:*** Throughout the semester, I will periodically post Podcasts in the “Assignments” section of the Canvas. The purpose of these Podcasts is to provide you with a more personalized instruction on the content covered in this course. The casts should be viewable in QuickTime Player or iTunes. These are freely downloadable tools that will allow you to view the clips on Windows or MacOSX. They can also be viewed using your browser by just clicking the “watch” link below the Podcast Title. To meet accessibility requirements, a transcript of any Podcast used in this course will be made available upon request. Additionally, I will provide a YouTube version of each Podcast so that you can view them with any YouTube app.

You can download QuickTime player for free here: <http://www.apple.com/quicktime/download/>

You can download iTunes for free here: <http://www.apple.com/itunes/download/>

***Grades:*** All grades will be posted on the Canvas Grade book module. A total of 750 points will be awarded throughout this course. The point break down for Exams and Assignments is summarized in the Schedule outlined on the last page of this Syllabus.

Here is a break down of the grading scale:

|  |  |  |  |
| --- | --- | --- | --- |
| A | 682 – 750 | C | 532 – 576 |
| A- | 667 – 681 | C- | 517 – 531 |
| B+ | 652 – 666 | D+ | 502 – 516 |
| B | 607 – 651 | D | 457 – 501 |
| B- | 592 – 606 | D- | 442 – 456 |
| C+ | 577 - 591 | F | Below 442 |

## Course Policies:

**School Closure Policy**

In the event of an emergency, it may be necessary for USF to suspend normal operations. During this time, USF may opt to continue delivery of instruction through methods that include but are not limited to: Canvas, Elluminate, Skype, and email messaging and/or an alternate schedule. It’s the responsibility of the student to monitor Canvas site for each class for course specific communication, and the main USF, College, and department websites, emails, and MoBull messages for important general information.

**You are responsible for completing all assignments on time.**

I am providing you with a schedule that details exactly what topics will be covered on each day. Any changes to that schedule will be communicated via Black Board in a timely manner. **It is your responsibility to be prepared to complete your assignments.**

I realize that emergencies do happen and you may be unable to get an assignment turned in on time, or take an exam on the scheduled day. Emergencies, however, are situations that are out of your control such as illness, death, or an accident. Please inform me as soon as possible when an emergency occurs. I do not consider a scheduling conflict, such as other course work or job-related work, to be an emergency. I will allow you to take an exam on an earlier date, if that will help resolve a scheduling conflict.

**You are responsible for knowing material covered in this course.**

**Attendance:** Each time you turn in an assignment, I will consider this your participation/attendance in this course.

**General Guidelines**

**University Policy On Academic Dishonesty**: Each individual is expected to earn his or her degree on the basis of personal effort. Consequently, any form of cheating on examinations or plagiarism on assigned papers constitutes unacceptable deceit and dishonesty. This cannot be tolerated in the University community and will be punishable, according to the seriousness of the offense, in conformity with this rule.

Cheating is defined as follows: (a) the unauthorized granting or receiving of aid during the prescribed period of a course‑graded exercise: students may not consult written materials such as notes or books, many not look at the paper of another student, nor consult orally with any other student taking the same test; (b) asking another person to take an examination in his or her place; (c) taking an examination for or in place of another student; (d) stealing visual concepts, such as drawings, sketches, diagrams, musical programs and scores, graphs, maps, etc. and presenting them as one's own; (e) stealing, borrowing, buying, or disseminating tests, answer keys or other examination material except as officially authorized, research papers, creative papers, speeches, etc.; (f) stealing or copying of computer programs and presenting them as one's own.

The University of South Florida has an account with an automated plagiarism detection service which allows instructors to submit student assignments to be checked for plagiarism. I reserve the right to 1) request that assignments be submitted to me as electronic files and 2) electronically submit assignments to Turnitin.com. Assignments are compared automatically with a huge database of journal articles, web articles, and previously submitted papers. The instructor receives a report showing exactly how a student’s paper was plagiarized. For more information, go to [www.turnitin.com](http://www.turnitin.com) and <http://www.ugs.usf.edu/catalogs/0304/adadap.htm#plagiarism>.

**University Policy On Religious Observances**. No student shall be compelled to attend class or sit for an examination at a day or time prohibited by his or her religious belief. In accordance with the University policy on observance of religious holy days, students are expected to notify their instructors if they intend to be absent for a class or announced examination prior to the scheduled meeting. ***Students who anticipate the necessity of being absent from class due to the observation of a major religious observance must provide notice of the date(s) to the instructor, in writing, by the second class meeting.***

Please note that USF regulations state that only students who are registered for this class may attend and be present in the classroom while presentations are being made.

**Students with Disabilities:** Students in need of academic accommodations for a disability may consult with the office of Students with Disabilities Services to arrange appropriate accommodations. Students are required to give reasonable noticeprior to requesting an accommodation.

**Tentative Fall 2012 Schedule:**

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| --- | --- | --- | --- |
| Date | Activity | Notes | Reference |
| 8/26/2012 | Attendance, Podcast, HW 1 Assigned **= 50 Points** | Attendance – First Day Mandatory | Preface – page ix |
| 9/4/2012 | **Read** Chapter 2  HW 2 Assigned **= 50 Points** | HW 1 DUE | Chapter 2: Electronic Health Records |
| 9/9/2012 | **Read** Chapter 3  HW 3 Assigned **= 50 Points** | HW 2 DUE | Chapter 3: Overview of Information Discovery Techniques on EHRs |
| 9/16/2012 | **Read** Chapter 4  HW 4 Assigned **= 50 Points** | HW 3 DUE | Chapter 4: Data Quality and Integration Issues in Electronic Health Records |
| 9/23/2012 | **Read** Chapter 1  HW 5 Assigned **= 50 Points** | HW 4 DUE | Chapter 1: Overview of XML |
| 9/30/2012 | **Read** Chapter 5  HW 6 Assigned **= 50 Points** | HW 5 DUE | Chapter 5: Ethical, Legal, and Social Issues for EHR Data Protection |
| 10/7/2012 | **Read** Chapter 6  HW 7 Assigned **= 50 Points**,  Study for Mid-Term Exam | HW 6 DUE | Chapter 6: Searching Electronic Health Records |
| 10/14/2012 | Exam = **100 Points** | MID-TERM EXAM | Will cover Chapters 1 – 5 |
| 10/21/2012 | HW 8 Assigned **= 50 Points** | HW 7 DUE | Chapter 6 (Cont.) |
| 10/28/2012 | **Read** Chapter 7  HW 9 Assigned **= 50 Points** |  | Chapter 7: Data Mining and Knowledge Discovery on EHRs |
| 11/4/2012 | **Read** Chapter 8 | HW 8 DUE | Chapter 8: Privacy-Preserving Information Discovery on EHRs |
| 11/12/2012 | **Read** Chapter 9  HW 10 Assigned **= 100 Points** | HW 9 DUE | Chapter 9: Real-Time and Mobile Physiological Data Analysis |
| 11/18/2012 | **Read** Chapter 10 |  | Chapter 10: Medical Image Segmentation |
| 11/25/2012 | Study for Final Exam | HW 10 DUE |  |
| 12/2/2012 - 12/9/2012 | Exam **= 100 Points** | FINAL EXAM will be posted online on 12/2 and it will be DUE by 12/9 | Final Exam Will cover Chapters 6 – 10 |