LIS/CJT639 (Section 201)
Introduction to Medical Informatics (Blackboard Course)
Fall 2011

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- NOTE: This syllabus is subject to change (minor change).

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1. Course Description/Objectives (SLIS Course Description):

This course is designed to introduce the interdisciplinary field of medical informatics to health information professionals. Medical Informatics is a developing field that essentially seeks to apply information and computing technologies to improve all aspects of healthcare, including patient care, research, and education. During the semester we will explore a number of topics central to understanding the field, including: the nature of biomedical information, the electronic medical record, the role of information and computing technologies to support clinical decision making, healthcare and informatics standards, information retrieval, system analysis and technology assessment, and essential issues of information technology in medical education and medical ethics. By the end of this Web-based course, students are expected to be able to understand broad aspects of the field and can use this as a foundation for further education, training, and work in various types of health information professions.

2. Course Expectations/General Policy:

2.1. Course Expectation

This course is an introductory course to teach you the interdisciplinary area of medical informatics. Although I assume that you have taken general reference services and resource courses, you may need to refine your skills in the area of health information. If you do not have the previous reference and retrieval courses or experience, I am happy to assist you or you can consult with medical librarians at the UK Chandler medical center. As you know, this is a graduate-level course which requires you to study at least 9 hours a week for a three-credit course like this one. You may need less time, but be prepared for the fact that some weeks may be busier than others.

2.2. General Policy

Academic honesty
Academic honesty is highly valued at the University. You must always submit work that represents your original words or ideas. If any words or ideas used in a class assignment submission do not represent your original words or ideas, you must cite all relevant sources and make clear the extent to which such sources were used. Words or ideas that require citation include, but are not limited to, all hard copy or electronic publications, whether copyrighted or not, and all verbal or visual communication when the content of such communication clearly originates from an identifiable sources. Please see the University’s policies concerning the consequences for plagiarism. Source: www.uky.edu/ombud/plagerism.pdf Policy: www.uky.edu/usc/new/rulesandregulationsmark.htm

Accommodations
If you have a documented disability that requires academic accommodations, please see me as soon as possible during scheduled office hours. In order to receive accommodations in this course, submit to me a Letter of Accommodation from the Disability Resource Center (www.uky.edu/TLC/grants/uk_ed/services/drc.html). If you have not already done so, please register with the Disability Resource Center for coordination of campus disability services available to students with disabilities.

Religious Observances
Students will be given the opportunity to make up work (typically, exams or assignments) when students notify their instructor that religious observances prevent the student from doing their work at its scheduled time. Students must notify the course instructor at least two weeks prior to such an absence and propose how to make up the missed academic work.
Inclement weather
The University of Kentucky has a detailed policy for decisions to close in inclement weather. The snow policy is described in detail at http://www.uky.edu/MicroLabs/documents/p-weather.pdf or you can call (859) 257-5684.

Late work policy
Assignments that are turned in late will be marked one letter grade lower unless prior approval from the instructor has been obtained. It will be based on the time stamp provided by Blackboard. (NOTE: Assignments more than one week past the original due date will not be graded.)

Excused absences policy
Attendance, excused absences and make-up opportunities for this course will conform to the course policies established by the Office of Academic Ombud Services as found at www.uky.edu/Ombud/policies.php

2.3. The challenges related to teaching and taking a course on-line are not trivial. In particular, it requires that you make serious effort to keep up with readings and work, take advantage of the communication mechanisms and other tools built into the Blackboard courseware, and continually assess yourself to ensure that you have a grasp of the subject matter. It is particularly important to log onto the course often in order to keep up with the topics being discussed.

3. Textbook/Required Readings:

- Weekly article readings (or Web sites or database reviews or other resources) are assigned and can be found in the Course Calendar in the last section of this syllabus.

Note: Supplementary readings will be posted as necessary to enhance the topics covered each week. The assigned readings are necessary to understand the lecture notes, to participate in discussion, and to complete the quizzes. Required readings for each topic are listed in the course calendar below.

4. Class Hours (online class and face-to-face class):

4.1. There are 16 weeks assigned for 13 regular lessons, one academic holiday (no class: Spring break), one online-presentation, and one final exam (online blackboard exam). There is no in-class meeting scheduled for this class. Although we will not have face-to-face meetings each week, I assume this online class is in session every Saturday unless further/special notice is given. You do not have to be online during this class. The course lecture notes will be posted by every Saturday morning and other class-related activities are also scheduled on Saturdays. Details about dues are included in the course calendar. The course will be taught through a series of individually designed weekly lessons, each of which relates to a specific area in medical informatics. Each weekly lesson will consist of one to four learning units that will be posted in the Blackboard Course Document Folder by Saturdays. Therefore, it is very important to be familiar with Blackboard Courseware. Please check Blackboard homepage to find further information available at http://elearning.uky.edu/index.html .

5. The Blackboard Course Page:

The Blackboard course page is a main tool for this class and you will be required to maintain a stable Internet connection to keep up with the all the relevant course materials and activities. Students should be aware that Blackboard keeps records of the dates and times they use various sections of the class page. The following information about course folders is to give you a general understanding of the individual course folder. Please consult with me or UK Blackboard Student Help and Support available at http://wiki.uky.edu/blackboard/Wiki%20Pages/Bb9%20Student%20Menu.aspx
5-1. Announcements
These appear first whenever the student logs in to the class site. Important and official announcements may appear at any time during the course and students should log in at least every other day. As a complementary way to reach you, the announcement messages will be sent to you via the email address with which you are registered with Blackboard. It is noted that the Blackboard emailing service has unexpected problems from time to time. Therefore, the official announcements will be posted in the Blackboard Announcement page.

5-2. Course Information
This syllabus and the course related materials can be found here. Links to project guidelines, final exam, and other course related materials will be posted in this folder.

5-3. Staff Information
This link includes my contact information. My personal homepage is also linked for your reference about my teaching, research, and project details.

5-4. Course Documents
This section of the course site contains documents and folders of lecture notes/slides, readings, source lists, web links, and other materials. Lecture notes/slides for each week will be provided either in Microsoft PowerPoint slides (MHTML) format or in PDF format for your convenience.

5-5. Assignments
Here are the instructions for completing assignments (e.g., assignment guidelines and links to Assignment Drop folders will be provided in this folder). Due dates are given in the Course Calendar pages 6-10. The individual links to Assignments will be given as needed and this link is where you will deposit all of your assignments. Your assignments MUST have your name in both filename and the document itself (preferably in the header or footer) if you want full credit for your work. For instance, one can see that a file named SujinKimExercise1.doc is student Sujin Kim’s exercise 1. I have no idea who turns in an assignment file labelled “Assignment 1.doc”!

5-6. Communication
(Reminder!: Any official announcements will be posted on Blackboard Announcement page).

I can communicate with students between classes in several ways.
● Most frequently asked questions about homework and material availability will be posted to the appropriate Discussion Board. A course Q&A section of the Discussion Board has been created for students to ask each other questions regarding the course in general. Often, simple problems can be resolved by utilizing this mechanism. Professionals constantly interact and collaborate with each other online. This is one place where students can share the expertise or experience they have with the rest of the class.
● For private matters, students can directly communicate with me through email at sujinkim@uky.edu. Given that I have other research and service related duties, please understand that it may take up to 48 hours to respond to some emails, although I will try to respond to most before that. If several students have emailed similar concerns, I may try to address these with one email to the entire class.
● Students can communicate with me during office hours (Tuesdays, between 3:30 p.m. and 5:30 p.m.) or by appointment. My office is located in 339 Lucille Little Fine Art Library Building. You can also reach me at 859-257-8657. However, emailing is better than telephone contact.
● Synchronous conversation by telephone or private online chat through Blackboard during my office hours (or by appointment) is also available, if needed. I will utilize synchronous communication such as “chat” and “office hours” available through Blackboard soon. Any of these sessions may be recorded. Read the User Manual (Under “Tools”) to learn how to use the live chat!

5-7. External Links
These are links to websites and web pages used in the course. Hint: They are usually easier to use if you right click on the link and choose “Open Link in New Window.”

5-8. Tools
Under the link to Tools, you can see My Grades where I will post your grades. Note that each assignment is weighted. For example, if an assignment is weighted at 10%, it will contribute 10 points to your final grade if you get 100% of it right, and 9 points if you get 90%, etc. You may want to wait to receive a total grade for an individual assignment until you complete each assignment category. The User Manual is very important. Use it!

6. Grading and Assignments:

6.1. Quizzes (20%)
6.2. Exercises (20%)
6.3. Discussion/Participation (20%)
6.4. Learning Log and Evaluation Essay (10%)
6.5. Term Project (30%)

Grading Scale:
- 90-100       A
- 80-89.9       B
- 70-79.9       C
- 69.9 or less   Fail

6-1. Quizzes (20%)
You are to take 10 weekly quizzes. Quizzes are based on the contents of course readings, course notes, and discussion topics. Mixture of multiple choices/answers, short answers, and short essay will be asked. When you prep the quiz, focus more on textbook chapter and lecture notes than the details of the assigned articles. The links to the quizzes will be open from Saturday 6am until Sunday Midnight.

6.2. Exercises (20%)
Three exercises will be given for you to sharpen the knowledge and skills that you have learned in the class lessons. Exercise guidelines will be distributed at least two weeks prior to the class.

6-3. Discussion/Participation (20%)
10 weekly discussion topics will be posted on the Discussion page, and active participation is required. You are to participate weekly in the Discussion board by posting or replying to the given topic. A discussion moderator for each week will be assigned to facilitate and summarize the discussions by the end of each week.

6.4. Learning Log and Evaluation Essay (10%)
You are to include an overall review of your learning experience twice a semester (dates are given in the course calendar below). For the learning evaluation essay part, the act of stepping outside yourself and examining your thoughts and your work is a valuable habit to cultivate as you prepare yourself for life-long learning. I want you to reflect on your learning during the semester. At minimum, your essay should be two double-spaced pages (no more than 1000 words). You will be given an Assignment Drop link in Blackboard’s Assignment folder.

6.5. Term Project (30%)
Each person will be assigned to further investigate on one of the class topics. Your main job is to create a resource link using one of social media technologies (such as Wiki, blog, personal webpage, etc.) that contains a systematically organized collection of resources for the assigned topic. Your topic should be approved by me, and I will post more detailed instruction about this project by the first week of October.
7. Submitting Assignments:

Assignments should be submitted using the Assignment folder feature through Blackboard courseware. Use MS Word for written assignments. **Please follow the file naming convention as instructed below.** Be sure to include your name in the header of each assignment as well as in the file name.

(ex. For exercises; Exercise1LastnameFirstname.doc
For term project: TermprojectLastnameFirstname.doc,
For presentation Slides: PresentationLastnameFirstname.doc, and
For learning Evaluation Essay: Learning1LastnameFirstname.doc)
8. **Course Calendar:**

- In this course calendar, 16 weeks are scheduled, including 13 individual course lessons, one academic holiday (Thanksgiving Break), and 1 term project presentation (online).
- Each Saturday before Noon, I will post class lecture slides/notes for your study. You are given a whole week to review course materials including course lecture slides/notes, one or two required textbook chapter(s) and the assigned articles. While you are reviewing course materials, you are asked to participate in the course discussion. Active participation for the discussion will be graded. Once you are done with your weekly study, you are asked to take weekly quiz for your weekly review by Sunday midnight. I will then grade quiz by next Saturday morning (at latest) for your quiz review.
- In addition to each week’s course topic (along with subtopics), this calendar provides you an overview of the entire schedule of the assignments and due dates. The *Note* column gives you important due dates and relevant information. Minor changes can be made, if necessary.
- For your assignments, you will be given 10 quizzes, 10 discussions, 2 learning log/evaluation essays, 3 exercises, and three separate dues for the final project are scheduled in this calendar.

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Reading (Textbook and Articles)</th>
<th>Note (Assignment/Quiz Dues)</th>
</tr>
</thead>
</table>
| 1    | 8/27 | (Lesson 1) | • Shortliffe et al. (2006) Ch: 1  
• YouTube video Clip by Edward Shortliffe about Biomedical Informatics. Lecture given at the OSU Medical Center on 3/17/2011. Available at: [http://www.youtube.com/watch?v=ii-NqmQ1lp8](http://www.youtube.com/watch?v=ii-NqmQ1lp8) (Duration 1h20m14s).  
|      |      | - Course logistics  
- Blackboard Features  
-- Overview of BMI | 1. Course syllabus and Blackboard course homepage should be fully understood! |
| 2    | 9/3  | (Lesson 2) | • Shortliffe et al. (2006) Ch: 2  
• Security and privacy requirements for a multi-institutional cancer research data grid: an interview-based study  
1. Discussion #1(Post it to Discussion Board)  
2. Quiz #1 about Lesson 1, the link is available between 6a.m. Saturday, 9/3/2011 and midnight Sunday, 9/4/2011  
3. Student Contract (Drop into Assignment folder) |
| 3    | 9/10 | (Lesson 3) | • Shortliffe et al. (2006) Ch: 5 & Ch.6 | Due by Midnight, Sun 9/11/2011 |
| Lesson | Date | Topic | Key Points | Assignment Due by Midnight, Sun Date  
|--------|------|-------|------------|-----------------------------------------------
| 4      | 9/17 | (Lesson 4) - Controlled Vocabulary: Standards in Medicine | • Shortliffe et al. (2006) Ch: 7  
2. Quiz #2 about Lesson 2, the link is available between 6 a.m. Saturday, 9/10/2011 and midnight Sunday, 9/11/2011  
3. Decide your term project topic  
4. Assign moderator week

| 5      | 9/24 | (Lesson 5) - Medical Decision Making | • Shortliffe et al. (2006) Ch: 3 and Ch: 20  
2. Quiz #4 about Lesson 4, the link is open between 6 a.m. Saturday, 9/24/2011 and midnight Sunday, 9/25/2011  
3. Term Project Part A (Resource Bibliography)

| 6      | 10/1 | (Lesson 6) - Electronic Medical Record (EMR) | • Shortliffe et al. (2006) Ch: 12  
• Blumenthal D, Tavenner M. (2010). The | 1. Discussion #5  
2. Quiz #5 about lesson 5, the link is open between 6 a.m. Saturday, 10/1/2011 and midnight Sunday, 10/2/2011  
3. Exercise #1
<table>
<thead>
<tr>
<th></th>
<th>Date</th>
<th>Lesson</th>
<th>Content</th>
<th>Due by Midnight, Sun Date/Time</th>
</tr>
</thead>
</table>
| 7 | 10/8  | (Lesson 7) - Information Retrieval System | • Shortliffe et al. (2006) Ch: 19  
1. Discussion #6  
2. Quiz #6 about Lesson 6, the link is open between 6 a.m. Saturday, 10/8/2011 and midnight Sunday, 10/9/2011 |
• Dr. David Sackett: Medical Pioneer. Video clip from YouTube (14:18). Available at: http://www.youtube.com/watch?v=Nbd--s2dfY0&feature=fvsr (Evidence-based medicine: McMaster University's Dr. David Sackett and the pioneering work that won him the prestigious Gairdner Award.) | 10/16/2011  
1. Discussion #7  
2. Quiz #7 about Lesson 7, the link is open between 6 a.m. Saturday, 10/15/2011 and midnight Sunday, 10/16/2011  
3. Leaning log and evaluation essay #1 |
| 9 | 10/22 | (Lesson 9) - Bioinformatics | • Shortliffe et al. (2006) Ch: 22  
1. Discussion #8 |
| 10/29 | 10 | (Lesson 10) - Biomedical Imaging | • Shortliffe et al. (2006) Ch: 9 and Ch: 18  
1. Discussion #9  
2. Quiz #9 about Lesson 9, the link is available between 6 a.m. Saturday, 10/29/2011 and midnight Sunday, 10/30/2011 |
| 11/5 | 11 | (Lesson 11) - Consumer Health Informatics - Telemedicine | • Shortliffe et al. (2006) Ch: 14  
1. Discussion #10  
2. Quiz #10 about Lesson 10, the link is available between 6 a.m. Saturday, 11/5/2011 and midnight Sunday, 11/6/2011 |
| 11/12 | 12 | (Lesson 12) - Public Health Informatics | • Shortliffe et al. (2006) Ch: 15  
1. Term Project Part B (Resource Annotation) |
| 11/19 | 13 | (Lesson 13) - Health Informatics Ethics and Education | • Shortliffe et al. (2006) Ch: 10 and Ch: 21  
1. Exercise #3 |
<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
<th>Readings</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>Thanksgiving Break (Academic Holiday-No Class)</td>
<td>• NO READINGS</td>
<td>No Dues</td>
</tr>
</tbody>
</table>
  1. Leaning log and evaluation essay #2  
  2. Term Project Part C (Resource Collection & Presentation Slides) |
| 16    | Final Project Presentation (Online)           | • NO READINGS                                                              | Due by Midnight, Sun 12/11/2011  
  1. Presentation Peer-review |