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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. 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. Students are expected to do all their graded work independently (unless instructed to do otherwise) and, in general, to engage in ethical behavior regarding academic work. Any evidence of cheating and/or plagiarism will be dealt with immediately per university regulations. For details regarding cheating and plagiarism, please refer to Section 6.4.0-1 of the Student Rights and Responsibilities Handbook (http://www.uky.edu/StudentAffairs/Code/) and Section 6.3 of the University Senate Rules (http://www.uky.edu/USC/Section%20VI.pdf).

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. 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 reading list.

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

4.1. (Online Classes): 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 are no in-class meetings 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. You can expect the course lecture notes will be posted by this class hour and other class-
related activities are scheduled based on this class hour on Saturday. Details about dues are scheduled 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 before Saturday. 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](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 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](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 will have 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 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
“My Grades” is the section 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 9%, 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 (15%)
6.3. Discussion/Participation (10%)
6.4. Learning Log and Evaluation Essay (5%)
6.5. Term Project (30%)
6.6. Final Exam (20%)

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. First, you are to compose 10-15 questions for each week that test what you have learned from the past week. Quizzes are based on the contents of course readings, course notes, and discussion topics. Second, I will collect them all and select the best questions to include in the weekly quiz. For full credit, you must to complete both steps of the quiz assignment. Your questions are to be submitted by Friday at 6pm so that I can use them for the weekly quiz which will be open all day Saturdays and Sundays each week.

6.2. Exercises (15%)
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 (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 topic. A discussion moderator for each week will be assigned to facilitate and summarize the discussions by the end of each week.

6.3. Learning Log and Evaluation Essay (5%)
You are to include an overall review of your learning experience twice a semester (right before Spring break and right before the final exam). For the leaning 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.

6.4. Term Project (30%)
Each person will be assigned to further investigate one of the topics from our class topics. Your main job is to create a resource link (Wiki or personal webpage) 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 February.

6.5. Final Exam (20%)
The final exam will be administered online through Blackboard courseware between 10am and 12:30pm on Saturday, May 1, 2010. More detailed information about the exam will be given later. It is very important to keep a secure Internet connection while taking the exam. It is highly preferred to use DSL or a high-speed Internet connection. You should report any unexpected problems to me immediately, if they occur. A failure to do so may cause loss of points.

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 the file name.

(ex. For quiz questions: Question1LastnameFirstname.doc,
For exercises; Exercise1LastnameFirstname.doc
For term project: TermprojectLastnameFirstname.doc,
For presentation Slides: PresentationLastnameFirstname.doc, and
For learning Evaluation Essay: ReadingLearningLastnameFirstname.doc)

8. Late 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.)

9. Special Considerations:
If you have a disability that requires special testing accommodations or other modifications, please notify both the instructor and Disability Resources and Services by the second week of the term. You may be asked to provide documentation of your disability to determine the appropriateness of accommodations. To notify Disability Resources and Services, contact and visit the UK Disability Student Resource Center at http://www.uky.edu/StudentAffairs/DisabilityResourceCenter/
10. **Course Calendar:**

- In this course calendar, 16 weeks are planned, including 13 individual course topics, 1 Spring break (academic holiday), 1 presentation (online), and 1 Final exam (online).
- Each Saturday between 10 am and 12:30 pm are regular class hours for this class. The regular classes are scheduled for posting class lecture notes, assignment dues, exams, etc. No online show-up is required for the regular class lesson.
- In addition to each week’s course topic (along with subtopics), this calendar provides an overview of the entire schedule of assignment due dates. The Note column gives you important due dates and relevant information. Minor changes can be made if necessary.
- Four assignments, including 10 quizzes, 10 discussions, 2 learning log/evaluation essays, 3 exercises, and three due dates for the final projects are scheduled in this calendar. For the quiz assignments, there are two due dates. You are to submit quiz questions by each Friday 6pm and you are to take a quiz by each Sunday midnight.
- One online presentation for the final project and one final exam are also scheduled in this calendar.
- It is highly advisable to study individual topics by reading textbook chapter(s) and assigned article(s) before you study the Blackboard course lecture notes.

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Reading (Textbook and Articles)</th>
<th>Note (Due dates and Exam)</th>
</tr>
</thead>
</table>
| 1    | 1/16  | (Lesson 1) -Course logistics features -Overview of MI field | • Shortliffe et al. (2006) Ch: 1  
| 2    | 1/23  | (Lesson 2) -Medical Data, Information, and Knowledge | • Shortliffe et al. (2006) Ch: 2  
1. Student Contract  
2. Introduction of yourself (Post it to Discussion Board)  
3. Discussion #1  
4. Quiz questions #1 (about Overview of MI field)  
5. Quiz #1 between 6a.m. Saturday, 1/23/2010 and midnight Sunday, 1/24/2010                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                            |
| 3    | 1/30  | (Lesson 3) - Essential Concept for Medical Computing | • Shortliffe et al. (2006) Ch: 5 & Ch.6  
1. Your choice of topic for a term project  
2. Discussion #2  
3. Quiz questions #2 (about Medical Data, Information, and Knowledge)  
4. Quiz #2 between 6 a.m. Saturday, 1/30/2010 and midnight Sunday, 1/31/2010                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                            |
<table>
<thead>
<tr>
<th>Lesson</th>
<th>Date</th>
<th>Topic</th>
<th>References</th>
<th>Due by</th>
<th>Notes</th>
</tr>
</thead>
</table>
| 4      | 2/6   | (Lesson 4) - Controlled Vocabulary: Standards in Medicine | Shortliffe et al. (2006) Ch: 7  
2. Quiz questions #3 (about Essential Concept for Medical Computing)  
3. Quiz #3 between 6 a.m. Saturday, 2/6/2010 and midnight Sunday, 2/7/2010 |
| 5      | 2/13  | (Lesson 5) - Medical Decision Making | Shortliffe et al. (2006) Ch: 3 and Ch: 20  
2. Term Project Part A (Resource Bibliography)  
3. Quiz questions #4 (about Controlled Vocabulary: Standards in medicine)  
4. Quiz #4 between 6 a.m. Saturday, 2/13/2010 and midnight Sunday, 2/14/2010 |
| 6      | 2/20  | (Lesson 6) - Electronic Medical Record (EMR) | Shortliffe et al. (2006) Ch: 12  
2. Quiz questions #5 (about Medical Decision Making)  
3. Quiz #5 between 6 a.m. Saturday, 2/20/2010 and midnight Sunday, 2/21/2010  
4. Exercise #1 |
| 7      | 2/27  | (Lesson 7) - Information Retrieval System | Shortliffe et al. (2006) Ch: 19  
2. Quiz questions #6 (about Electronic Medical Record (EMR))  
3. Quiz #6 between 6 a.m. Saturday, 2/27/2010 and midnight Sunday, 2/28/2010 |
2. Discussion #7  
3. Quiz questions #7 |
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<tr>
<th>Week</th>
<th>Date</th>
<th>Lesson</th>
<th>Reading</th>
<th>Discussion</th>
<th>Quiz</th>
<th>Terms Project</th>
<th>Notes</th>
</tr>
</thead>
</table>
| 9    | 3/13 | (Lesson 9) Bioinformatics | Shortliffe et al. (2006) Ch: 22  
1. Discussion #8  
2. Quiz questions #8 (about Evidence Based Medicine)  
3. Quiz #8 between 6 a.m. Saturday, 3/13/2010 and midnight Sunday, 3/14/2010  
4. Exercise #2 | | |
| 10   | 3/20 | Spring Break (Academic Holiday: NO CLASS) | NO READINGS | NO QUIZ  
NO DISCUSSION | | | |
| 11   | 3/27 | (Lesson 10) Biomedical Imaging | Shortliffe et al. (2006) Ch: 9 and Ch: 18  
1. Discussion #9  
2. Quiz questions #9 (about Bioinformatics)  
3. Term Project Part B (Resource Annotation)  
4. Quiz #9 between 6 a.m. Saturday, 3/27/2010 and midnight Sunday, 3/28/2010 | | |
| 12   | 4/3  | (Lesson 11) Consumer Health Informatics  
Telemedicine | Shortliffe et al. (2006) Ch: 14  
1. Discussion #10  
2. Quiz questions #10 (about Biomedical Imaging)  
3. Quiz #10 between 6 a.m. Saturday, 4/3/2010 and midnight Sunday, 4/4/2010 | | |
Yasnoff WA, Humphreys BL, Overhage JM, Detmer DE, Brennan PF, Morris RW, etc. | Due by 6 p.m., Fri, 4/9/2010  
1. Exercise #3 | | |
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<tbody>
<tr>
<td>14</td>
<td>4/17</td>
<td><strong>(Lesson 13)</strong> -Health Informatics Ethics and Education</td>
<td>Review week: No dues</td>
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<td></td>
<td></td>
<td>• Shortliffe et al. (2006) Ch: 10 and Ch: 21</td>
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<tr>
<td>15</td>
<td>4/24</td>
<td>Final Project Presentation (Online)</td>
<td>Due by 6 p.m., Fri, 4/23/2010</td>
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<td>• NO READINGS</td>
<td>1. Term Project Part C (Resource Collection &amp; Presentation Slides)</td>
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<td>2. Presentation: Further notice will be given.</td>
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<tr>
<td>16</td>
<td>5/1</td>
<td>Final Exam (Online: between 10 a.m. and 12:30 p.m. on Saturday 5/1/2010)</td>
<td>Due by 6 p.m., Fri, 4/30/2010</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• NO READINGS</td>
<td>1. Learning log and evaluation essay #2</td>
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