

**LIS/CJT639 (Sec201)**  
**Introduction to Medical Informatics (Web-based course)**  
**Spring 2007**

School of Library Information Science  
University of Kentucky

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or by appointment  
**In-Class Meeting: 2:30P -5P, Monday, April 23, 2007**  
  
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**NOTE: This syllabus is subject to change (minor change). Last modified: January 10, 2007**

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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 health information professions.

### **2. Expectations/General Course Policy:**

2.1. This course is an introductory course to teach you interdisciplinary area of medical informatics. You will be using what you have learned in general reference and retrieval classes like LIS601 and LIS602. I assume you have taken these courses and have general backgrounds about reference sources and services. As you know, this is a graduate-level course which requires for you to study at least 9 hours 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 of 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 VI.pdf>) for details.

2.3. The challenges related to teaching a course on-line are non-trivial. In particular, it requires that students make serious efforts to keep up with readings and work, take advantage of the communication mechanisms and other tools built into the Blackboard courseware, and to continually self-assess themselves to ensure they 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. Readings:**

- Shortliffe, E. H., & Perreault, L. E. (Eds.). (2000). *Medical Informatics: Computer Applications in Health Care and Biomedicine* (2nd ed.). New York: Springer.
- Van Bommel, J. H., & Musen, M.A. (Eds.). *Handbook of Medical Informatics*. Bohn: Springer. Retrieved January 7, 2007, from [http://www.mieur.nl/mihandbook/r\\_3\\_3/toc/toc.htm](http://www.mieur.nl/mihandbook/r_3_3/toc/toc.htm).
- Other readings as assigned. Articles, book sections, online sources, etc.

Readings will supplement and enhance the topics covered. The assigned readings are necessary for lecture notes, discussion, and Review Activities assignments prior to individual lessons. The book chapters and article readings should be something interesting that you think will help you

understand more about medical informatics. According to individual topic, the required readings will be assigned and announced at least one week prior to each week.

#### **4. Online and Offline Class meetings:**

4.1. Although we will not have face-to-face meeting each week, I assume this online class is in session every Monday unless further/special notice is given. The course will be taught through a series of individually designed weekly lessons, each of which relates to a specific area in science and technology resources and services. Each weekly lesson will consist of one to four learning units and it will be posted on Blackboard Course Document Folder before SUNDAY MIDNIGHT. Therefore, it is very important to be familiar with Blackboard Courseware (please check Blackboard homepage to find out further information available at <http://elearning.uky.edu/index.html>)

4.2. There will be only ONE IN-CLASS MEETING for this class for final project presentation on Monday, April 23, 2007 between 2:30P and 5P. Further notice and information about project and presentation will be provided.

#### **5. The Blackboard Course Page:**

The Blackboard course is a main course tool for this class and you will be required to keep a stable Internet connection to keep up 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 general understanding of individual course folder. Please consult with me or UK Blackboard Student Help and Support available at <http://www.uky.edu/Blackboard/student.html>.

##### *5-1. Announcements*

These appear first whenever the student logs in to the class site. Important announcements may appear at any time during the course and students should log in no less often than every other day.

##### *5-2. Course Information*

This syllabus and the course related materials can be found here. Links to mid-term and final exam will be given in this folder.

##### *5-3. Staff Information*

I can communicate with students between classes in several ways. Most questions about homework and material availability should be posted to the appropriate Discussion Board. For private matters, students can communicate with me through email at [sujinkim@uky.edu](mailto:sujinkim@uky.edu). Students can communicate with me during office hours (Tuesdays, between 3:30p and 5:30p). Synchronous conversation by telephone or private online chat through Blackboard, during my office hour (or by appointment) is also available if needed.

##### *5-4. Course Documents*

This section of the course site will have documents and folders of lecture notes, readings, source lists, web links, PowerPoint presentations and other material students will need for this course. Lecture Notes for each week will be provided either in Microsoft PowerPoint slides (PPT) format or in HTML format with some guidelines.

##### *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). 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 the title of the file and in the document itself (preferably in the header or footer) if you want credit for your work. For instance, one can see that a file named SujinKimAssignment1.doc is student Sujin Kim's assignment 1. I have no idea what a file labelled Assignment 1.doc is!

#### *5-6. Communication*

(NOTE: Any official announcements will be posted on Blackboard Announcement).

If you have questions (or matters) during the course of the semester, you have a few options for communicating with the instructor or other classmates. First, 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 each student can share the expertise or experience they have with the rest of the class.

Second, you may also wish to contact the instructor directly ([sujinkim@uky.edu](mailto:sujinkim@uky.edu)). Given that I am teaching three courses, please understand that it may take up to 48 hours to respond to some emails, although most will be responded to before then. If several students have emailed similar concerns, I may try to address these with one email to the entire class.

Third, I will utilize synchronous communication such as "chat" and "office hours" available through Blackboard. Any of these sessions may be recorded and the transcript posted here. Read the User Manual (Under "Tools") to learn how to use these! Online office hours and live chat will be available between 3:30p and 5:30p every Tuesday unless further/special notice is given.

Students can also drop by my office located in 518K, King Library during my office hour or by appointment. You can also reach me at 859-257-8657. However, emailing is better than telephone contact.

#### *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 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. The User Manual is very important. Use it!

### **6. Grading and Assignments:**

- Mid-term and Final exams (30%)
- Review Activities: 7 Quizzes and 2 Exercises (20%)
- Class Participation and Learning Essay (10%)
- Final Project: Review of Literatures and Presentation (40%)

Grading Scale:

- 90-100     A

- 80-89.9 B
- 70-79.9 C
- 69.9 or less Fail

*6-1. Mid-term and Final exam (30%)*

Mid term and final exam will be administered online through Blackboard courseware between 2:30P and 5P on Monday, March 5, 2007. More detail information will be given in later part of class. It is very important to keep a secure Internet connection while taking exams. It is highly preferred to use DSL or high-speed Internet connection. You should report any unexpected problems immediately, if occurs. The failure to do so may causes the loss of your point.

*6-2. Review Activities: 7 Quizzes and 2 Exercises (20%)*

Either weekly quiz or exercise will be posted after each lesson. Further detail will be announced.

*6-3. Class Participation/Learning Evaluation Essay (10%)*

To get full credit for class participation, you are to reply to online discussion to be assigned for individual topics as needed. Discussion topics will be announced in Blackboard Discussion Board. Reply to answer and discuss about the topic given for each week.

For leaning evaluation essay, 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 (due date can be found in course calendar). If you have never thought about yourself as a learner; never studied your learning style, this is an opportunity to begin.

There is not right or wrong way to write the learning evaluation essay. Possible approaches and questions to write this learning evaluation essay for yourself include: what did you discover for yourself?; what experiences made you feel informative about medical informatics?; what obstacles did you face and how did you overcome them?; were you able to observe yourself in the process of learning?; did you identify your learning style?; and did you apply any knowledge and experience to your life experiences outside of formal education. Whatever approaches you choose, I advise you not to wait until the last minute to turn in. Jot down ideas for each week, and be sure to save some critiques from me and your fellow students (if you can collect any). At minimum, your essay should be two double-spaced pages (less than 1000 words) and drop them into the Blackboard Assignment folder.

*6-4. Final Project: Review of Literatures and Presentation (40%)*

This review paper will be based on a topic of your choice related to some way to medical informatics or the health information profession in general. I will give you some topics that you might want to use it for your assignment. This review paper should be approximately 15-20 pages, double-spaced, page numbers on the bottom, center no more than 1.25" margins, a descriptive yet concise title on a separate title page that includes your name. Use a consistent reference style of your choice (e.g. APA writing style preferably), and please use Microsoft Word. Further information will be posted.

**7. Submitting Assignments:**

Assignments should be submitted using the Assignment folder feature through Blackboard courseware. Please use MS Word for written assignments. PLEASE FOLLOW THE FILE NAMING CONVENTION AS INSTRUCTED BELOW. Be sure to include your name on top of inside each assignment as well as file name

- (ex. For Literature Review: LitRev\_LastName\_FirstName.doc;
- For Presentation Slides: Presentation\_LastName\_FirstName.doc
- For Learning Essay: LearnigEssay\_LastName\_FirstName.doc;
- For Exercise: Exercise1\_Lastname\_FirstName.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 time stamp provided by Blackboard. (NOTE: Only assignments submitted no later than one week after original due date will 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, 13 lessons are listed. For each lesson, subtopics are given for each week. *Note* column gives you important due dates and relevant information. Each week's readings are for PROSPECTIVE STUDY before you study each lecture notes. Nine Review Activities (7 quizzes and 2 exercises) are assigned for your RETROSPECTIVE STUDY after you study each lesson. Nine discussions are assigned for you to think about after you study each lecture notes. The calendar is subject to change (minor change).

Date	Topic	Note
1/15	<b>Lesson 1:</b> -Course logistics, -Blackboard Features, -Intro. to Medical Informatics and Healthcare	<ul style="list-style-type: none"> <li>● Course syllabus and Blackboard course homepage should be fully understood!</li> </ul>
1/22	<b>Lesson 2:</b> -Medical Data, Information, and Knowledge	Due by: 11:59pm, Sunday, 1/21/2007 <ul style="list-style-type: none"> <li>● Student Contract</li> <li>● Introduction to yourself</li> </ul>
1/29	<b>Lesson 3:</b> -Electronic Medical Record (EMR)	Due by: 11:59pm, Sunday, 1/28/2007 <ul style="list-style-type: none"> <li>● Review Activity #1: Quiz (Lesson 2)</li> <li>● Discussion #1 (Lesson 2)</li> </ul>
2/5	<b>Lesson 4:</b> -Essential Concept for Medical Computing	Due by: 11:59pm, Sunday, 2/4/2007 <ul style="list-style-type: none"> <li>● Review Activity #2: Quiz (Lesson 3)</li> <li>● Discussion #2 (Lesson 3)</li> </ul>
2/12	<b>Lesson 5:</b> -Controlled Vocabulary:	Due by: 11:59pm, Sunday, 2/11/2007 <ul style="list-style-type: none"> <li>● Review Activity #3: Quiz (Lesson 4)</li> </ul>

	Standards in Medical Informatics	<ul style="list-style-type: none"> <li>● Discussion #3 (Lesson 4)</li> <li>● Final Project Part A (Topic and Bibliography)</li> </ul>
2/19	<b>Lesson 6:</b> -Information Retrieval System I	Due by:11:59pm, Sunday, 2/18/2007 <ul style="list-style-type: none"> <li>● Review Activity #4: MeSH (Lesson 5)</li> <li>● Discussion #4 (Lesson 5)</li> </ul>
2/26	<b>Lesson 7:</b> -Information Retrieval System II	Due by:11:59pm, Sunday, 2/25/2007 <ul style="list-style-type: none"> <li>● NO REVIEW ACTIVITY</li> <li>● NO DISCUSSION</li> </ul>
3/5	Mid-Term (NO CLASS LESSON)	2:30P-5P, Monday, 3/5/ 2007 (Blackboard exam)
3/12	Spring Break (No class)	<ul style="list-style-type: none"> <li>● NO REVIEW ACTIVITY</li> <li>● NO DISCUSSION</li> </ul>
3/19	<b>Lesson 8:</b> -Bioinformatics	Due by:11:59pm, 3/18/2007 <ul style="list-style-type: none"> <li>● Review Activity #5: PubMed (Lesson 6 &amp; 7)</li> <li>● Discussion #5 (Lesson 6 &amp; 7)</li> </ul>
3/26	<b>Lesson 9:</b> -Medical Decision Making	Due by:11:59pm, 3/25/2007 <ul style="list-style-type: none"> <li>● Review Activity #6: Quiz (Lesson 8)</li> <li>● Discussion #6 (Lesson 8)</li> </ul>
4/2	<b>Lesson 10:</b> -Evidence Based Medicine I	Due by:11:59pm, Sunday, 4/1/2007 <ul style="list-style-type: none"> <li>● Review Activity #7: Quiz (Lesson 9)</li> <li>● Discussion #7 (Lesson 9)</li> </ul>
4/9	<b>Lesson 11:</b> -Evidence Based Medicine II	Due by:11:59pm, Sunday, 4/8/2007 <ul style="list-style-type: none"> <li>● Review Activity #8: Quiz (Lesson 10)</li> <li>● Discussion #8 (Lesson 10)</li> <li>● Final Project Part B (Review Paper Due)</li> </ul>
4/16	<b>Lesson 12:</b> -Consumer Health Informatics and Reference Resources	Due by:11:59pm, Sunday, 4/15/2007 <ul style="list-style-type: none"> <li>● Review Activity #9: Quiz (Lesson 11)</li> <li>● Discussion #9 (Lesson 11)</li> <li>● Learning Essay Due</li> </ul>
4/23	<b>Lesson 13:</b> -Final Project Presentation (IN-CLASS MEETING)	Due by:11:59pm, Sunday, 4/22/2007 <ul style="list-style-type: none"> <li>● NO REVIEW ACTIVITY</li> <li>● NO DISCUSSION</li> <li>● Final Project Part C (Paper and Presentation Due)</li> <li>● Meeting place will be announced.</li> </ul>
4/30	Final Exam (NO CLASS LESSON)	2:30P-5P, Monday, 4/30/2007 (Blackboard exam)

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