SCHOOL OF INFORMATION SCIENCE
UNIVERSITY OF KENTUCKY

LIS 630 Information Retrieval
Syllabus – subject to change
Fall 2014: August 27 – December 19

Instructor: Soohyung Joo
Office: Little Library #352
Phone: (859) 257 – TBA
Office hour: 10am – 12pm every Tuesday & Thursday or by appointment
e-mail: soohyung.joo@uky.edu

COURSE FORMAT
This is an online course, which requires asynchronous class discussion via Blackboard to facilitate a sense of community. Blackboard system will also be used for making course announcements, distributing reading materials, submitting assignments and posting grades.

DESCRIPTION
An overview of information retrieval including concepts, approaches, evaluation methods, and issues (3 credits)

COURSE DESCRIPTION
This course examines three major categories of issues related to information retrieval. First, it is concerned with the range of current information retrieval systems and techniques or processes involved in their construction and application, including database structures, indexing principles, information retrieval models, and interfaces. Second, the course establishes how to describe and analyze the dynamics of users’ information needs and their searching strategies. Third, students will be equipped with critical and analytical skills related to selecting appropriate information retrieval systems, databases, resources for assistance, query formulation, and other information retrieval techniques. Special attention is also given to the evaluation of IR systems.

OBJECTIVES
Upon completion of the course, students will be able to:
1. Describe and critically compare fundamental characteristics of information retrieval systems, their interfaces, and other components;

2. Describe the key concepts and theories in information retrieval;

3. Apply information retrieval theories and models to analyze and evaluate information retrieval systems;

4. Analyze and evaluate different types of IR systems in terms of their interfaces, performance, and other components.

**METHOD**

Lecture, Discussion, Exercise (Students with special needs should contact the instructor as early as possible for accommodations)

**TEXTBOOK and READINGS:**

- No Required Textbook
- Weekly readings will be posted on Blackboard.

**PREREQUISITE**

- LIS 636: Foundations of Information Technology (or LIS 637: Information Technology)
- Basic understanding of HTML and algebra

**TECHNOLOGY REQUIREMENTS**

- You will need access to an appropriate computer with a broadband Internet connection. Note that it is your responsibility to ensure you have a reliable computer for use during the course. Ongoing “computer problems” will not be considered a legitimate excuse for missing course activities.
- All UK students are eligible for a one time free download of Office from the UK download site (https://download.uky.edu); you can get help with this process from the UK helpdesk (859.257.1300; http://www.uky.edu/IT/CustomerService/).
# COURSE SCHEDULE

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<th>Week</th>
<th>Dates</th>
<th>Topic</th>
<th>Assignment</th>
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<tr>
<td>1</td>
<td>8/27 – 8/31</td>
<td>Course overview</td>
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<tr>
<td>2</td>
<td>9/1 – 9/7</td>
<td>Structured Data and IR (1)</td>
<td>Exercise 1 (Due: Sep. 8)</td>
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<td>3</td>
<td>9/8 – 9/14</td>
<td>Structured Data and IR (2)</td>
<td>Exercise 2 (Due: Sep. 15)</td>
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<td>4</td>
<td>9/15 – 9/21</td>
<td>Semi-structured Data and IR (1)</td>
<td>Exercise 3 (Due: Sep. 22)</td>
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<td>5</td>
<td>9/22 – 9/28</td>
<td>Semi-structured Data and IR (2)</td>
<td>Exercise 4 (Due: Sep. 29)</td>
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<td>6</td>
<td>9/29 – 10/5</td>
<td>Text Retrieval (1) - Search engine architecture</td>
<td>Topic selection (Due: Oct. 5)</td>
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<td>7</td>
<td>10/6 – 10/12</td>
<td>Text Retrieval (2) - Text processing and indexing</td>
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<td>8</td>
<td>10/13 – 10/19</td>
<td>Text Retrieval (3) - Information retrieval models</td>
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<td>9</td>
<td>10/20 – 10/26</td>
<td>Online Searching I - Online databases and Web search engines</td>
<td>Exercise 5 (Due: Oct. 27)</td>
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<td>10</td>
<td>10/27 – 11/2</td>
<td>Online Searching II - OPACs and Digital libraries</td>
<td>Exercise 6 (Due: Nov. 3)</td>
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<td>11</td>
<td>11/3 – 11/9</td>
<td>IR Evaluation</td>
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<td>12</td>
<td>11/10 – 11/16</td>
<td>Search Interface Design (1)</td>
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<td>13</td>
<td>11/17 – 11/23</td>
<td>Search Interface Design (2)</td>
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<td>14</td>
<td>Thanksgiving Break</td>
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<td>15</td>
<td>12/8 – 12/14</td>
<td>Multimedia IR/ Test</td>
<td>Term Paper (Due: Dec. 15)</td>
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# EVALUATION COMPONENTS

<table>
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<tr>
<th>Evaluation</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>(1) Hands-on Exercises</td>
<td>30%</td>
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<tr>
<td>(2) Final Term Paper</td>
<td>40%</td>
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<tr>
<td>(3) Test</td>
<td>10%</td>
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<tr>
<td>(4) Participation</td>
<td>20%</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
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(1) **Exercises (30%)**
Six hands-on exercises (Each exercise: 5 points)

(2) **Final term paper (40%)**
Please see the attached instruction.

(3) **Test (10%)**
There will be an 90-minute test in Week 15. The test will consist of true/false, multiple choice, and short answer questions.

(3) **Class participation (20%)**
Participation in class discussion is expected of all students. Such discussions will analyze, criticize and synthesize the readings, lectures and relevant experiences. Students need to view/read the slides as well as the readings for each week before you participate in the discussion. You also need to read other students’ postings.

Students are encouraged to communicate with the instructor and other students within the framework of online courseware. Participation is an important part of the learning experience and is a factor in assessing class performance. The instructor may be reached by e-mail or in person during office hours or by appointment.

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**INSTRUCTION FOR CLASS DISCUSSION**

**Discussion Forums**
For each week, we are going to have one forum for class discussion: In the forum, you can discuss an important issue of each week’s topic posted by the instructor as well as any questions, ideas or thoughts you have regarding the topic, slides, readings or exercises for that week.

**Requirements for participation**
To get full credits for class participation, each student needs to participate in at least twice but no more than five times in each of the forums. You can post up to five times in each forum, but your credits will be deducted if you post more than five times in one of the forums unless you are requested to answer questions by your classmates or the instructor. More important, each student needs to read/view the required readings, class slides, and other students’ postings, before posting her/his messages.

**Instructions for constructing messages**
To get full credits for class participation, the quality of the message each student posts on the discussion forum is also considered. To make the discussion more efficient, each message you post on the forum is limited to 500 words. More important, you need to relate the content to your own context, experiences, and other readings.

**Due Date**
Each week’s forums will be locked (you can view the forums, but cannot post any messages) at noon the Monday (at 12:00 pm EST) after that week.
COURSE POLICIES

Academic integrity
According to Senate Regulation 6.3.1: “All academic work, written or otherwise, submitted by students to their instructors or other academic supervisors, is expected to be the result of their own thought, research, or self-expression. In cases where you feel unsure about a question of plagiarism involving your work, you are obliged to consult the instructors on the matter before submission.” For specific information regarding the University’s code and regulations on plagiarism and cheating, visit:

http://www.uky.edu/StudentAffairs/Code/
http://www.uky.edu/StudentAffairs/Code/part2.html
http://www.uky.edu/Ombud/Plagiarism.pdf

Diversity, Assessment, and Technology
All UK professional education programs address and affirm the value of diversity in education, the use of technology to support all aspects of instructional programming, and the importance of attaining high levels of skill in assessing the outcomes of instruction. The course content and the course environment are dedicated to an understanding of and acceptance of all people. Disparaging remarks in relation to others’ ethnic or racial background, sex, sexual orientation, age, disability, socioeconomic background, etc., will not be tolerated.

ADA SERVICES
If you have a documented disability that requires academic accommodations in this course, please make your request to the University Disability Center. The Center will require current disability documentation. When accommodations are approved, the Center will provide me with a Letter of Accommodation which details the recommended accommodations. Contact the Disability Resource Center, Jake Karnes, Director at 859-257-2754 or jkarnes@email.uky.edu. The Center is located in the Alumni Gym, Room 2, at the corner of Avenue of Champions and South Limestone Street (next to the Student Center and across South Limestone Street from Kennedy Bookstore).

COURSE RESOURCES

Blackboard
We will use the Blackboard course management system to facilitate the class. Please visit http://www.uky.edu/Blackboard/ to learn about this system and the login requirements. You should be automatically added to the Blackboard roll; if this goes as expected, you will not have to sign up manually for the course.
Blackboard help is available online through the Blackboard wiki website (http://wiki.uky.edu/Blackboard/Wiki%20Pages/Home.aspx), and from the UK helpdesk.
(859.257.1300; http://www.uky.edu/IT/CustomerService/). The helpdesk is also able to assist
with all general computing issues (file download, browser updates, etc.).

Distance Learning Library Services
- At UK, students in online courses have available Distance Learning Library Services. The link
to DLLS is: (http://www.uky.edu/Libraries/DLLS) Here is some of the information at that site:
- Phone: (859) 257-0500, ext. 2171; 2nd Phone: (800) 828-0439; Fax: (859) 257-0505 E-mail:
dllsسهل@email.uky.edu ; Location: 2-2, north wing, William T. Young Library 0456
- Distance Learning Librarian: Carla Cantagallo

Writing Center
- UK Writing Center offer both face-to-face and online consultation. And they also provide e-
Tutoring consultation, via which you can send your work as an attachment). Details can be
found here: http://ukwrite.wordpress.com/