LIS638/CJT638-201 Internet Technologies and Information Services
Spring 2012 (Online section)
Instructor: Professor Joseph Miller
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Office hours: MW 1:00-4:00 TR 10:00-12:00, & by appointment (appointments encouraged*)

Course Description: A course examining the development and evolution of the Internet and Web, examining network protocols (TCP/IP) and Internet client/server architecture; web page design, creation, and evaluation; the markup, styling, and scripting languages (HTML, XML, CSS, JS, PHP) used for web development as well as the tools supporting web 2.0 and beyond. Topics include the semantic web, the mobile web, and search engine technologies used for Internet information retrieval. Prereq: LIS 636 or consent of instructor. (Same as CJT 638). 3 Credits.

Course Objectives
- To understand the historical background and evolution of today’s Internet;
- To examine network topologies and models (OSI model);
- To develop an understanding of the technological foundations of the Internet and core Internet protocols (TCP/IP, SMTP, FTP, Telnet, ICMP, RSS, and HTTP);
- To understand client/server relationships in the context of the Internet and intranets;
- To identify important Internet content and graphics formats and understand the access issues they present users and the software they require;
- To develop a framework for evaluating web resources and designs;
- To develop advanced web publishing and design skills using the Hypertext Markup Language (HTML);
- To examine web enhancements possible with web programming techniques (ASP, PHP and JavaScript);
- To examine other markup beyond HTML, including DHTML, XHTML, and XML for information delivery and data structuring;
- To develop an understanding of the Internet in the context of information storage and retrieval. Discussion will include an overview of IR issues, how searchable Internet indexes are constructed, the limitations of search engines, and future trends.
- To examine Web 2.0, cloud computing, and the mobile web in the context of library services.
- To consider current and future web issues and trends, especially as they pertain to LIS.

*Note: office hours reflect times I am usually available for consultation; however, unforeseen commitments (meetings, etc.) often arise, so appointments are encouraged. Also, additional “online” hours will be posted in Blackboard.

Course Readings
The textbook is Miller, Joseph B. (2009) Internet Technologies and Information Services. Westport, CT: Libraries Unlimited, ISBN 978-1-59158-625-8. TEXTBOOK NOTE: I do not personally profit from assigning this text. University of Kentucky policy asks authors who require their text for a course to track and donate resulting royalties to avoid any appearance of a conflict of interest. To comply with this policy, I ask each student who purchases a new (not used) copy of this text to inform me via an email message. Please state whether you bought the hardback or paperback edition. Royalties generated by its use in our class will be donated to the SLIS for either scholarships or other School purposes.

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Grading
The grade for this course will be based on the following (percentages approximate):

- Module quizzes, 7 @ 20 points each = 140 points (44%)
- Four projects = 80 points (25%)
- Course project = 65 points (22%)
- Class participation = 35 points (9%)
- Total: 320 pts.

Grading Scale
- 100-90% (288-320 pts) = A
- 89 - 80% (256-287 pts) = B
- 79 - 70% (224-255 pts) = C
- <70% (<224 pts) = E

Participation
To earn the 35 points for participation, you must make at least two contributions to the course for each module (5 points per module). You can contribute to the course two SUBSTANTIVE contributions to a discussion forum, blog, or wiki per module. I will create a forum and/or blogs for each module and post some initial discussion questions. For Module 1, one of these posts must be a bio post to the blog created for that purpose.

Generally, a qualifying participation post is one that represents a meaningful contribution to a discussion question, begins a new original thread with background on a topic related to the module content, or offers significant explanatory help with a peer question. A qualifying wiki post is one that defines or explains a module topic or adds significant information to another entry. A substantive contribution is defined here as 150 or more words of thoughtful content. Simply posting a question to a forum, stating agreement with another comment, or making a minor edit to an existing wiki page do not qualify as substantive contributions. In addition, you must make your contributions to each module during the time the module is active; you cannot make advance posts before a module has started or post “make up” contributions after a module has ended – forums will open and close with each module. NOTE that all course content questions must be initially posted to a forum; I will usually refer all direct content questions you send to me to a forum if they have not yet appeared there. I will also wait for peer responses before answering a question in a forum except for any urgent course matter that requires my immediate intervention.

Project Summary
Project 1 (20 points): Internet protocols, social networking, and web apps.
Project 2 (20 points): HTML, and graphics manipulation techniques.
Project 3 (20 points): Web scripting and style sheets
Project 4 (20 points) XML markup and XML Schema

Course Project: (65 points) Students will create a web site on a topic or subject area selected from a list provided by the instructor or on some other approved topic. You will design, construct, and upload a set of linked web pages that will be the content equivalent of a 10-12 page paper. The site will be evaluated on design and layout, the accurate use of HTML and CSS styles, image acquisition and manipulation techniques, successful construction of document objects, formation of relative and absolute hypertext links, scripts for interactivity. A grading rubric will be provided in advance.
General Overview of Course Modules

Module 1: Introduction (January 11-25)
Introduction to the Internet: Development and Structure
Network Technologies: Basic network technologies and the OSI model
Connection technologies
Miller, Chapters 1, 2, 3

Module 2: Packets and Protocols, Clients and Servers (January 26-February 15)
Project 1 due February 15
TCP/IP: Comparison of SLIP, PPP, and Ethernet access.
Protocols of the Internet--TCT/IP, ping, SMTP, Telnet, TN3270, FTP, gopher and HTTP.
Client/server architecture and the web.
Web 2.0 technologies: RSS, blogs, wikis.
TCP/IP security issues
Miller, Chapters 4, 5, 6

Module 3: Web design and publishing (February 16-March 7)
Project 2 due March 7
Graphics primer.
Web design, HTML and Web authoring
Content management systems
Unix review
Miller, Chapters 7, 8, 9

Module 4: Web programming and CSS (March 8-28)
Project 3 due March 28
Enhancing web interactivity with programming techniques (JavaScript and PHP)
CSS and styles
Other development frameworks
Miller, Chapters 10, 11

Module 5: XML Technologies (March 29-April 4)
Project 4 due April 6
XML technologies
DTD and XML Schema Definition
Miller, Chapter 12

Module 6: Internet content and Information Retrieval (April 5-18)
Internet content and formats - file types found on the Internet
Evaluation of web resources
IR issues and search engine technologies; Google details and Page Rank.
Miller, Chapters 13, 14, 15

Module 7: Course wrap up (April 19-27)
Course project due April 27
Libraries and the Internet, past and future.
Chapter 16
Policies and resources for LIS638
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.
BlackBoard help is available online through the BlackBoard wiki website (http://wiki.uky.edu/Blackboard/Wiki%20Pages/Home.aspx), and from the UK helpdesk (859.218.HELP). The helpdesk is also able to assist with all general computing issues (file download, browser updates, etc.)

**SWEB**
We will use the SWEB system for many project activities; you should go to sweb.uky.edu to make sure your access is working correctly. Issues about sweb should be directed to help@sweb.uky.edu.

**Adobe Connect**
Adobe Connect, a web conferencing tool, is available to the class. You can access a virtual meeting room via an URL that I will provide. I require one initial meeting arranged during the first module of the course to ensure everyone is comfortable with this system (see module 1 for details). I will use Connect for some virtual office hours and for help sessions as needed.

**Attendance**
There are no face-to-face requirements for this class. However, everyone is expected to participate and be engaged. To satisfy the “online attendance” policy, you MUST login to the course a minimum of once a week throughout the course. To be tracked as a login, you must enter our course shell and open some course item. Failure to meet the minimum login requirements for any week (except for spring break week) will result in zero participation points for that module. Failure to login for two consecutive or non-consecutive weeks during the semester will result in the loss of all course participation points. Failure to login for three or more consecutive or non-consecutive weeks will result in a grade of E.

**Late assignments**
Assignments are due at on the dates specified in our calendar; late assignments will have an automatic 10% deduction if turned in late up to 48 hours past the due date. Assignments submitted beyond 48 hours late will not be accepted unless there is a documented extenuating circumstance such as an illness or family emergency. Assignments will be turned in by one of three means as directed in each project including an assignment drop box, direct email, and by uploads to the sweb host. Each assignment will have directions about the appropriate way to submit it. Projects must be submitted as specified to be accepted.

**Quizzes**
All quizzes are intended to be “closed book/closed notes.” You are therefore expected to do all quizzes without outside help and without consulting supporting materials. Quizzes will be posted by noon on the day the module ends and will be available until midnight of the following day (a 36-hour window). Most modules end at NOON on Wednesdays; however, there are exceptions due to spring break and the varying time allotted to each module. Access to a quiz beyond the 36-hour window requires a documented excuse such as a serious illness or family emergency. Technical problems can occur with Blackboard quizzes and will be addressed on a case-by-case basis. It is your responsibility to keep track of all quiz and project deadlines – “I forgot” is not considered a valid excuse for missing a quiz or project. Quizzes will be module specific. You will not have a final exam. Note that:

- Quizzes are timed events; you will know how many and types of questions you have and how long has been allowed for the entire quiz. They are presented one question at a time with no backtracking permitted. Blackboard can be slow, and it will permit you to go “overtime” but if you do go over the allotted time, you should email me with an explanation of the issue that you encountered that caused you to go overtime.
• Quizzes will cover material from that module, which includes lectures, projects, assigned readings, and ANY relevant forum discussions.

**Course Content Help**

I will try to assist you as much as possible with this online experience. Course content support is accomplished by several means (see above for BlackBoard help):

• Your peers: Discussion forums will be used to facilitate group discussion and serve as the place all content questions will be addressed. **ALL** content related questions about course topics and projects must go out to a discussion forum for that module first before expecting me to respond to a direct email (except for course structural issues such as any missing materials, etc.). If you have a question, it is likely that others would benefit from the discussion of it. I will be participating in the forums to answer questions that cannot be resolved through peer discussion, but I expect you to try to help each other in this online format just as you would in a face-to-face class discussion.

• One-on-one help through email consultation is available when needed beyond the forums. I will respond within 24 hours (with the possible exception of questions on weekends and holidays where a response could be delayed until the start of the week).

• Adobe Connect web conferencing sessions can be arranged.

• Face-to-face help: I can always schedule a F2F meeting with you individually or with small groups.

• Online sources: many tutorials have been pointed to on the web as well as the UK EVC training site.

**Email**

It is vital that we can depend on effective email communication. I ask that you follow up if you have not had a response from me within a reasonable period (I usually will respond within 24 hours). You can always leave me voicemail or post a note to a forum that marked to my attention. Email will be our primary one-to-one communication channel and I expect you to check your email frequently. Also, to help me manage the volume of mail I receive, please include “638-201” within your subject line of course related correspondence to me.

**Plagiarism and Cheating**

Plagiarism and cheating will not be tolerated. The University of Kentucky has established rules concerning these issues. You can review the University guidelines and consequences at [http://www.uky.edu/Ombud/acadoffenses/index.htm](http://www.uky.edu/Ombud/acadoffenses/index.htm). Please note the penalties described for these violations.

**Diversity in LIS**

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. This course will provide students an opportunity to demonstrate attention to these themes and reflect on the mechanisms that this course has provided to demonstrate improved skills in these areas.