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 models; 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. 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 are donated to the SLIS for scholarships or other School purposes.
A second edition of this text is in preparation, and new content from it will be added to our course materials at the start of each module. You can expect new outlines, PowerPoints, and other assigned readings to be added to the modules prior to the start date of each. Other activities on the UK eT&D site (see http://www.uky.edu/HR/etraining) also support this course.

**Grading**

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

- Module quizzes, 7@20 points each: 140 points
- Four projects: 80 points
- Course project: 60 points
- Class participation: 70 points
- Total: 350 pts.

**Grading Scale:**

- 100-90% (315-350 pts) = A
- 89-80% (280-314 pts) = B
- 79-70% (245-279 pts) = C

**Participation**

- Discussion forum/wiki: 35 points (5 points per module)
- Blog: 35 points (5 points per module)
- Total 70 points

**Participation 1: Discussion points**

Students are expected to participate in class discussion via the Discussion board or wiki tool. Topics will be posted for each module in the discussion forums, and students should use the discussion board to bring up any questions on topics they wish to explore further. All content and project related questions should be posted to a forum first instead of being sent directly to the instructor so others may benefit from the answer, whether it comes from a peer or the instructor. There are five discussion points available **for each module** for 35 points. To earn the full five participation points in each module, you must make at least one substantive contribution to either the discussion board forum or a wiki page you create **during the time the module is active**. Therefore, you cannot make advance posts before a module has started or post “make up” contributions after a module has ended. Discussion boards and the wiki close with the launch of the module quiz, which is always at NOON on the day the module ends. Discussion posts can be in the form of responding to one of my framing questions or initiating a discussion with a substantive post on a topic of interest as long as it is related to the module content where you offer your insights or new information to the class, or answering a content or project question from a peer. Wiki posts should be your attempt to define and explain some technology or concept that you encounter in the course. As a general guide, a “substantive” post to a forum or wiki page is one that goes beyond stating agreement with another or just passing along a link and generally must be at least **150 words (a short paragraph or more) of thoughtful commentary or related information.**

**Participation 2: Blogs**

The blogs are less formal than the forums. It is the place where you will introduce yourself to the class and reflect on topics or offer tangential thoughts. The 35 participation points associated with blog activities are earned by posting your personal reflections on the course or course related topics at least once each module. For module 1, that first post must **include a brief introductory bio with a photo.** All other posts are up to you – you may wish to include your
reflections on your experience with IT, your expectations or thoughts about the class, or how you believe they relate to your future career goals. They are your chance to “think aloud” about your personal perspective on the course or ideas related to how it might inform your practice when you complete the program. If you wish, you can also make additional posts on any other topic of interest to you throughout the course. It is one additional way for me to get to know you better and for you to get to know your classmates. You may post as often (or as little) as you wish beyond the one course related post per module expectation. Given that these posts might be reflections on a module after it is completed, you can complete the module blog entry anytime up to two days after the end of a module. For example, for modules ending at noon on Wednesday, you have until the end of the day Friday of that week to complete your blog entry. Although I do not have specific content requirements for your blogging, I do expect that these not become overly negative in tone – you certainly may comment on challenges you experience in the course, but I prefer that specific course complaints be sent directly to me.

I will create a blog in Blackboard in your name for you to use. Others may elect to read or comment on your blog or not; unlike the discussion forum, topics that come up in a student blog are not considered content that you will be responsible for in the quizzes. You can read someone else’s blog if you are interested, but that is your choice. I be reading all the blogs, and I might comment on posts you make.

**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: (60 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 15-29)**
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 30-February 12)**
Project 1 due February 12
TCP/IP: Comparison of SLIP, PPP, and Ethernet access.
Protocols of the Internet--TCP/IP, ping, SMTP, Telnet, TN3270, FTP, gopher and HTTP.
Client/server architecture and the web.
TCP/IP security issues
Miller, Chapters 4, 5, 6

**Module 3: Web design and publishing (February 13- March 5)**
Project 2 due March 5
Graphics primer.
Web design, HTML and Web authoring
Mobile and responsive design
Content management systems
OAIS
Wikis, blogs, and RSS
Miller, Chapters 7, 8, 9

Module 4: Web programming and CSS (March 6-26) Includes spring break
Project 3 due March 26
Enhancing web interactivity with programming techniques (JavaScript and PHP)
CSS and styles
Other development frameworks
Miller, Chapters 10, 11

Module 5: XML Technologies (March 27-April 9)
Project 4 due April 9
XML technologies
DTD and XML Schema Definition
JSON
RDF and RDFa
Miller, Chapter 12

Module 6: Internet content and Information Retrieval (April 10-April 23)
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: Web 2.0 technologies and course wrap up (April 24-May 2)
Course project due May 5
Libraries and the Internet, past and future.
Chapter 16 and other resources in Blackboard

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. Failure to meet the minimum login requirements for any 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 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) so it is important to keep track of the end date for 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 marked to my attention. Email will be our primary one-to-one communication channel and I expect you to check your email regularly. 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.

Portfolio Artifacts
LIS638 is often a technology course used in your exit portfolio and the projects we do may be used as artifacts. Therefore, you MUST keep copies of the projects you submit along with any grading notes I provide in Blackboard or via email. I DO NOT keep copies of your graded work that you can request later; all I archive is the numeric score for each project.

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. 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.