LIS638-201 Internet Technologies and Information Services
Spring 2011 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 structure, development, evolution, and use of the Internet and related network technologies. Discussion of network protocols, client/server architecture, web page design and publishing, markup languages (HTML, XML), and scripting as well as Internet information retrieval/Internet resource evaluation in the context of social/legal environment of the Internet and the evolving roles of libraries and librarians. Prereq: LIS636, Foundations of Information Technology or consent of instructor. 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 the use of 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 and library services. Discussion will include an overview of IR issues, how searchable Internet indexes are constructed, the limitations of search engines, and future trends.
- To examine the social/political context of the Internet, specifically in the areas of copyright and intellectual property rights, privacy/security issues, and the censorship/filtering debate.
- 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 appointment requests are encouraged.

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. Supplemental readings marked with an asterisk * should be considered assigned; others are optional supporting readings.

Course Requirements
You will need access to an appropriate computer with a broadband Internet connection; 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. If you have a computer that is unreliable, you should rectify that situation before taking online courses. You must have audio capability and a headset/microphone; a webcam is recommended but not required. Note that all examples and many project activities are Windows-based. **You do not have to have a Windows PC but if you use another platform it is up to you to find appropriate software replacements for the programs demonstrated (these include an HTML and script editor, as well as FTP and telnet clients).** Other required software includes a reasonably current copy of Office Professional that includes Word, Excel, PowerPoint, and Access. Note that all UK students are eligible for a one time free download of Office 2007 from the UK download site (https://download.uky.edu); you can get help with this process from the UK helpdesk. You should also have both the Firefox and IE browsers available not just for occasional BlackBoard issues but to test web projects in both browsers. We make extensive use of Flash audio/visual materials, so you will also need the newest version of the Flash media player for both my Flash presentations and for any use of the Adobe Connect web conferencing tool. Occasionally BlackBoard has problems with Flash content; generally, either IE or Firefox should work. However, if something is not working in one browser, you should be prepared to use an alternate one to see if that is the issue.

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. We will also 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. 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.).

Adobe Connect
Adobe Connect, a web conferencing tool, is available to the class this semester. You can access a virtual meeting room via an URL that I will provide. I do not require Adobe Connect participation but I will use it to create help sessions as needed.

Course Content Help
I will try to assist you as much as possible with this online experience. However, that does not mean 24/7 support with immediate question response. 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 to be the place all initial questions will be addressed. Note that **ALL** content 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 check my mail frequently and 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 OPTIONAL sessions where I can be available
  to meet with you individually or with small groups.
- Online sources: many tutorials have been pointed to and the UK EVC training site is
  also a useful resource.

Email
It is vital that we can depend on effective email communication. Unfortunately, many personal
email accounts can run into problems with the UK mail spam filtering system. Therefore, I ask
that you always follow up if you have not had a response from me within a reasonable period (I
usually will respond within 24 hours). If you are not getting through via email, you can always
leave me voicemail or post a note to a forum directed to me. 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 all
correspondence to me.

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

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module quizzes</td>
<td>150</td>
<td>47%</td>
</tr>
<tr>
<td>Three projects</td>
<td>60</td>
<td>19%</td>
</tr>
<tr>
<td>Course project</td>
<td>80</td>
<td>25%</td>
</tr>
<tr>
<td>Class participation</td>
<td>30</td>
<td>9%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>320</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

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

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 during the time each module is running (exception is during
spring break week) throughout the course. You must enter our course shell and open some
course item for BlackBoard to track this as a login. Meeting the login requirements simply
makes you eligible for that module’s participation points; failure to meet the minimum login
requirements for any week during will result in zero participation points for that module
irrespective of other activities. Failure to login for two consecutive or non-consecutive weeks
during the semester will result in the loss of all participation points for the course. Failure to
login for three or more consecutive or non-consecutive weeks will result in a grade of E.
Participation
To earn the 30 points for participation, you must 1) satisfy the minimum login requirement and 2) contribute to the course wiki and/or discussion forums for each module (5 points per module). One participation point (up to a total of five per module) is awarded for each SUBSTANTIVE contribution to a discussion forum OR the wiki per module. I will create a forum for each module and post some initial discussion questions. A substantive post is one that represents a thoughtful 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. I expect these to reflect at least a paragraph (150 words or more) of thoughtful content. Simply posting a question to a forum, stating agreement with another comment, or 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. Wiki posts must be relevant to a current module and be made during the time frame the module is active. It is required that all course content questions be initially posted to a forum; I will refer all direct content questions to a forum if they have not yet been posted to one. I will initially wait for peer responses before answering a question in a forum unless it is an urgent course matter that requires my immediate intervention.

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.

Quiz Policy
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. Any violation of this expectation will be deemed an academic integrity violation and be subject to the appropriate academic response. You should be aware that “cutting and pasting” of answers from other sources into quizzes can be usually be detected in BlackBoard and will be treated as an academic integrity violation.

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). All modules end at NOON the respective Wednesday except for Module 6 which ends on the last Friday of the semester. During the quiz window there should be no discussion of quiz questions on forums or in personal communications to other students. Access to a quiz beyond the 36-hour window requires a documented excuse such as a serious illness or family emergency. Simple convenience and work schedules are not considered valid reasons to seek an extension to quiz deadlines. Note that technical problems can occur with BlackBoard quizzes and will be addressed on a case-by-case basis. Quizzes will be timed and presented one question at a time with no backtracking permitted. 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. A number of techniques have been employed to control the quiz environment:
• Quizzes can only be engaged once during the quiz window; you cannot begin the quiz, stop, and return to it later.
• 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. It will be up to you to manage the allotted time for the quiz. Blackboard will permit you to go “overtime” but this is only permitted in the event of technical problems or BB slowdowns. If you do go over the allotted time, you must email me with an explanation of the issue that you encountered that caused you to go overtime.
• Quizzes will be presented one question at a time with no backtracking permitted. You will not have the opportunity to view the entire quiz at one time.
• Note that quizzes will cover material from that module, which includes both assigned readings and ANY relevant forum discussions. You will not be tested on that specific content again and you therefore will not need access the quiz after it is completed for further studying. Hence, you will be presented only with the quiz score when you complete the quiz. However, anyone who wants more than a score-only result can request detailed feedback on missed questions by sending me an email request.

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.

Project Summary
Project 1 (15 points): Internet protocols, social networking, and web apps.
Project 2 (20 points): HTML, and graphics manipulation techniques. Mastering HTML with tables, forms, and frames.
Project 3 (25 points): Web scripting, style sheets, and XML.
Course Project: (80 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. This project will require original content and research; it should not be merely a collection of pointers to other web sites. Students will design, construct, and upload a set of linked web pages with supporting graphics to the UK SWEB web server. Along with developing the content, all aspects of web publishing will be evaluated including initial 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.

General Overview of Course Modules
Module 1: Introduction (January 12 – January 26)
Introduction to the Internet: Development and Structure
Overview of the development of the Internet: How it began and how it has evolved over the last 30 years.
Network Technologies: Basic network technologies and the OSI model are examined. Miller, Chapters 1, 2, 3

Module 2: Packets and Protocols, Clients and Servers (January 27 – February 16)
Project 1 due February 16
TCP/IP: Comparison of SLIP, PPP, and Ethernet access. Protocols of the Internet--TCT/IP, ping, SMTP, Telnet, TN3270, FTP, gopher and HTTP. Discuss the function of each and why an
understanding of them is important even in the current web environment. Develop an understanding of the client/server relationship as it pertains to 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 17 – March 9)
Project 2 due March 9
Graphics primer. Scanning technologies, appropriate formats, GIF animators. Web design HTML Web Authoring - Basic elements and principles of web authoring are examined including HTML, image acquisition, click maps and page layout. Students develop, upload, and evaluate their web pages. Students review Unix as it pertains to uploading to a Unix web server. Web server issues and functions (CGI scripts, etc.) would be briefly examined. Image acquisition and manipulation techniques Content management systems Miller, Chapters 7, 8, 9

Module 4: Web programming (March 10 – April 6)
Project 3 due April 6
Introduction to enhancing web interactivity with selected multimedia and programming techniques (e.g. JavaScript, PHP, Macromedia Flash, etc.) CSS and styles XML technologies Other development frameworks Miller, Chapters 10, 11, 12

Module 5: Internet content and Information Retrieval (April 7 – April 20)
Internet content and formats - An examination of the variety of file types found on the Internet Evaluation of web resources - Discussion of some important related issues including problems of authentication (evaluating) web information, dealing with content that may be inappropriate for some audiences, intellectual property rights and copyright. Internet Information Storage and Retrieval - Develop an understanding of the issues surrounding the Internet in the context of information storage and retrieval. Metadata and Internet Resources - Discussion of the concept of Metadata, its use in HTML, and efforts to improve intellectual access to the Internet through cataloging activities (Dublin Core and PURLs). How search engines create searchable indexes. The Google engine in more detail. Miller, Chapters 13, 14, 15

Module 6: Course wrap up (April 21 – April 29)
Course project due April 29 Libraries and the Internet, past and future. Chapter 16

NCATE statement: Integration with UK Educator Preparation Unit Themes This course supports the four themes of the conceptual framework for the UK professional education unit: research, reflection, learning, and leading. The ultimate goal is to produce leaders who work together to improve service and learning among diverse populations in Kentucky and beyond.