LIS650

Web Site Architecture and Design

2012–08–22

See the course web site at http://openlib.org/home/krichel/courses/lis650n12a for the latest online version of this file.

Course Description

This course examines the construction of simple web sites where users navigate content that is stored in files on a server. Students learn what the web is. They learn how web sites work, how to build them, and how to build them well. This involves technical know-how, as well as knowledge regarding good design. The course covers both areas.

The course emphasizes the use of standard compliant XHTML 1.0 and CSS level 2.1. Standards compliance is an integral part of the composition process. Students are allowed to use whatever tool they wish to use to create their sites. The final project sites must be standards compliant. They use free validation tools to check standard compliance.

The course covers the most widely used parts of XHTML 1.0 and CSS 2 level 1. It does not generally cover accessibility issues.

The course covers the issue of web site design as far as simple passive web sites are concerned. Discussion of design starts as soon as basic XHTML is covered, in parallel to the CSS material.

Course objectives

After taking this course students:

- will understand the basic underpinnings of the Web;

- will be able to interact with a server for storage and retrieval of pages;

- will have sufficient knowledge of XHTML in order to create simple standards-compliant pages;

- will have sufficient knowledge of CSS in order to create simple but effective style sheets;

- will be able to assess web pages using technical criteria, contents on the page, layout of contents.

The Palmer School Student Learning Objectives covered by the course are

- 2.E Students will build information systems and/or records used in such systems.

Prerequisites

There are no other formal prerequisites for this course. Students should have some prior web use. They should be able to use a Microsoft Windows computer, e.g. click on an icon to run a program, cut and paste between applications, and copy files from one location to another. Students should also be familiar with the idea of files and directories on a computer. They should also be able to use a web browser. Everything that goes beyond this is explained in class or by personal tuition from the instructor. No prior knowledge of HTML and CSS is assumed.

Students are provided with free web space where they can design their own sites. This web space continues to be available after the course ends. In order to operate that web space students only need a computer with an Internet connection.

Instructor

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Class structure
Classes are held in the PC1 lab on Saturdays between 13:00 and 18:00. Between classes, support via the class mailing list will be available.
Each class has a presentation by the instructor. With the exeption of the first class, the students work directly with their computers under the supervision of the instructor. However, students are expected to do some of the the work on their web site at home.

Class details
Here are some class details:

2012–09–08	13:00 to 18:00	Introduction to the course and to the world wide web
2012–09–15	13:00 to 18:00	XML and the HTML body
2012–09–29	13:00 to 18:00	HTML head, CSS introduction and HTML tables
2012–10–20	13:00 to 18:00	important CSS without positioning, page and contents design
2012–11–03	13:00 to 18:00	CSS positioning and site design
2012–11–17	13:00 to 18:00	an introduction to HTML5

The slides for the course can be downloaded at http://openlib.org/home/krichel/courses/lis650n12a/. To print the slides in Microsoft powerpoint, press control-p to print. Then in the "Full Page Slides" menu, choose "6 Slides Horizontal" and under "Grayscale" choose "Pure Black and White". In an older MS Powerpoint version, under "Print what" choose "Handouts", and under "Color/grayscale" choose "Pure Black and White".

Reading
Freeman and Freeman (2005) wins a lot of praise. It does not follow the same approach as the course. It is therefore a good complement.

Background readings
If students want a textbook on HTML and CSS, they are spoiled for choice. However, students should be aware that most books teach the loose version of HTML and place much less of an emphasis on style sheets than the course contents does. This is a really LIS-style course with an emphasis on separation of contents and presentation.
Castro (2006) is a widely used and reasonably priced book. A book that the instructor likes a lot is Musciano and Bill (2002) , but it only covers HTML, not CSS. A good, though outdated book on CSS is Bos and Lie (1999) . Another good book is on CSS is Meyer (2006) .
The technical specifications of HTML and CSS are on the web. XHTML 1.0 is defined in Group (2002). To understand it, you need to refer to the definition of HTML 4.01 in Raggett, Le Hors, and Jacobs (1999). CSS level 2 revision 1 is defined in Bos, Çelik, Hickson, and Lie (2004). http is defined in Fielding, Gettys, Mogul, Frystyk, Masinter, Leach, and Berners-Lee (1999). URLs are defined in Berners-Lee, Masinter, and McCahill (1994), but that definition was updated in Berners-Lee, Fielding, and Masinter (1998). MIME types are documented in IANA (2001).
Some specialized web sites and wikis deal with web design. Among them are:

- A List Apart at http://alistapart.com

- CSS-discuss wiki at http://css-discuss.incutio.com

- CSS Zen Garden at http://www.csszengarden.com

As far as the design of web sites is concerned, Krug (2005) and Nielsen (2000) are classic references. The most relevant contents of these books is covered in the course. Morville and Rosenfeld (2002) is a book on information architecture. Other resources include Clark (2007), Lynch and Horton (2002), Horton (2006) and Zeldman (2005).
The following mailing lists may be worth subscribing to.

- Web4Lib at http://lists.webjunction.org/web4lib/ is a US-based list that deals with the relationship between libraries and the web.

- webdev is a digested announcement list for web development in academic institutions.

- css-discuss is a high-volume technical list for CSS.

Last, but by no means least, there is a bunch of home-grown resources at http://dlib.info//home/krichel/courses/lis650.

Mailing list

There is a mailing list for the course at https://lists-1.liu.edu/mailman/listinfo/cwp-lis650-krichel. All students are encouraged to subscribe. As a rule, answers to email sent to the instructor are copied to the list. There are exceptions to this rule:

- if the question writer requests the answer not to be posted;

- if the question is a purely private matter.

Assessment

Before each class except the first and second, there is a quiz on the issues covered in the previous class. The average of all the quiz results counts for 5/17 of the assessment. The two worst quiz performances are discarded. On the third class meeting, the students hand in a one-page typed statement about the web site that they want to build. This statement should cover both the purpose of the web site and the site's architecture. The assessment of this statement counts for 1/17 of the grade.

On the second to last class day, students also hand in a web site assessment. This assessment should cover the web site of an academic library and information science department in the US or abroad. Students should use the suggested departments list. The assessment should not aim to describe the web page. It should discuss the strength and weaknesses of the site in terms of the usability criteria reviewed in the class meeting from the week before. The assessment should roughly be 2000 words long. If students don't like the first grade they get on the assessment are given a chance to improve it. The web site assessment counts for 4/17 of the course. There is a grading rubric for it at http://openlib.org/home/krichel/courses/lis650/rubrics/web_site_assessment.html

The remaining 7/17 are assessed through students' ability to build a web site. The site must validate against the *strict* version of the XHTML 1.0 specification. The site must have a style sheet with the main presentational elements. The site should provide an information source about a topic, though it need not be comprehensive by any means. Students are recommended to develop the web site on behalf of some other person. That person may provide useful feedback on the site to avoid creating something that is too designer-centered. The informational contents of the site should go beyond simple link collections or path finders. Personal web sites, such as for the student describing herself, are not allowed. However students may build a personal site for someone else. The total amount of information contained should be roughly equivalent to a conventional student essay. It has to be finalized one week after the last class. Assessment of the site follows a published list of criteria at http://openlib.org/home/krichel/courses/lis650/doc/criteria.html. There is a grading rubric for it at http://openlib.org/home/krichel/courses/lis650/rubrics/final_web_site.html

Students

References

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