COURSE DESCRIPTION

Dept., Number    CSC 80    Course Title    Web Development with HTML/XHTML and Tools
Semester hours    3    Course Coordinator    Kwai-Ting Lan

URL (if any): 

Catalog Description

A hands-on course covering the processes and guidelines for creating and customizing interactive webpages. Emphasis on use of HTML/XHTML, CSS, and tools to create webpages. HTML/XHTML syntax to create, format, and link documents. Use of tables, graphics, styles, forms, multimedia, and other features in webpages. Effective webpage design and website organization. Prerequisites: At least a C- grade in CSC 8 or equivalent computer and Internet experience.

Textbook

No textbook required.

References

Various public websites and online resources.

Course Goals

1. Design and create effective webpages.
2. Develop effective websites.
3. Create webpages with HTML and XHTML.
4. Design professional webpage layouts with Cascading Style Sheets (CSS).
5. Use hyperlinks, lists, tables, forms and frames on a webpage.
6. Use images and animated images on a webpage.
7. Use sound, music and digital video files on a webpage.
8. Use HTML editors and tools.
9. Work as a team to complete a website design project.
10. Manage files on a web server.

Prerequisites by Topic

Basic understanding of:
- The use of a search engine to locate information on the World Wide Web.
- The use of Internet applications such as e-mail, ftp, and ssh.
- Downloading, decompressing and creating ZIP files.
- Media on the Internet (images, video, other files).

Exposure to:
- Web design using XHTML, Web editors, and other tools.
Major Topics Covered in the Course

1. Introduction (1 hour).
2. Basic HTML/XHTML syntax (5 hours).
3. Web color and hexadecimal (1 hour).
4. Hyperlinks and anchors (2 hour).
5. Cascading Style Sheets (CSS) (5 hours).
6. Lists - bullets and numbering (1 hour).
7. Data presentation and layout using tables (2 hours).
8. Content presentation with frames (1 hour).
9. Working with images, animated images, and image maps (3 hours).
10. Inserting multimedia, sound, and video files in webpages (3 hours).
11. Collecting user input with forms (3 hours).
12. Web editors and Tools (5 hours).
13. Webpage design and layout (3 hours).
14. Website and site map design (2 hours).
15. Testing and debugging webpages (2 hours).
16. Web content management with UNIX file commands (2 hours).
17. Website project demo and presentation (4 hours).

Outcomes

Thorough understanding of:
- HTML and XHTML.
- Web colors and hexadecimal notation.
- Hyperlinks and anchors.
- Cascading Style Sheets (CSS).
- Creating lists, tables, frames and forms on webpages.
- Inserting images, animated images, and image maps.
- Incorporating multimedia, sound, and video files.
- Using Web editors and tools.
- Webpage design and layout.
- Testing and debugging webpages.

Basic understanding of:
- Webpage design trends.
- Web client and server software.
- Website and site map design.
- File management commands in the UNIX operating system.
- The history and breadth of World Wide Web technologies.

Exposure to:
- Javascript.
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- ASP.Net.
- Java Applets.
- DHTML.
- XML.
- ASCII code and Unicode.

Laboratory Projects

1. Designing a webpage with basic XHTML tags, including images and links.
2. Formatting text with paragraphs, line-breaks, and alignment.
3. Using a graphics editing program to create an image with a transparent background.
4. Creating and working with image maps.
5. Listing information with bullets, numbering, and nested lists.
6. Using tables for data presentation and layout.
7. Using frames to display more than one webpage in the same browser window.
8. Inserting audio and video into a webpage.
9. Creating a form to collect input from user.

Estimated Curriculum Category Content (Semester hours)

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<th>Area</th>
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Oral and Written Communications

Every student is required to design a professional quality website and to make an oral presentation to the class.

Social and Ethical Issues

The course includes discussion of copyright and legal issues of Web documents, as well as a basic understanding of computer and Web security (including virus, worms, spyware, firewalls etc).

Theoretical Content

No significant component.
Problem Analysis

Design, analysis and performance comparisons done for each of the following:

1. Webpage layout strategies.
2. Website map structures.

Solution Design

Design, analysis and performance comparisons done for each of the following:

1. Webpage layout strategies.
2. Website map structures.

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