Common Course Outline
CSIT 121
Web Standards
3 Credits

Community College of Baltimore County

Description

CSIT 121 – Web Standards introduces common Web Standards as recommended by the World Wide Web Consortium. Topics include HyperText Markup Language (HTML), Cascading Style Sheets (CSS), JavaScript, Extensible Markup Language (XML) and WAI (Web Accessibility Initiative.) The course emphasizes the important role standards play in Web Site development and covers how these standards are used to create, structurally mark-up, design and create interactive elements for web pages.

3 credits

Prerequisite: CSIT 155 or Co-requisite: CSIT 101 or consent of the program coordinator

Overall Course Objectives

Upon completion of this course students will be able to:

1. explain the relationship among HTML, CSS, JavaScript, XML and other common web standards;
2. define HTML and explain the differences among the HTML derivatives;
3. list HTML syntax rules;
4. use a text and/or web authoring editor to mark-up an HTML document;
5. define CSS and describe the CSS syntax and style sheet rules, including levels, grouping and selectors;
6. define the CSS box model and explain how it impacts CSS development;
7. code CSS styles to define properties for an HTML document including background, text and positioning of elements;
8. define XML and list ways it can be used;
9. structure content using XML and display the document in a browser;
10. define JavaScript and explain the relationships between HTML and CSS;
11. list common JavaScript elements, properties, methods and functions;
12. transfer web documents to a web server using File Transfer Protocol (FTP) for successful distribution among common web browsers;
13. identify and test differences among popular browsers; and
14. explain other common web standards initiatives including WAI.

Major Topics

I. Introduction Topics
   A. Introduction to HTML/CSS/JavaScript/XML
   B. Web Browsers, Authoring Tools, and Search Engines
   C. Accessing and uploading files using FTP

II. Web Page Basics
   A. Create, save and upload an HTML file
   B. Display a web page in a browser
   C. Markup a web page with basic HTML (paragraphs, lists and headings)
   D. Validate files for standards compliance
   E. Publish a web page using FTP

III. Basic HTML Elements
   A. Use contextual elements (definitions, quotes, address)
   B. Use hyperlinks (relative, absolute, mailto)
   C. Use images
   D. Tables
   E. Forms

IV. Introduction to CSS
   A. Add CSS to HTML documents (inline, embedded, external, imported)
   B. Define classes, id's and tags
   C. Modify typography and links with CSS (fonts, pseudo classes, etc.)
   D. Alternative style sheets for different media (mobile, print, screen size)

V. Advanced CSS topics
   A. Element positioning (absolute, relative, float, etc.)
   B. Style HTML elements (size, block, inline, visibility)
   C. Create and style tables and lists

VI. Work with XML
   A. Create an XML declaration
   B. Add XML elements
   C. Verify an XML document
   D. Apply a style sheet

VII. Introduction to JavaScript
   A. Incorporate JavaScript into HTML
   B. Add comments in scripts
   C. Use alerts to display data and text

VIII. Manipulating the Document Object Model (DOM) with JavaScript
   A. Change HTML and CSS attributes
   B. Modify structural elements (HTML)
   C. Modify presentation elements (CSS)
   D. Add code to events to modify the DOM
   E. Create and validate document type definitions

IX. Form Validation
   A. Describe reasons for using form validation
   B. Use regular expressions for verifying form data
   C. Improve usability through validation

X. Making HTML Pages Dynamic
    A. Put the current date/day into a web page
    B. Work with referrer pages
    C. Write dynamic text
    D. Available JavaScript libraries for added functionality (jQuery, Dojo, etc.)

XI. Research additional Web Standards (Web Accessibility Initiative, Uniform Resource Identifiers, Document Object Model, Hypertext Transfer Protocol, Multipurpose Internet Mail Extension)

Course Requirements

Grading/exams: Grading procedures will be determined by the individual faculty member but will include the following:

Minimum of 2 exams
Minimum of 5 Web Page Development Projects
A Final Web Site Project

Writing: Students are required to utilize appropriate academic resources. The individual faculty member will determine specific writing assignments, such as developing website content and concepts for analyzing web standards best practices.

Other Course Information

This course is taught in a computerized environment.

Individual faculty members may include additional course objectives, major topics, and other course requirements to the minimum expectations stated in the Common Course Outline.

This is a core program requirement course in the Information Technology Degree Program.

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