IT-1150: INTRODUCTION TO WEB PROGRAMMING

Cuyahoga Community College

Viewing: IT-1150 : Introduction to Web Programming

Board of Trustees:

December 2021

Academic Term:

Fall 2022

Subject Code

IT - Information Technology

Course Number:

1150

Title:

Introduction to Web Programming

Catalog Description:

Build Web pages using current technologies including but not limited to HTML, Cascading Style Sheets, and JavaScript. Focus is on developing a foundation in web programming.

Credit Hour(s):

3

Lecture Hour(s):

2

Lab Hour(s):

2

Requisites

Prerequisite and Corequisite

IT-1025 Information Technology Concepts for Programmers, or concurrent enrollment.

Outcomes

Course Outcome(s):

Develop an understanding of the server-client model.

Objective(s):

1. Describe the client and server relationship in Web page presentation.
2. Demonstrate an understanding of where HTML, CSS, and JavaScript are interpreted and run.

Course Outcome(s):

Create well-formed valid Web pages using CSS and HTML.

Objective(s):

1. Differentiate between releases of HTML and design for consideration of depreciated tags.
2. Demonstrate the use of several HTML elements available in the latest specification of HTML.
3. Use hypertext links.
4. Create Web page forms.
5. Display data in tables.
6. Display images.
7. Add information to tags to using attributes.
8. Use developer tools to assist in design and layout.

Course Outcome(s):
Use Cascading Style Sheets (CSS) to describe the appearance of elements and implement responsive page layout.

Objective(s):
1. Include CSS using inline, internal, and external stylesheets.
2. Apply styles using element, class, and id selectors.
3. Develop responsive page layouts using current responsive layout techniques.
4. Utilize styles to describe how elements are displayed.
5. Describe the use of a current mobile-first CSS framework.

Course Outcome(s):
Create Web pages supporting accessibility guidelines.

Objective(s):
1. Consider accessibility when designing Web pages.
2. Implement techniques for accessibility and syntax compliance.

Course Outcome(s):
Describe uses of JavaScript in Web pages.

Objective(s):
1. Describe the techniques used to include JavaScript in an HTML file.
2. Describe how JavaScript interacts with the elements of a web page.

Methods of Evaluation:
1. Class participation and discussion
2. Oral and/or written reports
3. Homework assignments
4. Comprehensive projects
5. Quizzes
6. Objectives examinations
7. Other methods deemed appropriate by the department

Course Content Outline:
HTML Introduction
1. An overview of Hyper Text Markup Language (HTML)
2. Create a first HTML document
3. Introduction to HTML elements
    a. Standalone vs. container elements
4. Displaying HTML pages in a browser
5. The history of HTML versions

The HTML Document
1. Type declaration using !DOCTYPE
2. HTML, HEAD, and BODY elements
3. META tags

Basic HTML Elements and Techniques
1. Paragraphs
2. Links
3. Applying attributes
4. Absolute vs. relative URLs
5. Images
6. Adding accessibility using the alt attribute
7. Headings
8. Nesting elements
9. Tables

10. Lists
11. Block and inline
12. Character entities, symbols, and emojis

Introduction to Cascading Style Sheets (CSS)

1. Using inline, internal, and external stylesheets
2. Applying styles using elements, class, and id selectors
3. Colors
4. Backgrounds
5. Borders
6. Introduction to the box model
7. Margins
8. Padding
9. Height and Width
10. Text styling and fonts

Responsive Layout Techniques

1. Flexible box layout
2. Grid layout
3. Floating elements
4. Bootstrap and W3.CSS for mobile-first layout
5. Setting the viewport
6. Responsive images
7. Media queries

HTML Forms

1. The <form> element and attributes
2. Form elements
3. Input types and attributes

Intro to JavaScript

1. Including JavaScript in a web page
2. Interacting with elements using

Resources

Carey, Patrick. *New Perspectives on HTML5, CSS3: Comprehensive.* 7th ed. Boston, MA: Course Technology/Cengage Learning, 2017.

Felke-Morris, Terry. *Web Development Design Foundations.* 8th ed. Boston, MA: Pearson Education Inc., 2016.

Melone, Julie C. (2015) *HTML, CSS and JavaScript All in One, Sams Teach Yourself: Covering HTML5, CSS3, and jQuery*, Sams Publishing.

Boehm, A. & Ruvalcaba, Z. *Murach's HTML5 and CSS3*. 4th ed. Murach & Associates Inc., 2018.

Shostack, Adam. (2014) *Threat Modeling: Designing for Security*, Wiley.

Resources Other

HTML Tutorial - https://www.w3schools.com/html
CSS Tutorial - https://www.w3schools.com/css
Bootstrap - https://www.w3schools.com/bootstrap
W3.CSS Tutorial - https://www.w3schools.com/w3css
JavaScript Tutorial - https://www.w3schools.com/js

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