Common Course Outline
CSIT 125
Introduction to JavaScript
4 Credits

The Community College of Baltimore County

Description

CSIT 125 – Introduction to JavaScript introduces the creation of interactive and dynamic web sites by integrating JavaScript into site structures. Major topics include the Documents Object Model (DOM), event-driven scripting, functions, parameter passing, conditionals, loops and object-oriented principles. Students create web pages and web sites containing interactive components developed with JavaScript.

4 Credits

Prerequisite: CSIT 121 or consent of the program coordinator.

Overall Course Objectives

Upon completion of this course students will be able to:

1. describe and explain the relationship among Extensible HyperText Markup Language (XHTML), Cascading Style Sheets (CSS), JavaScript, and the DOM;
2. relate file hierarchy and website organization;
3. describe limitations of creating interactivity including browser support and differences;
4. demonstrate how JavaScript is integrated in a web document;
5. examine the differences between client-side and server-side event handling;
6. describe common JavaScript events;
7. modify CSS properties using JavaScript;
8. define, create and use JavaScript functions including parameter passing;
9. define and use variables in JavaScript functions;
10. demonstrate and implement JavaScript conditional and looping statements in functions;
11. apply JavaScript's core objects including the Array, Boolean, Date, Math and String objects;
12. use XHTML, CSS and JavaScript to develop an interactive web site;
13. demonstrate the basics of JQuery; and
14. identify and describe emerging JavaScript frameworks and standards.

Major Topics

I. JavaScript Introduction
   A. Language introduction
   B. Script integration and style
   C. Functions

II. DOM
    A. Introduction and origins
    B. Element attributes
    C. Text nodes
    D. Style properties
III. Handling DOM Events
    A. Events and event handlers
    B. Cross-browser events
IV. Images and Animation
    A. Design considerations
    B. Image manipulation through events
    C. Image map rollover
    D. Changing background colors
V. Forms and Validation
    A. Rationale for validation
    B. Regular expressions
    C. Improving form accessibility and functionality
VI. Making Your Pages Dynamic
    A. Day/time format
    B. Referrer pages
    C. Dynamic text and elements
VII. JQuery Introduction
    A. Basic application
    B. DOM manipulation
    C. Basic code effects
VIII. Server Communication
    A. Protocols
    B. Using AJAX and coding basics
    C. AJAX with JQuery
    D. AJAX with JSON
IX. Emerging Web Frameworks
    A. Introduction to modern JS frameworks
    B. Adding dynamic elements into a web page
    C. Compare frameworks

Course Requirements

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

- Two exams
- Ten web page development projects

Written Assignments: Students are required to use appropriate academic resources.

Other Course Information

This course is taught in a computerized environment.
This is an elective course for the Web Development option of the Information Technology Degree Program.

Date revised: 3/10/15