Course Name: Web Development and Design I

Course Number: CST* E153

Credits: 4

Catalog description: An introduction to web development and design using HTML, CSS, JavaScript, and related technologies such as JQuery and web application development frameworks to create multi-page web sites. Topics include links, tables, forms, graphics, styles, layout, event handling, and client-side programming. Course content is continually updated to reflect the current state of the art in Internet computing.

The course requires substantial hands-on use of computers in a computerized classroom environment.

Prerequisite: CSC *E105 or CSC* E223 or permission of the instructor

Corequisite or Parallel:

General Education Competencies Satisfied:

HCC General Education Requirement Designated Competency Attribute Code(s):

None

Additional CSCU General Education Requirements for CSCU Transfer Degree Programs:

None

Embedded Competency(ies):

None

Discipline-Specific Attribute Code(s):

☒ **COMP**   **Computer Science**

Course objectives:

General Education Goals and Outcomes:

None

Course Specific Objectives:

1. Understand the structure and organization of webpages and websites

2. Web site design

3. Ethical and legal issues

4. Ability to use a hosting environment

5. Build and edit HTML
    5.1 HTML syntax and tags

6. Knowledge and usage of CSS

7. Knowledge and usage of JavaScript and JQuery

8. DHTML and JavaScript and Document Object Model

9. Use JavaScript to handle events and HTML elements

10. Knowledge and use of Web application development frameworks

Course Content:

1. Understand the structure and organization of webpages and websites
    1.1. Making images and video compatible for integration with webpages
    1.2. Understanding of storage and bandwidth in the context of website design
    and development

2. Web site design
    2.1. Including wire framing principles for information design, navigation design and
    interface design
    2.2. Ethical and Legal Issues

3. Ability to use a hosting environment
   3.1. cPanel
   3.2. Domain name registration
   3.3. FTP files
   3.4. Directory structure
   3.5. File editing and manipulation

4. Build and edit HTML
   4.1. Header tags
   4.2. Formatting text
   4.3. Lists
   4.4. Images
   4.5. Forms
   4.6. Links
   4.7. Tables

5. Knowledge and usage of CSS
   5.1. Inline / internal CSS
   5.2. Classes & IDs
   5.3. Divs
   5.4. Colors
   5.5. Positioning
   5.6. Margins
   5.7. Padding
   5.8. Borders
   5.9. Text (fonts, styling, aligning)

6. Knowledge and usage of JavaScript
   6.1. What is a script
   6.2. Intro to accessing elements
   6.3. Variables
   6.4. Expressions
   6.5. Control Statements
   6.6. Object Creation and Modification
   6.7. Screen output
   6.8. Arrays
   6.9. Functions
   6.10. Events and Event Handling
   6.11. JQuery selection, loops, functions, and event handling
   6.12. Dynamic HTML

6.13. Using the Document Object Model

7. Knowledge and usage of Twitter Bootstrap
    7.1. Apply templates (with simple modifications)
    7.2. The Grid
    7.3. Navbars
    7.4. Forms and tables

Date Course Created: Spring 2018

Date of Last Revision: 01/22/2018