# COURSE OUTLINE HTML and CSS

#### **Course Description**

ID 124. HTML and CSS. 3 credit hours. This course will enable the student to create web sites using Hyper Text Markup Language (HTML). The student will troubleshoot faulty web pages and provide corrective HTML and Cascading Style Sheets (CSS) coding. The student will learn about the origins of markup languages, how standards are established and changed, and the role of browser software companies in expanding web page capabilities. The student will hand-code HTML and CSS using simple text editors.

### **Required Materials**

For complete material(s) information, refer to https://bookstore.butlercc.edu

Various free or opensource software apps. Please contact your instructor for information or refer to the external software page in the introductory module in Canvas.

Portable storage device (Portable hard drive recommended)

#### **Butler-Assessed Outcomes**

The intention is for the student to be able to do the following:

- 1. Identify the entities responsible for implementing markup language standards.
- 2. Code and troubleshoot HTML based web pages, incorporating CSS and scripts, with the use of text editor.
- 3. Incorporate multimedia (images, animation, sound, and movies) into web pages using plugins and players and current standard coding.

# Learning PACT Skills that will be developed and documented in this course

Through involvement in this course, the student will develop ability in the following PACT skill area(s):

# Analytical Thinking Skills

• Problem solving – Through the analysis of technical issues related to markup language code, the student will demonstrate problem-solving skills.

# Technology Skills

• Discipline-specific technology – Through the selection and application of software and hardware to create and deliver web pages, the student will develop markup language and CSS skills.

## Major Summative Assessment Task(s)

These Butler-assessed Outcomes and Learning PACT skills will be demonstrated by the following:

1. Preparing a comprehensive final project of web pages that adheres to specifications of appropriate and validated HTML and CSS coding, and demonstrating appropriate use of file management and organization.

## Skills or Competencies

These actions are essential to achieve the course outcomes:

- 1. Identify the organizations involved in implementing markup language standards and credentialing professionals.
- 2. Distinguish between the functionality of various markup language releases and browsers.
- 3. Describe the relationships between HTML, scripting languages, and programming languages.
- 4. Manage files for effective web page development.
- 5. Define the basic structure of HTML tags, elements, attributes, and values including CSS properties.
- 6. Use a simple text editor to compose markup code to create basic header, body, and meta tags.

### Learning Units

- I. Introduction to HTML and CSS
  - A. How the web works
  - B. Web standards
  - C. HTML semantic markup syntax
  - D. Basic document structure, paragraph, and heading elements
  - E. Validation
- II. Text markup and page content organization
  - A. Block content elements (lists, quotations, preformatted text, figures)
  - B. Content organization elements (section, article, aside, nav, header, footer, address)
  - C. Text-level inline elements and breaks
  - D. Generic div and span elements
  - E. Special characters
- III. Links and publishing
  - A. Anchor elements and attributes
  - B. External links, linking within a directory, and linking to a fragment
  - C. Mail and telephone links
  - D. FTP clients and web publishing process
- IV. Web graphics and image optimization
  - A. Image element and attributes
  - B. Linking images

- C. Image file formats, size, and resolution
- D. Image optimization strategies
- V. Table markup
  - A. Table structure elements and attributes
  - B. Table headers and spanning cells
- VI. Form markup
  - A. How forms work
  - B. Form element and attributes
  - C. Form variables and labels
  - D. Text entry controls (input element types and text area)
  - E. Menu, fieldset, and language elements
- VII. CSS and formatting text
  - A. Anatomy of style rules
  - B. External and embedded style sheets
  - C. Inheritance, cascade, and specificity
  - D. Font properties and web fonts
  - E. Descendant and contextual selectors
  - F.Line adjustment and other text properties
- VIII. Colors, backgrounds, and box model
  - A. RGB color values and transparency
  - B. Pseudo-class, pseudo-element, and attribute selectors
  - C. Color, background, and gradient properties
  - D. Element box and dimension properties
  - E. Padding border, and margin properties
- IX. Floating, positioning, and page layout techniques
  - A. Normal flow and float property
  - B. Clearing and containing floats
  - C. Position, offset, and stacking order properties
  - D. Page layout strategies (fixed, fluid, elastic, and hybrid)
  - E. Float and positioned multicolumn layouts
- X. CSS techniques
  - A. CSS resets
  - B. Styling tables and forms
  - C. Basic responsive web design techniques
- XI. Transitions, transforms, and animation
  - A. Transition and transform properties
  - B. Keyframe and animation properties

- XII. HTML5 Application Programming Interfaces (APIs)
  - A. Current APIs
  - B. Media formats, video and audio markup elements
  - C. Canvas

#### **Learning Activities**

Learning activities will be assigned to assist the student to achieve the intended learning outcome(s) through lecture, instructor-led class discussion, instructor-led demos, guest speakers, group activities, drills/skill practice and other activities at the discretion of the instructor. These activities may be either face-to-face or online.

#### **Grade Determination**

The student will be graded on learning activities and assessment tasks. Grade determinants may include the following: daily work, quizzes, chapter or unit tests, comprehensive examinations, projects, presentations, class participation, and other methods of evaluation at the discretion of the instructor.