CS 50A Course Outline as of Fall 2014

CATALOG INFORMATION

Dept and Nbr: CS 50A Title: WEB DEVELOPMENT 1
Full Title: Web Development 1
Last Reviewed: 10/24/2022

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.00	Lecture Scheduled	3.00	17.5	Lecture Scheduled	52.50
Minimum	3.00	Lab Scheduled	0	4	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	3.00		Contact Total	52.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 105.00 Total Student Learning Hours: 157.50

Title 5 Category:	AA Degree Applicable
Grading:	Grade or P/NP
Repeatability:	00 - Two Repeats if Grade was D, F, NC, or NP
Also Listed As:	
Formerly:	

Catalog Description:
This course is intended for the beginning student who will learn how to build a simple website using HTML and CSS. Topics include: font formatting, navigation, images, layout, semantic elements, tables and forms

Prerequisites/Corequisites:

Recommended Preparation:
Course Completion of CS 5 or CS 101A or CS 105; AND Course Eligibility for ENGL 1A

Limits on Enrollment:

Schedule of Classes Information:
Description: This course is intended for the beginning student who will learn how to build a simple website using HTML and CSS. Topics include: font formatting, navigation, images, layout, semantic elements, tables and forms. (Grade or P/NP)
Prerequisites/Corequisites:
Recommended: Course Completion of CS 5 or CS 101A or CS 105; AND Course Eligibility for ENGL 1A

Limits on Enrollment:
Transfer Credit: CSU;
Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	**Area**			Effective:	Inactive:
CSU GE:	**Transfer Area**			Effective:	Inactive:
IGETC:	**Transfer Area**			Effective:	Inactive:
CSU Transfer:	Transferable	Effective:	Fall 2014	Inactive:	
UC Transfer:		Effective:		Inactive:	

CID:

Certificate/Major Applicable:
Certificate Applicable Course

COURSE CONTENT

Outcomes and Objectives:
Upon completion of the course, students will be able to:
1. Create a simple website.
2. Develop webpages that utilize the HTML elements that address the following functions: basics document structure, head elements, text markup, site navigation, images, div and span structure, semantic elements, tables, forms.
3. Develop webpages that utilize CSS to control the appearance of the site. Students will use these CSS property groups: text and font, color and background, the box model, position and display, lists, tables.
4. Develop webpages that utilize the CSS concepts of the cascade and inheritance of browser, external, embedded and inline CSS.
5. Students will correctly use the CSS elements of selectors, declarations, properties, values. Classes and id's will be stressed.
6. Summarize the following website development concepts: element, attribute, element nesting, asset path, style, rule, selector, declaration, property, and value.

Topics and Scope:

I. Basic Document Structure
   a. DOCTYPE html, head, title, body, meta, h1 … h6, br and p elements
   b. Definitions: element, tag, opening element, closing element, stand alone elements, attributes, element syntax, page content
   c. Hypertext markup language
   d. Uploading webpages to a server
   e. Roles of web servers and web browsers
   f. Proper nesting of elements
   g. Structure vs. presentation
II. Navigation
   a. Links using relative paths

b. Links using complete URLs (Uniform Resource Locators)
c. Links to id's within a webpage
d. Navigation bars
e. Validating HTML (HyperText Markup Language) code to the HTML 5 standard
f. Email link

III. Structural Elements
a. Strong
b. Em
c. Pre
d. Blockquote
e. Unordered Lists
f. Ordered Lists
g. Definition Lists
h. Special Characters

IV. Images
a. Images sources - downloading from a website, digital camera, smart phones. Copyright overview
b. Using the img element to insert images into a webpage
c. The src, alt, height, and width attributes
d. Joint Photographic Experts Group vs. Portable Network Graphics vs. Graphic Interchange Format
e. Using folders to organize a website
f. Using image editing software to resize an image
g. Linking thumbnail images to a web page

V. Cascading Style Sheets Usage
a. Basic CSS rules : selector, property, value, declaration, style
b. Inline, embedded, external and browser stylesheets
c. Descendant and multiple selectors
d. Inheritance
e. The cascade
f. Classes and id's

VI. CSS Font / Text Properties
a. Font-family, font-size, font-weight, font-style, font-variant
b. Text-align, text-transform, text-indent, text-decoration, color, background-color, line-height, letter spacing, word-spacing

VII. HTML Editors - download, use and review

VIII. CSS (Cascading Style Sheets) Box Properties
a. Width
b. Padding
c. Border
d. Margin
e. Background-image
f. Background-repeat
g. Background-position
h. Shorthand properties: padding, margin, border, background, and font

IX. Webpage layout using CSS
a. Float
b. Clear
c. Wireframe
d. Conversion of wireframe to web site
e. Pseudo-classes
f. Absolute positioning

g. Responsive design
h. Z-index

X. Semantic Elements
a. conversion of div elements to semantic elements
b. header, nav, section, footer
c. Article, aside, time
d. CSS for screen and print

XI. Tables
a. Table element
b. Tr (table row)
c. Td (table data)
d. Th (table heading)
e. Summary
f. Caption
g. Border
h. Rowspan
i. Colspan
j. Styling a table using CSS
k. Nested tables

XII. Forms
a. Form
b. POST and GET commands
c. Input
1) Text
2) Submit
3) Radio
4) Checkbox
5) Reset
6) Hidden
d. Textarea
e. Select and option
f. Fieldset
g. Label
h. Layout of forms
i. Styling forms
j. Form processing using an existing CGI (Common Gateway Interface) script
k. Using hidden input elements to provide input to an existing CGI script

XIII. Commercial Website
a. Web hosting
b. Domain names
c. E-commerce

Assignment:

Required Assignments
1. 25 – 60 pages of textbook reading per week
2. 4 – 7 website projects. All webpages must be uploaded to the student.santarosa.edu server and must validate XHTML 1.0 strict. Each of the following must be included in at least one website project:
a. At least 5 pages
b. A standard navigation bar
c. Html, head, title, body, h1, h2, p, a, img, string, em, pre, br, q, blockquote, ol, ul, li, and

meta elements
d. CSS to control border-bottom, background-color, font-family, font-size, font-weight, font-style, color, and text-decoration properties
e. The use of classes
f. Links using relative paths, links using complete URL's, and links to id's within a webpage
g. Thumbnails
3. At least 2 quizzes

Optional Assignments
1. Website critique(s)
2. Participation in electronic message board discussions

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Website critiques, participation in electronic message boards	Writing 0 - 20%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Website projects	Problem solving 30 - 70%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

None	Skill Demonstrations 0 - 0%

Exams: All forms of formal testing, other than skill performance exams.

Quizzes	Exams 20 - 50%

Other: Includes any assessment tools that do not logically fit into the above categories.

None	Other Category 0 - 0%

Representative Textbooks and Materials:
Basics of Web Design: HTML 5 and CSS3. Felke-Morris, Terry Ann. Addison-Wesley: 2012
Head First HTML and CSS (2nd). Robson, Elisabeth; Freeman, Eric. O'Reilly Media: 2012