BUTTE COLLEGE
COURSE OUTLINE

I. **CATALOG DESCRIPTION**

CSCI 31 - Web Development I **3 Unit(s)**

Prerequisite(s): CSCI 4 (or concurrent enrollment)
Recommended Prep: Reading Level IV; English Level IV; Math Level III
Transfer Status: CSU
34 hours Lecture
51 hours Lab

This course is an introduction to web development using HyperText Markup Language Version 5 (HTML5), Cascading Style Sheets Level 3 (CSS3), JavaScript, and jQuery. Students will learn to design and build standards-compliant front-end/client-side web applications using HTML5, CSS3, JavaScript, and jQuery.

II. **OBJECTIVES**

Upon successful completion of this course, the student will be able to:

A. Design a basic web page using appropriate HyperText Markup Language Version 5 (HTML5) structural and semantic markup.
B. Apply Cascading Style Sheets Level 3 (CSS3) styles to control the look and formatting of a web page.
C. Write JavaScript code to interact with the Document Object Model (DOM) of an HTML5 web page.
D. Create simple effects and respond to events in web pages using jQuery.
E. Explain how HTML5 and CSS3 are used to achieve the separation of structure from presentation in a web page.
F. Use the appropriate tools to ensure that a web page meets accessibility requirements.

III. **COURSE CONTENT**

A. **Unit Titles/Suggested Time Schedule**

Lecture

Topics	Hours
1. HTML5 - document structure	1.00
2. HTML5 - text	2.00
3. HTML5 - lists	1.00
4. HTML5 - links and images	1.00
5. HTML5 - tables	1.00
6. HTML5 - forms	2.00
7. HTML5 - semantic markup	1.00
8. HTML5 - validation	1.00
9. CSS3 - syntax, selectors, properties, values	1.00
10. CSS3 - internal versus external	1.00
11. CSS3 - color	1.00
12. CSS3 - text	1.00
13. CSS3 - box model	2.00
14. CSS3 - lists and tables	1.00
15. CSS3 - layout	2.00

16. CSS3 - frameworks	2.00
17. CSS3 - validation	1.00
18. JavaScript - syntax	3.00
19. JavaScript - testing and debugging	1.00
20. jQuery - events	2.00
21. jQuery - effects	2.00
22. jQuery - using plugins	2.00
23. Search Engine Optimization (SEO), web hosting, File Transfer Protocol (FTP)	2.00
Total Hours	34.00

Lab

Topics	Hours
1. HTML5 - document structure	1.50
2. HTML5 - text	3.00
3. HTML5 - lists	1.50
4. HTML5 - links and images	1.50
5. HTML5 - tables	1.50
6. HTML5 - forms	3.00
7. HTML5 - semantic markup	1.50
8. HTML5 - validation	1.50
9. CSS3 - syntax, selectors, properties, values	1.50
10. CSS3 - internal versus externa	1.50
11. CSS3 - color	1.50
12. CSS3 - text	1.50
13. CSS3 - box model	3.00
14. CSS3 - lists and tables	1.50
15. CSS3 - layout	3.00
16. CSS3 - frameworks	3.00
17. CSS3 - validation	1.50
18. JavaScript - syntax	4.50
19. JavaScript - testing and debugging	1.50
20. jQuery - events	3.00
21. jQuery - effects	3.00
22. jQuery - using plugins	3.00
23. Search Engine Optimization (SEO), web hosting, File Transfer Protocol (FTP)	3.00
Total Hours	51.00

IV. **METHODS OF INSTRUCTION**

A. Lecture
B. Collaborative Group Work
C. Homework: Students are required to complete two hours of outside-of-class homework for each hour of lecture

D. Demonstrations
E. Multimedia Presentations

V. METHODS OF EVALUATION

A. Quizzes
B. Projects
C. Class participation
D. Mid-term and final examinations

VI. EXAMPLES OF ASSIGNMENTS

A. Reading Assignments
   1. Read the chapter in your book on CSS3 layouts. Using the list of CSS3 frameworks provided by the instructor, compare and contrast the layouts supplied with each framework. Be prepared to discuss your findings in class.
   2. Read the article on HTML5 semantic markup supplied by the instructor. Be prepared to solve a series of semantic markup problems in class.

B. Writing Assignments
   1. Research the accessibility requirements in the Rehabilitation Act of 1973, Section 508, paying particular attention to requirements that are applicable to web developers. Write a one-page summary of the key requirements and associated HTML5 markup.
   2. Write a short essay (minimum 250 words) in response to the instructor's presentation on "Old School Web Development." In your opinion, what were the worst practices of web development in the past?

C. Out-of-Class Assignments
   1. Interview a web designer using the questionnaire provided by the instructor. Prepare a short (maximum five minutes) multimedia presentation to share what you learn with the class.
   2. Design and build a website for a hypothetical small business, selected from the list provided by the instructor. Submit your validated HTML5 and CSS3 files to the instructor.

VII. RECOMMENDED MATERIALS OF INSTRUCTION

Textbooks:

A. Duckett, Jon. HTML and CSS: Design and Build Websites. 1st Edition. Wiley, 2011.
B. Duckett, Jon. JavaScript & JQuery: Interactive Front-End Web Development. 1st Edition. Wiley, 2014.
C. Niederst Robbins, Jennifer. Learning Web Design: A Beginner's Guide to HTML, CSS, JavaScript, and Web Graphics. 4th Edition. O'Reilly Media, 2012.

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Date: 03/07/2016