Course Outline

2026-2027 Catalog

CSCI 31 - Web Development I

Catalog Description

Transfer Status: CSU/UC

Prerequisite: CSCI 4 (or concurrent enrollment) or CSCI 20 (or concurrent enrollment)

Unit(s): 3.00

Lecture: 34.00 Contact hours/68.00 Out of class hours/102.00 Total hours/2.00 Unit(s)
Lab: 51.00 Contact hours/0.00 Out of class hours/51.00 Total hours/1.00 Unit(s)
Total: 85.00 Contact hours/68.00 Out of class hours/153.00 Total hours/3.00 Unit(s)

Course Description: This course is an introduction to web development using HyperText Markup Language (HTML), Cascading Style Sheets (CSS), and JavaScript. Students will learn to design and build standards-compliant front-end/client-side web applications using current technologies and methodologies.

Objectives

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

1. Design a basic web page using appropriate HyperText Markup Language (HTML) structural and semantic markup
2. Apply Cascading Style Sheets (CSS) styles to control the look and formatting of a web page
3. Create JavaScript code to manipulate the Document Object Model (DOM) and respond to events
4. Explain how HTML and CSS are used to achieve the separation of structure from presentation in a web page
5. Use the appropriate tools to ensure that a web page meets accessibility requirements

Course Content

Topic Titles / Suggested Time Topic

Lecture

Topics	Lec Hrs
HTML - document structure	1.00
HTML - text	2.00
HTML - lists	1.00
HTML - links and images	1.00
HTML - tables	1.00
HTML - forms	2.00
HTML - semantic markup	1.00
HTML - validation	1.00
CSS - syntax, selectors, properties, values	1.00
CSS - internal versus external	1.00
CSS - color	1.00
CSS - text	1.00
CSS - box model	2.00
CSS - lists and tables	1.00
CSS - layout	2.00
CSS - frameworks	2.00
CSS - validation	1.00
JavaScript - syntax	3.00
JavaScript - testing and debugging	1.00
JavaScript - events	2.00
Client-Side Web Frameworks	4.00
Search Engine Optimization (SEO) and web hosting	2.00
Total Hours:	**34.00**

Lab

Topics	Lab Hrs
HTML - document structure	1.50
HTML - text	3.00
HTML - lists	1.50

Topics	Lab Hrs
HTML - links and images	1.50
HTML - tables	1.50
HTML - forms	3.00
HTML - semantic markup	1.50
HTML - validation	1.50
CSS - syntax, selectors, properties, values	1.50
CSS - internal versus externa	1.50
CSS - color	1.50
CSS - text	1.50
CSS - box model	3.00
CSS - lists and tables	1.50
CSS - layout	3.00
CSS - frameworks	3.00
CSS - validation	1.50
JavaScript - syntax	4.50
JavaScript - testing and debugging	1.50
JavaScript - events	3.00
Client-Side Web Frameworks	6.00
Search Engine Optimization (SEO) and web hosting	3.00
Total Hours:	**51.00**

Methods of Instruction

A. Collaborative Group Work
B. Demonstrations
C. Homework: Students are required to complete two hours of outside-of-class homework for each hour of lecture
D. Lecture
E. Multimedia Presentations
F. Applied Computer and Networking Technologies: Programming

Methods of Evaluation

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

Examples of Assignments

Reading Assignments

1. Read the chapter in your book on CSS layouts. Using the list of CSS 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 HTML semantic markup supplied by the instructor. Be prepared to solve a series of semantic markup problems in class.

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 HTML 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?

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 HTML and CSS files to the instructor.

Recommended Materials of Instruction

Felke-Morris, Terry Ann. (2022). Basics of Web Design: HTML5 & CSS. *Pearson, 6th.* 9780137327522.
Miles, Rob. (2022). Begin to Code with JavaScript. *Pearson, 1st.* 9780136870722.

Robbins, Jennifer. (2018). Learning Web Design: A Beginner's Guide to HTML, CSS, JavaScript, and Web Graphics. *O'Reilly Media, 5th.* 978-1491960202.

Minimum Qualifications

Computer Science (Masters Required)
Computer Information Systems

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