



Certification Exam: CIW-FEDA-0100

Exam Objectives

The CIW *Front-End Development Associate v1* courseware is written to the following Exam Objectives:

Domain 1: Introduction to Web Development

Purpose: Build a foundational understanding of how websites work and the role of a front-end developer.

- 1.1 Define what a website is and describe how browsers render web pages.
- 1.2 Differentiate between front-end and back-end development.
- 1.3 Explain the roles of HTML, CSS, and JavaScript in building websites.
- 1.4 Explain the role of web standards organizations (WHATWG, W3C) and how validation and accessibility guidelines shape development practices.

Domain 2: Creating Web Pages with HTML

Purpose: Learn to structure content using HTML.

- 2.1 Create a valid web page using document structure tags.
- 2.2 Use headings, paragraphs, lists, and links to organize content.
- 2.3 Add images, video, and audio to a web page using HTML, choosing appropriate formats for compatibility, performance, and accessibility.
- 2.4 Apply semantic tags to improve document meaning.
- 2.5 Build forms with inputs, labels, and buttons to collect user data.
- 2.6 Apply basic accessibility features such as alt text, labels, and ARIA roles.

Domain 3: Style Web Pages with CSS

Purpose: Make websites appealing and organized.

- 3.1 Explain the purpose of CSS and how it works with HTML.
- 3.2 Write CSS rules and apply styles using selectors, classes, and IDs.
- 3.3 Explain how cascade, specificity, and inheritance affect styles.
- 3.4 Apply CSS rules to the box model to control spacing, borders, and layout.
- 3.5 Style text, backgrounds, borders, and spacing for clarity and emphasis.
- 3.6 Use pseudo-classes, pseudo-elements, and CSS variables to enhance styling.

Domain 4: Responsive & Mobile-Friendly Design

Purpose: Ensure websites work well across screen sizes and devices.

- 4.1 Understand and apply mobile-first design principles to create responsive, usable layouts across devices.
- 4.2 Define responsive design and implement it using media queries.
- 4.3 Create flexible layouts using Flexbox and CSS Grid.
- 4.4 Apply positioning techniques (relative, absolute, fixed, sticky) to elements.

Domain 5: Programming with JavaScript

Purpose: Add interactivity and logic to web pages.

- 5.1 Explain how JavaScript is implemented in a web page and executed by the browser.
- 5.2 Declare and use variables and apply operators to manipulate data.
- 5.3 Identify and apply data types (string, number, Boolean, array, object).
- 5.4 Use control structures (if/else, switch, while, for) to direct program flow.
- 5.5 Use scope to control variable behavior within functions, loops, and code blocks.
- 5.6 Write reusable functions with modern syntax, including arrow functions.

Domain 6: Interacting with the Page (DOM, Events, APIs, Asynchronous)

Purpose: Make web pages respond to user actions.

- 6.1 Access and modify DOM elements using JavaScript (*getElementById*, *getElementsByClassName*).
- 6.2 Handle user events such as clicks, inputs, and form submissions.
- 6.3 Validate form inputs and display feedback to users.
- 6.4 Explain the purpose of an API, why JSON is preferred over XML, and how *fetch()* is used to retrieve data from a public API.
- 6.5 Explain how asynchronous code is managed using *async/await*.

Domain 7: Testing, Troubleshooting, and Debugging Code

Purpose: Improve code quality and ensure correct functionality.

- 7.1 Identify and resolve various types of errors encountered in front-end development.
- 7.2 Inspect HTML, CSS, and JavaScript using built-in browser tools.
- 7.3 Use W3C validators to check for syntax errors and ensure standards compliance.
- 7.4 Conduct cross-browser and user testing to identify issues that affect usability, accessibility, and SEO performance.

Domain 8: Frameworks, Libraries, and Version Control (5 Objectives)

Purpose: Use modern tools to build and manage projects.

- 8.1 Use Git for version control (clone, commit, push, pull).
- 8.2 Identify and resolve simple merge conflicts in Git workflows.
- 8.3 Configure and run basic build tools (e.g., npm scripts).
- 8.4 Identify and use common frameworks and libraries (React, Vue, Angular, Bootstrap, Tailwind) and recognize their use in content management systems (WordPress, Adobe Experience Manager).
- 8.5 Explain a component-based approach to UI design (e.g., React).

Domain 9: Accessibility, Security & Performance (5 Objectives)

Purpose: Build websites that are secure, performant, and usable by all.

- 9.1 Apply WCAG accessibility principles to improve usability.
- 9.2 Optimize images and assets to reduce load times.
- 9.3 Use bundling and minification to improve site performance.
- 9.4 Understand HTTPS and secure practices for forms, user data, and payment processing, including working with payment processors.
- 9.5 Identify and prevent common client-side security vulnerabilities (e.g., XSS).

Domain 10: Career Skills and Professional Practices (5 Objectives)

Purpose: Prepare for entry-level roles in web development.

- 10.1 Identify entry-level developer roles, responsibilities, and career paths.
- 10.2 Demonstrate teamwork, communication, and time management in a professional setting.
- 10.3 Explain project management phases and how they work with Agile/Scrum methodologies.
- 10.4 Apply ethical reasoning and cultural sensitivity in digital communication while following international privacy laws.
- 10.5 Prepare a resume, cover letter, and online portfolio to apply for web development positions.