



Certification Exam:

The Front-End Development Associate course introduces students to the foundational technologies and practices used to build modern, interactive websites and web applications. Students will explore HTML, CSS, JavaScript, responsive design, accessibility, version control, content management systems (CMS), and professional workflows through ten domains aligned with industry expectations.

Through hands-on projects and real-world scenarios, students will develop the skills to create interactive, mobile-friendly web pages, collaborate using modern tools, and prepare for entry-level roles in front-end web development.

Candidate Profile

The CIW Front-End Development Associate certification and courseware serve a wide range of learners seeking practical, industry-relevant JavaScript skills, including:

High School Students

- Grades 9 – 12 or recent graduates with basic tech literacy and HTML/CSS exposure.
- Those interested in college pathways (computer science, software development) or improving job prospects after graduation.

Adults

- Non-technical roles (e.g., marketing, design) expanding into software development.
- Junior developers seeking certification for career growth.
- Career changers entering tech from other fields.
- Participants in corporate upskilling, reskilling, or workforce development programs.

Career Profile

This course aligns with the Department of Labor Standard Occupational Classification for the following:

SOC: 15-1252 Software Developer

Software developers design, code, test, and maintain software and applications. They analyze user needs, resolve issues, develop and update software, and collaborate with teams to ensure systems run efficiently and meet requirements.

SOC: 15-1254 Web Developers

Web developers design, build, and maintain websites and web applications. They write and test code, ensure sites function properly, fix issues, and collaborate with team members to meet user and business needs.

SOC: 15-1255 Web and Digital Interface Designers

Web and Digital Interface Designers design the layout, visuals, and user experience of websites and digital applications. They create wireframes and prototypes, ensure interfaces are visually appealing and easy to use, and collaborate with developers to implement designs that meet user and business requirements.

Topics

Lesson 1: The Web and How It Works

What is a website? How browsers render pages
 Front-end vs back-end
 HTML, CSS, and JavaScript
 Web standards, validation, accessibility guidelines
 Guided Instruction
 Independent Learning
 Challenge It!

Lesson 2: Creating Web Pages with HTML

HTML document structure
 Organizing content with text and links
 Adding multimedia
 Semantics
 Forms
 Basic Accessibility Features
 Guided Instruction
 Independent Learning
 Challenge It!

Lesson 3: Style Web Pages with CSS

What CSS does and how it integrates with HTML
 Writing rules with selectors, classes, IDs
 Cascade, specificity, inheritance
 Box model and layout control
 Styling text, backgrounds, borders
 Advanced styling
 Guided Instruction
 Independent Learning
 Challenge It!

Lesson 4: Responsive & Mobile Friendly Design

Mobile-first principles
 Responsive design and media queries
 Flexbox & CSS Grid for layouts
 Positioning techniques
 Guided Instruction
 Independent Learning
 Challenge It!

Lesson 5: Programming with JavaScript

Running JavaScript in the browser
 Variables & operators
 Data types
 Control structures (if/else, loops, switch)
 Scope and variable behavior
 Functions and modern syntax
 Guided Instruction
 Independent Learning
 Challenge It!

Lesson 6: Interacting with the Page

Access and modify DOM elements
 Handling user events
 Form validation and user feedback
 APIs, JSON vs XML, and fetch()
 Asynchronous programming with async/await
 Guided Instruction
 Independent Learning
 Challenge It!

Lesson 7: Testing, Troubleshooting, Debugging

Types of errors
 Using browser dev tools
 W3C validators
 Cross-browser and usability testing
 Guided Instruction
 Independent Learning
 Challenge It!

Lesson 8: Tools and Modern Frameworks

Git basics
 Merge conflicts and workflows
 Build tools (npm) scripts
 Frameworks & CMS
 Component-based UI design
 Guided Instruction
 Independent Learning
 Challenge It!

Lesson 9: Accessibility, Security and Performance

WCAG accessibility principles
 Optimizing assets and load performance
 Bundling and minification
 HTTPs, secure forms, payment processors
 Client-side security (XSS prevention)
 Guided Instruction
 Independent Learning
 Challenge It!

Lesson 10: Career Skills and Professional Practice

Entry-level jobs and career paths
 Teamwork, communication, time management
 Project management and Agile
 Ethics, cultural sensitivity, privacy laws
 Resume, cover letter, online portfolio
 Guided Instruction
 Independent Learning
 Challenge It!