



Advanced HTML5 & CSS3 Specialist

Certification Exam: 1DO-620

Advanced HTML5 And CSS3 Specialist is the first course in the CIW Web And Mobile Design series. This course teaches the essentials of HTML5, Cascading Style Sheets (CSS), and JavaScript. These technologies, sometimes known as the "HTML5 Family" or the "web development trifecta," can be used together to create web pages that easily adapt to display on smartphones, tablets, gaming devices, and smart TVs, as well as on traditional desktop computers.

This course builds upon your manual coding skills to teach you how to develop web documents using new elements, attributes, and selectors introduced in HTML5 (Hypertext Markup Language version 5) and CSS3 (Cascading Style Sheets version 3). You will create web pages using the HTML5 structure elements, embed video and audio, and develop cross-browser user-input forms. You will use CSS3 to position and format content, and to create effects such as transformations, transitions, and animation.

You will also learn basic JavaScript coding and use HTML5 APIs (application programming interfaces) to extend the functionality of web pages with modern features such as geolocation, drag-and-drop, canvas, and offline web applications. In addition, you will learn techniques for code validation and testing, form creation, inline form field validation, and mobile design for browsers and apps. This course will also apply project management tasks and critical thinking as you learn to code web pages. You will also learn why accessibility, ethics, and legal considerations are important to consider when creating web pages.

Candidate Profile

Individuals preparing to enter or continue in the workforce fields of website development and design can benefit from the CIW Advanced HTML5 And CSS3 Specialist course and/or certification:

- High school students
- College students
- Technical/trade school students

Professionals working in website development and design fields for any industry can benefit from the CIW Advanced HTML5 And CSS3 Specialist course and/or certification:

- Web and graphic designers
- Web marketing professionals
- Mobile application developers
- Art/creative directors
- Advertising professionals
- Entrepreneurs

Career Profile

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

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

HTML5 Essentials

Introduction to HTML5 and CSS3
Introduction to Mobile Design
Mobile Websites vs. Mobile Apps
App development
The Evolution of HTML5
HTML5 Structure Elements
HTML5 Semantic Elements
Universal markup creation
Validating HTML5 Code
HTML5 Multimedia
The <video> Element
The <audio> Element
HTML5 Graphics
Navigation and Hyperlinks for Mobile Devices
Images and Mobile Design
HTML5 APIs

Introduction to Cascading Style Sheets (CSS) Technology

Cascading Style Sheets (CSS)
Style Guides
CSS and HTML
CSS Terms and Syntax
Applying CSS Styles
The CSS Box Model
Page Layout with CSS
Designing Websites for Mobile Devices

Using CSS Version 3 (CSS3)

Introduction to CSS3
CSS3 Selectors and Properties
CSS3 Background Properties
CSS3 Border Properties
CSS3 Text Effects
Cross-browser compatibility
Responsive Web Design

Using Advanced CSS3 Techniques

Introduction to Advanced CSS3 Techniques

CSS3 2D and 3D Transformations
CSS3 Transitions
CSS3 Animations
CSS3 User Interfaces
Creating Menus and Buttons with CSS3

Introduction to JavaScript

HTML5 and JavaScript
Introduction to Scripting
JavaScript Characteristics
JavaScript vs. Other Languages
Ways of Embedding JavaScript into HTML5 Documents
JavaScript and Common Programming Concepts
Objects, Properties and Methods
Expressions and Operators
Conditional statements
Arrays
Loops
Scope isolation
Iterators
Regex

JavaScript Events, Functions and Methods

User Events and JavaScript Event Handlers
Introduction to JavaScript Functions
Defining a Function
Pre-defined functions in JavaScript
Calling a Function
JavaScript Animations
Methods as Functions
Promises
Modules
Async/Await and Closures
AJAX and JSON
Errors In JavaScript

Using HTML5 APIs

Introduction to HTML5 APIs
Document Object Model (DOM)
Common HTML5 APIs

The Canvas API
The Offline AppCache API
The Geolocation API
The Drag-and-Drop API
The File API
The History API
Retrieving Data with XMLHttpRequest
Manipulating Data with jQuery

Developing HTML5 Forms

Introduction to HTML5 Forms
Cross-Browser Compatible HTML5 Forms
HTML5 Form Input Types
New Form Elements in HTML5
HTML5 Global Attributes for Form Elements

Completing, Submitting and Validating User Input Forms

Improving Forms with HTML5
HTML5 Attributes for the <form> Element
HTML5 Attributes for the <input> Element
Submitting Forms with the <button> Element
Concepts and Techniques for Validating User Input
Validating User Input with HTML5 Attributes
Validating User Input with JavaScript

Copyright, Ethics and Legal Considerations

Copyright Laws in Coding, Really?
Why Accessibility?
Netiquette and Cultural Considerations
Why Consider Global Laws?
Security Standards
How does Ethics affect coding