

HTML5 and CSS3 Fundamentals: Build Websites from Scratch

A beginner-friendly course to learn HTML5 and CSS3 step by step, creating responsive websites with hands-on projects.

Programming Instructor: Cameron Brooks • 5 sections • 57 lessons • 14.50h total

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About this course

Starting from scratch in web development can be confusing with so many tools and concepts. Without a clear path, beginners often struggle to build their first website. This course guides you through HTML5 and CSS3 fundamentals, from basic structure to responsive layouts. You'll learn through video lessons, practical examples, and build a complete portfolio site by the end.

Course curriculum

Web Development Foundations

- **How the Web Works: Browsers and Servers (15m)**
Understand the client-server model and how browsers render web pages using HTML and CSS.
- **Introduction to HTML and CSS Roles (12m)**
Learn what HTML and CSS do and why they are essential for creating web content.
- **Setting Up VS Code for Web Development (20m)**
Step-by-step guide to installing Visual Studio Code and configuring it for HTML and CSS projects.
- **Using Browser Developer Tools (18m)**
Explore Chrome DevTools to inspect elements, test changes, and debug your web pages.
- **Creating Your First HTML File (10m)**
Write a basic HTML document with DOCTYPE, head, and body tags, and save it with a .html extension.
- **Previewing HTML in a Browser (8m)**
Open your HTML file in a browser and see how it displays content. Make simple edits and refresh.
- **Understanding File Paths and Directories (12m)**
Manage your project files, learn about relative and absolute paths, and organize folders for efficiency.
- **Introduction to Code Editors and Shortcuts (15m)**
Get familiar with VS Code features like syntax highlighting, auto-complete, and common keyboard shortcuts.

Structuring Content with HTML5

- **HTML5 Document Structure (14m)**
Set up the HTML5 boilerplate with DOCTYPE, head elements, and body for a clean starting point.
- **Headings, Paragraphs, and Text (12m)**
Use h1 to h6 headings and paragraphs to organize text content on your web pages.
- **Creating Links with Anchor Tags (10m)**
Add hyperlinks to navigate within your site and to external pages using the anchor element.
- **Embedding Images with Img Tags (12m)**
Insert images into your HTML, set alt text for accessibility, and manage image sources.
- **Lists: Ordered, Unordered, and Description (15m)**
Build different types of lists for content like menus, steps, or definitions.
- **Semantic HTML5: Header, Nav, Main, Footer (18m)**
Use semantic elements to give meaning to your page structure, improving accessibility and SEO.
- **Additional Semantic Elements (16m)**
Explore article, section, aside, and figure tags to further structure your content.
- **Building a Multi-Page Website Skeleton (20m)**
Create multiple HTML files and link them together to form a basic website with navigation.
- **Introduction to HTML Forms (14m)**
Add forms with input fields, labels, and buttons for user interaction, like contact forms.

- **Tables for Data Presentation (12m)**
Organize data into tables using table, tr, th, and td elements with proper structure.
- **HTML5 Media Elements (15m)**
Embed audio and video content directly into your web pages with audio and video tags.
- **Validating HTML Code (10m)**
Use online validators and browser tools to check your HTML for errors and best practices.

Styling with CSS3

- **Introduction to CSS Stylesheets (12m)**
Learn how CSS controls the presentation of HTML elements and link your first stylesheet.
- **CSS Syntax: Selectors and Properties (15m)**
Understand the rule set structure with selectors, property-value pairs, and declarations.
- **Linking CSS to HTML Files (10m)**
Connect external CSS files to your HTML using the link tag, and explore inline styles.
- **Colors and Backgrounds in CSS (14m)**
Set text colors, background colors, and use gradients to style your web pages.
- **Typography: Fonts and Text Styling (16m)**
Control font family, size, weight, and line height to improve readability and design.
- **The Box Model Explained (20m)**
Master margin, padding, border, and content areas to understand element spacing and sizing.
- **Styling Links and Buttons (12m)**
Customize link colors, hover states, and create buttons with CSS for interactive elements.
- **Background Images and Properties (14m)**
Add background images, control positioning, and use background-size for responsive design.
- **CSS Units: Pixels, Percentages, Em, Rem (18m)**
Choose the right units for different contexts to create flexible and scalable designs.
- **Introduction to CSS Selectors (15m)**
Use class, ID, and element selectors to target specific HTML elements for styling.

Responsive Design & Modern Layout

- **What is Responsive Web Design? (12m)**
Understand the need for responsive design and how it adapts to various screen sizes.
- **Using Media Queries (18m)**
Apply different CSS styles based on device width using media queries for breakpoints.
- **Viewport Meta Tag and Units (14m)**
Set the viewport for mobile devices and use viewport units for responsive scaling.
- **Percentage-Based Layouts (15m)**
Create flexible layouts using percentages instead of fixed pixel values.
- **Flexbox Fundamentals (20m)**
Learn the basics of Flexbox to align and distribute space among items in a container.
- **Flex Direction and Alignment (16m)**
Control the direction and alignment of flex items using properties like justify-content and align-items.

- **Wrapping and Ordering Flex Items (14m)**
Make flex items wrap to new lines and reorder them visually with flex-wrap and order.
- **Practical Flexbox Layouts (22m)**
Build common layout patterns like navigation bars and card grids using Flexbox.
- **CSS Grid Basics (18m)**
Introduce CSS Grid for creating two-dimensional layouts with rows and columns.
- **Defining Grid Containers and Items (16m)**
Set up grid templates and place items into grid areas for structured layouts.
- **Responsive Grid Techniques (20m)**
Use media queries with Grid to create layouts that adapt to different screen sizes.
- **Responsive Images with Srcset (15m)**
Serve different image sizes based on device capabilities using srcset and picture element.
- **Fluid Typography with Clamp (12m)**
Create text that scales smoothly across devices using CSS clamp and viewport units.
- **Building a Responsive Navigation Menu (25m)**
Design a navigation menu that collapses on mobile and expands on desktop using Flexbox and media queries.

Capstone Project & Next Steps

- **Planning Your Portfolio Website (15m)**
Outline the structure, sections, and design ideas for your personal portfolio site.
- **Setting Up the Project Files (12m)**
Create the file structure with HTML, CSS, and asset folders for organized development.
- **Building HTML Structure for Portfolio (20m)**
Write the HTML code for all sections including header, about, projects, and contact.
- **Styling the Header and Navigation (18m)**
Apply CSS to the top section with logo, menu, and responsive navigation toggle.
- **About Section with Flexbox (16m)**
Design the about area using Flexbox for alignment and content distribution.
- **Projects Grid with CSS Grid (22m)**
Create a responsive grid of project cards that displays well on all devices.
- **Contact Form and Footer (14m)**
Style the contact form inputs and buttons, and design the footer with links.
- **Adding Responsive Breakpoints (20m)**
Use media queries to adjust the layout for tablets and mobile screens.
- **Image Optimization for Performance (12m)**
Compress images and use proper formats to reduce load times without losing quality.
- **Code Review and Cleanup (15m)**
Review your HTML and CSS for errors, consistency, and best practices before finalizing.
- **Introduction to Browser Compatibility (14m)**
Test your site in different browsers and address common compatibility issues.

- **Deploying Your Website Live (18m)**

Upload your site to a hosting service like Netlify or GitHub Pages to make it accessible online.

- **Next Steps: JavaScript and Beyond (16m)**

Explore paths for learning JavaScript, frameworks, and other web development tools.

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