



# CodeHS

## Web Design Course Syllabus

**Kahlo: One Semester for Middle School, 70 hours**

### Course Overview and Goals

In today's world, web pages are the most common medium for sharing ideas and information. Learning to design websites is an incredibly useful skill for any career path.

The CodeHS Web Design course is a project-based course that teaches students how to build their own web pages. Students will learn the languages HTML and CSS, and will create their own live homepages to serve as portfolios of their creations. By the end of this course, students will be able to explain how web pages are developed and viewed on the Internet, analyze and fix errors in existing websites, and create their very own multi-page websites.

**Learning Environment:** The course utilizes a blended classroom approach. The content is fully web-based, with students writing HTML and CSS in the browser. Teachers utilize tools and resources provided by CodeHS to leverage time in the classroom and give focused 1-on-1 attention to students. Each unit of the course is broken down into lessons. Lessons consist of video tutorials, short quizzes, example web pages to explore, and web design exercises in which students develop and publish their own web sites.

**Development Environment:** Students write HTML and CSS code in the browser using the CodeHS online editor. Classes can choose to write code using either blocks or text. Due to the fact that different browsers treat HTML and CSS differently, we highly recommend that all student computers use an up-to-date version of the Chrome browser. You can download an up-to-date version of Chrome for free here: <https://www.google.com/chrome/browser/>

**Quizzes:** Each lesson includes at least one formative short multiple-choice quiz. At the end of each unit, students take a summative multiple-choice unit quiz that assesses their knowledge of the concepts covered in the unit.

**Prerequisites:** There are no official prerequisites for the CodeHS Web Design course. The course is designed for complete beginners with no previous background in computer science. The course is highly visual, dynamic, and interactive, making it engaging for new students. In the broader course pathway, the Web Design course is a great starting place. However, students that have taken other CodeHS courses will be able to apply concepts learned in earlier courses to Web Design, making Web Design a great second or third course in the pathway.

**More information:** Browse the content of this course at <https://codehs.com/course/20946>

## Course Breakdown

### Unit 1: Getting Started - What is the Web? (1 week/5 -7 hours)

Objectives / Topics Covered	<ul style="list-style-type: none"> <li>● Course introduction</li> <li>● Goal setting</li> <li>● The impacts of the Internet</li> <li>● Browsers and websites</li> <li>● Digital footprint</li> </ul>
Assignments / Labs	<ul style="list-style-type: none"> <li>● Example exercises:             <ul style="list-style-type: none"> <li>○ Setting course goals: "What is something you want to be able to create by the end of this course?"</li> <li>○ Free Response: A Day Without the Internet</li> <li>○ Exploring Crowdsourcing</li> <li>○ Viewing Websites in Different Browsers</li> <li>○ Building a Positive Digital Footprint</li> </ul> </li> </ul>

### Unit 2: HTML - Structuring Websites (3 - 4 weeks/15 - 20 hours)

Objectives / Topics Covered	<ul style="list-style-type: none"> <li>● How do we build web pages?</li> <li>● Markup Languages</li> <li>● HTML</li> <li>● HTML tags</li> <li>● HTML attributes</li> <li>● HTML elements</li> <li>● The Anatomy of an HTML page</li> <li>● Formatting text</li> <li>● Hyperlinks</li> <li>● Images</li> <li>● Copyright fair use</li> <li>● Lists</li> <li>● Nesting tags</li> <li>● Tables</li> <li>● Styling with HTML</li> <li>● HTML Colors</li> </ul>
Assignments / Labs	<ul style="list-style-type: none"> <li>● Students create several web pages to practice each of the concepts above</li> <li>● Example exercises:             <ul style="list-style-type: none"> <li>○ Modify existing web pages using formatting tags to make text more readable</li> <li>○ Use links to create a web page linking to your 5 favorite websites</li> <li>○ Use links and images to create a personal library web page showing your favorite books</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>○ Use lists and images to create a flashy list article</li> <li>○ Use tables to create a personal calendar web page</li> <li>○ Use styling attributes to add style to your web pages</li> </ul>
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### Unit 3: Project - Create Your Homepage (1 week/5 hours)

Objectives / Topics Covered	<ul style="list-style-type: none"> <li>● Combination of the concepts learned thus far</li> <li>● Allow students to think creatively about the applications of the concepts they have learned</li> <li>● Designing a web page from scratch</li> </ul>
Assignments / Labs	<ul style="list-style-type: none"> <li>● Students will build their own websites about themselves. This site will be accessible on their own custom URL on the CodeHS site and will be continually improved by the student as they continue on in the course. It will serve as a running portfolio of each creative project they create in the course.</li> </ul>

### Unit 4: CSS - Styling Websites (2 weeks/10 - 12 hours)

Objectives / Topics Covered	<ul style="list-style-type: none"> <li>● How do we style web pages?</li> <li>● CSS vs HTML</li> <li>● CSS Selectors</li> <li>● Selecting by tag</li> <li>● Selecting by class</li> <li>● Selecting by id</li> <li>● The Cascade (order of selector precedence)</li> </ul>
Assignments / Labs	<ul style="list-style-type: none"> <li>● Students create several web pages to practice each of the concepts above</li> <li>● Example exercises: <ul style="list-style-type: none"> <li>○ Use CSS selectors to style your previous web pages</li> <li>○ Use CSS selectors to style new web pages</li> <li>○ Create a music library web page and use CSS to style each song in your table</li> <li>○ Use CSS styling to make several images fit together properly</li> <li>○ Explain the benefits CSS provides over styling with only HTML</li> <li>○ Identify CSS selectors and rules used on example web pages</li> </ul> </li> <li>● Project: Add CSS styling to the students' homepages</li> </ul>

**Unit 5: Advanced HTML and CSS (4 weeks/20 hours)**

Objectives / Topics Covered	<ul style="list-style-type: none"> <li>● Splitting your site into separate files</li> <li>● &lt;div&gt;</li> <li>● &lt;span&gt;</li> <li>● Combining CSS selectors</li> <li>● Special CSS selectors</li> <li>● Reading documentation</li> <li>● Image manipulation</li> <li>● Animation</li> </ul>
Assignments / Labs	<ul style="list-style-type: none"> <li>● Example exercises: <ul style="list-style-type: none"> <li>○ Create multi-page websites that utilize separate CSS stylesheets</li> <li>○ Use divs and spans to style groups of HTML elements</li> <li>○ Add CSS styling to elements that the user clicks on</li> <li>○ Add CSS styling to elements that the user hovers over</li> <li>○ Use CSS to add a greyscale filter to a group of images</li> <li>○ Recreate a popular image-sharing app with multiple filters to select from</li> <li>○ Apply animations and transitions to bring web pages to life</li> </ul> </li> </ul>

**Unit 6: Final Project (2 weeks/10 hours)**

Objectives / Topics Covered	<ul style="list-style-type: none"> <li>● Combination of the concepts learned in the course</li> <li>● Allow students to think creatively about the applications of the concepts they have learned</li> <li>● Designing a website from scratch</li> </ul>
Assignments / Labs	<ul style="list-style-type: none"> <li>● Students will develop an animated and interactive web page that profiles a local community</li> </ul>