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## *Web Design Course Syllabus and Course Outline*

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### **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 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. Students will learn the foundations of user interface design, rapid prototyping and user testing, and will work together to create professional, mobile responsive 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. I will 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.

### **ASSESSMENT CATEGORIES**

- Coding Projects
- Quizzes/Unit Tests
- Participation

### **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.

### **UNIT TEST**

We will be working through 7 Units. Each unit includes an End of the Unit Test.

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## COURSE OUTLINE

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### UNIT 1: GETTING STARTED - WHAT IS THE WEB?

Objectives / Topics Covered	<ul style="list-style-type: none"><li>● Course introduction</li><li>● Goal setting</li><li>● The Internet</li><li>● URLs</li><li>● How a web page gets to your computer</li></ul>
Assignments / Labs	<ul style="list-style-type: none"><li>● Example exercises:<ul style="list-style-type: none"><li>○ Free Response: “When you think of the Internet, what comes to mind?”</li><li>○ “What would you like to learn in this course?”</li><li>○ Brainstorm something you would like to create “Wouldn’t it be great if...”</li><li>○ Why is the Internet often called “The Web”?</li><li>○ Explain the steps it takes for a web page to get to your computer</li><li>○ Class Activity: The Internet Then and Now<ul style="list-style-type: none"><li>■ Students investigate the capabilities of the Internet 20 years ago, 10 years ago, today, and looking forward to the future</li></ul></li></ul></li></ul>

## UNIT 2: HTML - STRUCTURING WEBSITES

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><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></li></ul>

### UNIT 3: CSS - STYLING WEBSITES

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></ul>

#### UNIT 4: PROJECT - CREATE YOUR HOMEPAGE

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 website 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 5: ADVANCED HTML AND CSS

Objectives / Topics Covered	<ul style="list-style-type: none"><li>● Splitting your site into separate files</li><li>● Iframes and embedding</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>● Avoiding repeated code</li></ul>
Assignments / Labs	<ul style="list-style-type: none"><li>● Example exercises:<ul style="list-style-type: none"><li>○ Use iframes to embed a video into your web page</li><li>○ Use iframes to embed a previous exercise into your web page</li><li>○ Use divs and spans to style groups of HTML elements</li></ul></li></ul>

#### UNIT 6: DESIGNING USER INTERFACES

Objectives / Topics Covered	<ul style="list-style-type: none"><li>● What makes an engaging interface?</li><li>● Various User Interface (UI) Design techniques</li></ul>
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	<ul style="list-style-type: none"> <li>● Accessibility issues</li> <li>● Readability</li> <li>● Lite sites</li> <li>● Rapid prototyping</li> <li>● User testing</li> </ul>
Assignments / Labs	<ul style="list-style-type: none"> <li>● Example exercises: <ul style="list-style-type: none"> <li>○ Research existing user interfaces</li> <li>○ Assess the user interfaces of various web sites</li> <li>○ Design a website using paper prototypes, test these prototypes and get feedback from your peers, and improve your design before implementing it with code</li> <li>○ UI Design Project <ul style="list-style-type: none"> <li>■ Find and present an article about a particular UI design technique</li> <li>■ Create your own live examples using this technique</li> </ul> </li> </ul> </li> </ul>

**UNIT 7: FINAL PROJECT**

Objectives / Topics Covered	<ul style="list-style-type: none"> <li>● Allow students to think creatively about the applications of the concepts covered in the course</li> <li>● Scoping a project</li> <li>● Designing a website from scratch</li> <li>● Incremental development</li> <li>● Creating and iterating on prototypes</li> <li>● User testing</li> <li>● Collaboration</li> </ul>
Assignments / Labs	<ul style="list-style-type: none"> <li>● In this project, students work in teams to design, prototype, test, and develop a final website</li> <li>● Brainstorm ideas for a final project</li> </ul>

	<ul style="list-style-type: none"><li>● Plan out milestones for incremental development</li><li>● Design the different pages you will create for this website</li><li>● Prototype your designs and improve them by getting feedback from users</li><li>● Create your final website</li></ul>
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