General Assembly
Course Curriculum

FRONT-END WEB DEVELOPMENT

GA.CO/FEWD

Front-End Web Development
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OVERVIEW

THE FRAMEWORK

This 10-week course introduces students to the basics of programming for the web using HTML, CSS, and JavaScript. This is a beginners course that teaches students how to build the visual and interactive components of a website. Students learn how to create the structural foundation of a site (HTML), style it (CSS), and add logic to control its behavior (JavaScript). Students gain an understanding of how the web works and customize their sites using their own designs and ideas. By the end of this course, students should be able to:

- Explain how the web works
- Create the structure and style of a website using HTML and CSS
- Apply interactivity to a site using programming fundamentals in JavaScript
- Host a website on a server
- Know the basic technical vocabulary to communicate with front-end web developers

STUDENTS

ENTREPRENEURS SEEKING TO CREATE AN ONLINE PROTOTYPE	This course provides individuals looking to translate their business ideas into a working prototype with the skills necessary to build a thoughtfully designed website.
CAREER CHANGERS	This course provides individuals looking to break into the field of web development with the skills necessary to understand what it means to program for the web.
BACK-END WEB DEVELOPERS	This course provides individuals with back-end programming experience with the skills necessary to control the client-side components of web applications.
NEWBIES	This course provides individuals with no programming experience with the skills required to build your first website using HTML/CSS and JavaScript.

PROJECTS

FINAL PROJECT

The final project for FEWD is to design and build a website of your choice using HTML, CSS, and JavaScript. This project tests your knowledge of how to structure, style, and add interactivity to a website. The result is a site that can be used in your portfolio. The objective of the project is to:

- Demonstrate understanding of all HTML, CSS, and JavaScript topics covered throughout the course
- Apply knowledge gained during the course by building a website from scratch
- Combine technical and design skills to create a website that is compatible with modern browsers and devices

We encourage you to exercise your creativity; instructors will validate feasibility and manage scope.

UNITS

UNIT 1: HTML / CSS BASICS	▸ HTML Basics	Lesson 1
	▸ CSS Basics	Lesson 2
	▸ Box Model	Lesson 3
	▸ Layout	Lesson 4
	▸ Layout Lab	Lesson 5
	▸ HTML & CSS Lab	Lesson 6
UNIT 2: ADDING INTERACTIVITY	▸ Introduction to Programming	Lesson 7
	▸ Introduction to jQuery	Lesson 8
	▸ Variables and Conditionals	Lesson 9
	▸ Functions	Lesson 10
	• Arrays (optional lesson)	Lesson 10a
	▸ Programming Lab	Lesson 11
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UNIT 3: BUILDING IN CONCERT	▸ Responsive Design Basics	Lesson 13
	▸ Responsive Design Lab	Lesson 14
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1 HTML/CSS BASICS

1 HTML BASICS

- Apply HTML tags (e.g., <html>, <head>, <!DOCTYPE html>, <body>) to a web page and experiment with HTML tags.
- Describe the DOM and draw a simple DOM tree.
- Create and link an external style sheet.

2 CSS BASICS

- Apply and explain CSS “cascade” including: importance, specificity and inheritance.
- Describe the DOM and draw simple DOM tree.
- Predict image paths and apply relative paths to <img> and <a> tags.
- Experiment with margin and border.

3 BOX MODELS

- Define the CSS box model and demonstrate the ability to properly manipulate the "box" around tags.
- Select nested elements to apply styling.
- Apply inline and block attributes to a page.
- Describe and identify use cases for normalize.css and reset.css files.

4 LAYOUT

- Draw the DOM tree for web pages containing and <section>.
- Apply header, footer, sidebar, and multi-column layouts to develop a web page.
- Experiment and predict the effects of floats and clearing CSS positioning.

5 LAYOUT LAB

- Apply floats and clearing techniques to effectively create a two-column layout.

6 HTML & CSS LAB

- Practice web development by transforming a design composition into an HTML and CSS web page.

2 ADDING INTERACTIVITY

7 INTRODUCTION TO PROGRAMMING

- Practice programmatic thinking by writing pseudocode to solve a basic problem.
- Define website behavior and the practical uses of JavaScript.
- Predict DOM output/changes by reading JS code.

8 INTRODUCTION TO JQUERY

- Differentiate between jQuery and JavaScript, and describe benefits of using them.
- Recognize jQuery syntax.
- Use selectors and jQuery functions to effectively manipulate the DOM.

9 VARIABLES AND CONDITIONALS

- Define variables and identify best cases in which to use them.
- Differentiate between strings, integers, and floats.
- Apply conditionals to change a program's control flow.

10 FUNCTIONS

- Describe arguments as they relate to functions.
- Predict values returned by a given function.
- Differentiate control flow between anonymous and named functions.

10A ARRAYS (OPTIONAL LESSON)

- Apply JavaScript and jQuery knowledge to program a carousel.
- Define arrays and collections.
- Practice using index values to access array elements.

11 PROGRAMMING LAB

- Apply programming skills to plan and build a card-matching game.

2 ADDING INTERACTIVITY (CTD)

12 REFACTORING

- Apply switch blocks as a replacement for if...else if...else statements.
- Describe the concept of "this" as it applies within jQuery anonymous functions.
- Define refactoring and describe why it is important.
- Learn the basics of CSS/JS refactoring and how to apply these concepts to your own code.
- Know the different ways to debug code and how to apply the concepts to your own code.

3 BUILDING IN CONCERT

13 RESPONSIVE DESIGN BASICS

- Articulate that responsive design is more about design than code.
- Know the difference between fixed and responsive layouts, and understand the difference between fluid and elastic layouts.
- Apply media queries to websites to achieve a responsive layout.
- Implement media queries to change layout on mobile devices.

14 RESPONSIVE DESIGN LAB

- Analyze a web page in order to be able to redesign it responsively.
- Practice reusing previous code.
- Apply media queries for responsive design.

15 WEB FORMS

- Differentiate the different types of inputs, along with why and where we would use each.
- Explain how to group elements by name.
- Perform pseudo-styling of input elements that the browser won't let us directly style.
- Optional: Apply the ‘method’, ‘action’, and ‘enctype’ attributes.

16 WEB FORMS LAB

- Apply all skills learned thus far to create a to-do list application.

3 BUILDING IN CONCERT (CTD)

17 FINAL PROJECT WORK SESSION

18 STUDENTS' CHOICE

19 INSTRUCTOR'S CHOICE

20 FINAL PROJECT PRESENTATIONS

FAQS

WHY IS THIS COURSE RELEVANT TODAY?

Literacy in the basics of web development (HTML, CSS, and JavaScript) is critical in today's tech-driven world. Most products and companies have a digital component, and more and more professionals work closely with technical teams. Designers and journalists — along with many others — can gain a competitive edge by learning web development skills. Use it to bring your ideas to life online to the digital space, make edits and updates to your own website, and and communicate more effectively with technical stakeholders.

WHAT PRACTICAL SKILL SETS CAN I EXPECT TO HAVE UPON COMPLETION OF THE COURSE?

Our Front-End Web Development course is designed to teach students how to quickly translate their ideas into functional, stylized websites for personal or business use. This course enables them to create a site with the user in mind, become more innovative in their current job role, and master the technical vocabulary to communicate their ideas to others.

WHAT KIND OF COMMUNITY WILL I FIND IN THIS COURSE?

This course attracts eager learners whose professional backgrounds span blogging, design, product management, marketing, and more. These students are often looking to apply marketing skills to their current jobs or take the first step toward breaking into the web development world. The General Assembly experience creates lasting friendships and collaborations that will support you throughout a lifetime of discovery.

ARE THERE ANY PREREQUISITES FOR THIS COURSE?

No, there are no prerequisites for the course.

WILL THERE BE ANY PRE-WORK?

Yes, students must download a browser and text editor.

SHOULD I COME EQUIPPED WITH ANYTHING?

A laptop (Macs are preferred, but PCs are OK).

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