

Techdegree Curriculum

# Front-End Web Development



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Build a portfolio, create a network,  
and land your dream job.

[teamtreehouse.com/techdegree](https://teamtreehouse.com/techdegree)

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# Welcome



Treehouse's Techdegree program is a structured, self-paced, online learning program that's designed to give you entry-level job skills as a Front-End Web Developer in as little as 4 months. As a Front-End Web Developer, you'll work with HTML, CSS, and JavaScript- the fundamental building blocks of the web- to create engaging and interactive websites. The Techdegree, developed by industry professionals, starts at the beginning giving you a firm foundation in HTML. You'll then learn CSS, or Cascading Style Sheets, the styling language used to make beautiful websites. Rounding out your education, you'll learn JavaScript- the world's most popular programming language. JavaScript lets you develop fun and interactive experiences on the web.

This program is a unique online learning environment which engages students through video, written instruction, interactive quizzes, code challenges, a live support community and an engaging set of projects which help you master

## Bootcamp-style program that prepares you for a high-paying career in tech

your newly learned skills and build out a polished portfolio of professional quality projects. The Techdegree curriculum is structured into units that each teach a core concept, skill, language component or framework. You'll learn by watching videos; reinforce your learning with quizzes and interactive code challenges; apply what you've learned in mini-practices sessions, and finally, apply all that you've learned in a challenging project that's individually graded with feedback.

When you've completed the 9 projects in this Techdegree, and passed the final exam, you'll receive a certificate of accomplishment from Treehouse, and have the skills that better prepare you for an entry-level job as a Front-End Web Developer.

# Designed For Success

Online learning can be challenging, and we know it can be tough to learn on your own. Fortunately, we've created more than just a great set of web development courses. We've made a program that provides support, guidance, and flexibility to fit your busy lifestyle.



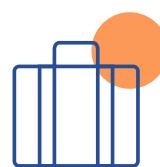
## Key Benefits of the Techdegree Program



Study at your own pace



Live support and an online community



Study and career guidance



A professional and finished portfolio

# Our Mission

Treehouse strives to create inclusive and accessible education in order to empower people to achieve their dreams. Since 2011, we've taught over 650,000 people how to code and design, and our goal is to create lasting, systemic change in tech. Treehouse courses and programs use competency-based learning to enforce what students are learning. We've rethought the learning process and built a proven system to get you the skills and knowledge you need to accomplish your goals. We use gamification, which is scientifically proven to increase motivation: stay on track with our points system, badges, and weekly activity log. When you're done with a course, you haven't just watched a video—you learned, practiced, and absorbed a concept. Plus, Techdegree takes you through an immersive project at the end of each unit—so you'll have a ready-to-show portfolio of work as soon as you're done. Techdegree, like all our programs, is designed with beginners in

**We designed this program to be an accessible alternative to bootcamps**



**Treehouse's mission is to diversify the tech industry through online-learning**

mind—however, if you're starting out with some knowledge but want to level-up, Techdegree provides current and relevant skills in order to help get you where you need to be. And no matter what your prior experience level is, you'll benefit from the Techdegree Slack, a vibrant online community where you can ask questions and network with fellow students. Treehouse support staff are available for tips and encouragement, and you'll have weekly office hours, too.

In order to diversify the tech industry, we realized there needed to be a program that was completely beginner-friendly, wouldn't result in student debt, and wouldn't require any payment back. Many bootcamps cost thousands of dollars; or, worse, require a cut of graduates' salaries after they land a job. With Techdegree, you'll get high-quality courses, robust learning support, and career knowledge, at a fraction of the cost of bootcamps.

# Units & Overview

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**Unit 1** HyperText Markup Language (HTML)

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**Unit 2** Cascading Style Sheets (CSS)

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**Unit 3** Tables, Forms, and Flexbox

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**Unit 4** Introducing the Command Line, Git, and Sass

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**Unit 5** CSS Grid and Javascript

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**Unit 6** JavaScript and the DOM

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**Unit 7** SVGs and CSS Grid

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**Unit 8** Interacting With an API

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**Unit 9** Build Your Professional Portfolio

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## Unit 1

# HyperText Markup Language (HTML)

Learn the basics of building web pages using HTML and CSS.

- Learn the basics of how the web works and where Front End Web Development fits within the tech career landscape
  - Start coding with HTML and CSS
  - Learn how to add images to websites
  - Master the basic HTML tags and CSS selectors
- .....

## Project 1: Build a Personal Profile Page

Practice HTML and CSS, while rebuilding a web page to match your own personal presentation and vision.

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## ..... Unit 2

# Cascading Style Sheets (CSS)

Dive deeper into Cascading Style Sheets. CSS is the styling language of the web letting you add color, design web pages, structure content and create complex and compelling visuals.

- Learn advanced CSS concepts such as selectors and how styles interact so you can be a more efficient developer
- Learn multiple techniques for creating a web page with CSS, including how to create boxes, columns, and structure the layout of a page design
- Create web pages that work well and look good on different devices from mobile phones to tablets to desktop computers
- Use debugging strategies to inspect your designs, and quickly find and fix problems

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## Project 2: Build a Responsive Layout

You'll master mobile-first responsive web design by building a home page with graphics, links, and navigation that adjusts to fit the size of the viewer's device. In other words, you'll build a page that looks different on hand-held devices, tablets, laptops, and desktop computers.

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## ..... Unit 3

# Tables, Forms, and Flexbox

Learn important HTML elements for presenting data and retrieving information from website visitors using HTML tables and forms. Develop an accessible website that meets the requirements of the Web Content Accessibility Guidelines (WCAG). You'll also be introduced to Flexbox- a CSS technique to design flexible pages.

- Create and format HTML tables using rows, cells, head, body, foot, and caption elements
- Build HTML forms to accept user input with text boxes, menus, checkboxes
- Improve your CSS skills and write more efficient code by employing DRY (don't repeat yourself) principles
- Use CSS Flexbox to make positioning items on a web page easier, more reliable and attractive

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### Project 3: Build an Online Registration Form

Create a newsletter signup form for an online magazine using text fields, checkboxes, and buttons. Your form will work well on mobile phones, too.

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## ..... Unit 4

# Introducing the Command Line, Git, and Sass

Get started with the world's most popular programming language, JavaScript, and begin turning your web pages into interactive experiences. You'll learn powerful, professional tools to help you create CSS more efficiently and get started with tools used by developers.

- Learn the history, evolution, and uses for JavaScript
  - Get introduced to JavaScript by building a game
  - Dive deeper into Git and learn to manage code in projects
  - Learn Sass, a tool used by professional Front End Web Developers to write more efficient, manageable and powerful CSS code
- .....

## Project 4: Build a Web Style Guide

A style guide is a document which defines the accepted styles and design principles for a company. They're commonly used in companies to help create consistent designs for web and mobile design. Use Sass and CSS to create your own style guide.



## ..... Unit 5

# CSS Grid and JavaScript

You'll dive deeper into JavaScript by learning the fundamentals of programming, practice creating variables, functions and control structures.

- Learn programming concepts like variables, values, control structures and functions
- Learn JavaScript Objects, JSON and array methods
- Learn Principles of DRY programming

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#### Project 5: Build an Interactive Photo Gallery

Interactive image galleries are a common feature of many websites, from photo sites to e-commerce applications. Use HTML, CSS and the popular programming language JavaScript to create an interactive, searchable gallery of photos.

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## ..... Unit 6

# JavaScript and the DOM

Dive into the heart of interactivity web page programming by learning how the DOM (document object model) works, and how to write JavaScript to dynamically and interactively update the appearance, content, and functionality of a web page.

- Learn and apply JavaScript arrow syntax to create functions
  - Learn what the DOM is; how it works; and how to use JavaScript to control it
  - Intermediate debugging using exceptions, breaks and monitoring DOM changes
  - Program JavaScript to respond to browser events and respond to user interaction
  - Dynamically update the HTML on web pages using JavaScript
- .....

## Project 6: Build a Game Show App

Use JavaScript to create an interactive, web-based, guess game where players click letters from an onscreen keyboard to try to guess a random phrase.



## ..... Unit 7

# SVGs and CSS Grid

**Building a web page with beautiful graphics and a strong layout is an important skill for a Front-End Web Developer.** In this unit, you'll learn about the popular SVG image format and how it can help create better looking and faster-loading images. You'll also get started with CSS Grid.

- Learn about SVG graphics file format and how to embed them into web pages
  - Create web animation effects using SVGs and CSS
  - Use CSS Grid to create flexible and complex web layouts more simply
- .....

## Project 7: Build a Web App Dashboard

Build an interactive dashboard for a web application using advanced web techniques including SVG graphics and JavaScript programming. The project involves creating tables, charts, graphics and other user interface components in a manner that promotes interactivity and usability.



## ..... Unit 8

# Interacting With an API

**Being able to grab data from other websites through an application program interface, or API, has become an essential skill in modern web development. In this unit, you'll learn how to use fetch to grab information from another website. Then you will manipulate this data using JavaScript to dynamically display it in your own pages.**

- Write object-oriented JavaScript to create professional, efficient and reusable code
- Create callbacks for code that responds to timers, user actions, and requests from web servers
- Learn how to communicate with web servers using AJAX and retrieve information from third-party APIs.

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### Project 8: Use an API to Create an Employee Directory

Many sites (Twitter, Facebook, IMDB, Wikipedia, etc.) offer a vast sea of data that you can access and display on your own web pages. Using JavaScript, you'll create an employee directory by communicating with a third-party API (Application Programming Interface).

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## ..... Unit 9

# Build Your Professional Portfolio

Now it's time to let your talents shine and bring together all of the projects you've created and skills you've built to create a professional portfolio that you can share with potential employers and the world.

- Learn how to host websites for free using GitHub
  - Use the Bootstrap front end web framework to quickly build web prototypes, websites, and web applications
- .....

## Project 9: Your Portfolio

In this final project, you'll build an online portfolio to showcase the work you've created as part of this program and any projects you've built on your own. Bring all of your talents with HTML, CSS, and JavaScript together to create a fun and interactive online portfolio. You'll host the portfolio site on the web either using a traditional web hosting company or using free GitHub Pages hosting.

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## Additional Coursework

# Communication and Soft Skills

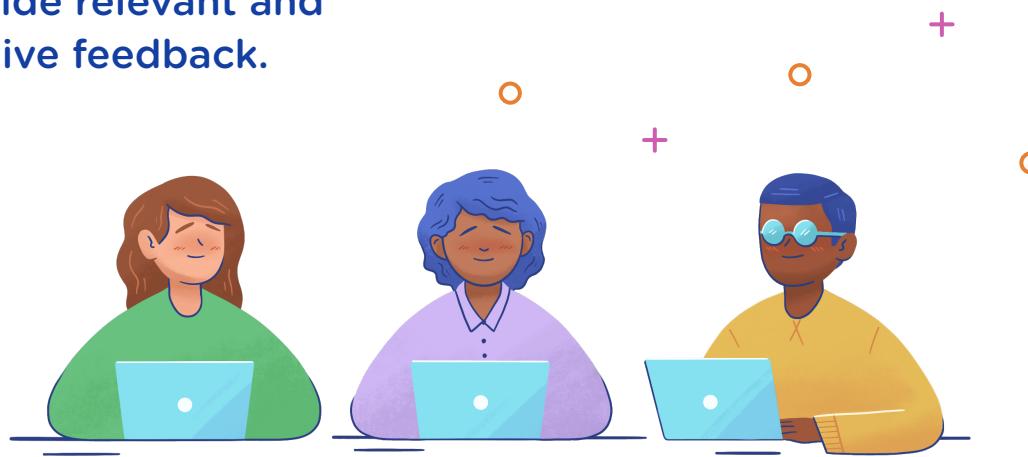
In addition to the technical curriculum detailed above, we also teach general communication and career guidance courses:

- Slack for the Treehouse Techdegree so you can learn how to use a popular communication tool used in the tech industry
  - How to ask a technical question to get the answer you need
  - How to Learn: Strategies and techniques to learn better and faster
  - Career Help: Courses and workshops to help you create a resume, build a professional network, create a professional, social profile and organize your job search
- .....

As a Techdegree student, you also have access to hundreds of other courses, workshops and learning material on Treehouse, like mobile app development, web design, UX, and much more.

# Assessment

Our instructors are real-world tech professionals who provide relevant and constructive feedback.



The Techdegree program features project-based learning which allows you to put the skills you are developing to use by building projects of ever-increasing complexity. Each of the projects you build will be individually reviewed using a detailed grading rubric that is unique to that project. In addition to an overall grade of Exceeds Expectations, Meets Expectations, or Needs Work, you will receive personalized written feedback on your project. If your project is marked as Needs Work, don't worry. You will have the opportunity to

address the issues and resubmit the project for additional review. Along with building projects, you will demonstrate your growing skillset by completing quizzes and code challenges as you progress through the Techdegree, culminating in a Final Exam. The Final Exam is your chance to showcase everything you have learned through the Techdegree. To successfully pass the Final Exam, you will need to get at least 70% of the questions correct. If you fall short of that mark you can study up and retake the exam as soon as the next day.

# Career Statistics

After receiving your Techdegree you will be ready to start your new career journey within the tech industry! Here is a quick glance at some of the opportunities you will have as an entry-level Front-End Web Developer.

## Day to Day Tasks as a Front-End Web Developer

- Visual website updates
- Light work with APIs
- Converting designs into code

  
**\$67,437**

Per year for an entry-level role,  
according to glassdoor.com

An average entry-level Front-End Web Developer role will earn you +\$10,000 more annually than the National Average Wage Index,



The tech industry has been growing year-over-year and shows no sign of slowing down, with new technologies being developed every day.

# Testimonials

The Slack community for Techdegree is so supportive and fun. Treehouse does a great job of updating courses and content. Peer reviews are invaluable, and the projects themselves are also really good.

- Samantha A.

Hey folks, it's been two months after completing the FEWD Techdegree and I was just offered a full-time Web Developer position with a company. Please don't give up!

- Christopher C.



One of the things that has always held me back from learning to code is the pretentious attitude of many developers... I love how Treehouse does not have that gatekeeping mentality, and makes code approachable and open to everyone.

- Rhys M.

# Partnerships

We work with a variety of tech companies to ensure that our students are receiving the most relevant and up-to-date education.



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## Companies We Work With

**HubSpot**

**verizon<sup>✓</sup>**

**mailchimp**

**ezcater**

**Chegg<sup>®</sup>**

**vacasa**

**toast**



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