



Front End Web Development Syllabus

Instructor

JORDAN PAPALEO

Email: jordan@elevate.blue

Twitter: [@jordanpapaleo](https://twitter.com/jordanpapaleo)

Github: <https://github.com/jordanpapaleo>

Course Overview

Our market-aligned curriculum focuses on the skills needed to be a proficient front end Developer. Over the course of 6 weeks, students will code in HTML, CSS, and JavaScript; industry standard tools and services to build and publish websites.

This beginner level course will teach the fundamentals of front end web development and professional workflow using GIT, CLI, HTML5, CSS3, JavaScript, and jQuery.

Students are expected to have a general knowledge of computers, opening, saving files, etc. Students will need a personal laptop computer for this course. Macs are highly encouraged as there may be some differences between the PC and Mac commands that will be demonstrated. Students can expect to commit to a minimum of 9 hours per week on this course in class having both lectures and labs. Additional tasks will be assigned to deepen the understanding of topics presented in class. Students should expect to spend a minimum of additional 4 hours a week working on projects. Languages are only learned through repetition.

An approx. total of 75+ hours to complete this course in 6 weeks.

Unit 1 - Getting Setup

This is a great the first session for anyone interested in learning web topics. It is really a foundational course as we will get your developer environment setup on your computer, discuss a lot of the common workflow processes, and introduce you basic but super common steps in debugging.

- Editors and Environments
- Terminal
- Version Control
 - git
 - Github
- Creating your first repository.
 - Git init
 - GH new Repo
- GIT Practice
 - Push

- Pull
 - Clone
 - Update
- Chrome Developer Tools
 - Elements
 - Console
 - Network
- What makes an app
 - Front end
 - Back end
 - Data
 - API
 - Third party dependencies
- Project/Folder Structure

Unit 2 - Intro to HTML

- HTML, XHTML, XML
- Comments
- Semantics
- Page Structure
 - DOCTYPE
 - head
 - body
- Text (Use a mockup for the content)
 - Headers
 - Paragraphs
 - Emphasis & Strong
 - Special Characters (HTML Encoded)
- Images
- Lists
 - Unordered Lists
 - Ordered Lists
 - Definition Lists
- Container elements
 - div, span, header, footer, section, article, nav, aside

Unit 3 - HTML 1

Links

- Anchors
 - Pages links
 - Page sections
 - External Pages

- Downloadable resources
- Buttons
 - Basic
 - Submit
 - Reset

Tables

- headers
- body
- rows, columns, joining

Unit 4 - HTML 2

Forms

- Validation

Unit 5 - Intro CSS

This course goes over the basics of Cascading Style Sheets (CSS) which is one of the major components in web development and web design. It allows you to control how a site and/or application will look. With CSS, you can control things like the layout, colors, and font sizes. You'll learn the basics of CSS, including how it works, how to make changes to visuals of your site, and even get into some semi-advanced techniques for controlling content.

- Purpose of CSS
- Ways to style
 - Inline Styles
 - Style Tags
 - External files
 - Style placement (FOUC)
- Basic Selectors
 - IDs and Classes
 - Combination Selectors
 - Pseudo Selectors
- Basics
 - Sizing
 - Units [px, em, %, etc]
 - Coloring
 - rgb, rgba, hex, hsl
 - Specificity
 - Naming semantics
 - Reusability

- Maintainability
- Spacing
 - Box Model
 - Padding, margin, border
- Text
 - Size
 - Font family
 - Text transforms

Unit 6 - CSS 1

- Display
 - Block, Inline, Inline-Block
- Centering Techniques
 - Inline
 - Horizontal Margin
 - Vertical
- Layout
 - Float
 - Clear
 - Clearfix
- Positioning
 - Relative
 - Fixed
 - Absolute
- Layout Grids
- Flexbox

Unit 7 - CSS 2

- Front End Performance
 - Repaint
 - Reflow
- Preprocessing
 - SASS, LESS
- Responsive Web Design
 - Media Queries gallery
- Libraries
 - Normalizer

- Modernizr

Unit 8 - Using BootStrap

- Overview of using bootstrap

Unit 9 - Intro JavaScript

JavaScript (also known as JS) is one of the core pillars in developing for the modern web. It allows you to define how users can interact with your applications on the client-side and can also be used to define the server code. Javascript is one of the major components of building web applications. HTML defines content, CSS defines what the content looks like, and JavaScript provides interactivity to our users.

- What is programming
 - Instructions
- Variables (Primitives)
 - String
 - Number
 - Boolean
 - Null and Undefined
- Boolean logic
 - If Statements
 - Else If
 - Not Equal
 - Less Than, Greater Than
 - Less Than or Equal to, Greater Than or Equal To
 - Advanced Conditionals

Unit 10 - JavaScript 1

This unit will cover JavaScript flow control by introducing functions and loops. We will also look at using jQuery to gather data and retrieve form input

- Data Structures
 - Arrays
 - Objects
- Iterative Logic
 - For Loops
 - while

- do while
 - for in
 - for of
 - for each
 - Number incrementing
- Functions
 - Named Function
 - Callbacks
 - Scope
 - Pure vs Impure Functions
 - Context (this)
- String Methods
- Array Methods

Unit 11 - JavaScript 2

Math

Unit 12 - JavaScript 3

- Selectors
 - Basic Selectors
 - Saving Selectors
- DOM Traversal
- Class Manipulation [add, remove, and toggle class]
- Attribute manipulation
- Editing Contents
- Element Creation
 - Inserting into the DOM
- Manipulating Elements
- Cloning elements
- Removing elements
- Events handling

jQuery

- Selectors
- Method Chaining
- DOM Traversal
- Element Creation
 - Adding new elements [append, prepend, before...

Unit 13 - JavaScript 4

- Statements vs. Expressions
- If vs Ternary
- Functional Programming
- Map
- Filter
- Lodash
- Debugging

Unit 14 - JavaScript 5

This unit will cover object oriented programming in JavaScript. We will look at creating objects, constructors, and getting objects to talk to one another.

- Object Oriented JavaScript
- Inheritance
- ES6 Classes

Unit 15 - JavaScript 6

- ES6
- Babel & Transpiling
- Intro to Single page applications
 - React, Angular, Backbone, Knockout

Unit 16 - JavaScript 7

This unit will cover JSON and AJAX which will allow us to make asynchronous requests. We will also explore APIs, frameworks, and site publishing using FTP and SSH.

- Apis
- JSON
- AJAX

Unit 17 - JavaScript 8

- Tooling

- Deploying a site

Unit 18 - JavaScript 9

- Testing
- Code Quality