

# Beginning Programming Syllabus

## Overview

Learn the basics of building apps and sites for the internet. It may seem basic, but all web apps, like Facebook, Instagram, Tik Tok, and even Spotify, are built with the framework of HTML, CSS, and JavaScript.

Learning these three core components of the web will give you a foundation for creating anything that will be displayed in a web browser. Not only that, but it gives you a great introduction into the world of coding that you can take into any coding language you desire to learn.

## Part One: HTML

We will go over the basics of what HTML is and how it creates the framework for any web app or website. You will learn the different elements of HTML, how it creates pages for a browser, and how to structure your pages for the best display based on the device on which you view it.

- Introduction to HTML
  - The history of HTML
  - How it builds a web page
  - The main framework for any page
  - The information you need to tell the browser
- HTML elements
  - Learn the different elements used to create a web page
  - How to structure elements to create a layout you want
  - Which elements create structure and which are for styling

## Part Two: CSS

Cascading Style Sheets (CSS) is the styling of a site. You will learn how to add color, position, and styling to pages to give a professional look to the page or app you are creating.

- Introduction to CSS
  - The history and overview of how CSS works
  - The basics of CSS and how it works on a web page
  - The main elements used on every page
- Properties and assignment
  - How to create styles using the property: value structure

- Using IDs and classes to assign styles to HTML elements
  - Learn how to focus styles on HTML children using nesting styles
- Responsive design
  - Learn how to use media properties to rework a page on the fly based on the device on which its viewed
  - Focus on mobile-first design
- Linking
  - Learn how to incorporate external stylesheets into a webpage
  - Learn to add libraries like Google Fonts and CSS frameworks

## Part Three: JavaScript

JavaScript is the engine that drives interactivity on a page. It is the code that causes things to happen outside of just a basic plain web page.

- Introduction to JavaScript
  - What is JavaScript?
  - How it functions on a page
- JavaScript elements
  - Creating variables
  - Assigning variables to HTML elements
  - Properties to assign to elements
- JavaScript in action
  - Make actions work on a web page
  - Creating and using functions

## Part Four: Putting it all together

We will create a single-page web app that is a music player. By the end of the year, you will have created a fully-functional web page that displays songs and plays them based on the actions of the user.