

# HackerYou Course Syllabus

## Intro to JavaScript and jQuery

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### CLASS 1

#### Intro to JavaScript

Welcome to Intro to JavaScript & jQuery! Today we'll go over what programming languages are, JS syntax, variables, and script tags. We'll also poke around and get comfortable in the Chrome Dev Tools console.

### CLASS 2

#### Control Flow and Loops

In this class we are all about loops, 'if statements' and Booleans.

### CLASS 3

#### Functions

What's a function, and how is it used? Today we'll review built-in functions, and learn how to create and call our own functions.

### CLASS 4

#### Objects

What's the difference between an array, and an object? We'll dive into other types of objects, arrays, and Booleans today.

### CLASS 5

#### Arrays and Advanced Arrays

Today we'll learn all about arrays! We'll cover creating, sorting, adding, removing, splitting and merging arrays. In the second half of the class, we'll cover more advanced topics such as mapping, filtering, and reducing arrays.

### CLASS 6

#### Project 1

Our first project will call upon everything you've learned so far, including control flow, types, built-in and custom functions, objects, and arrays.

Students can build an app from an existing list, or can create your own!

### CLASS 7

#### Introduction to jQuery

Why should we use jQuery? Today we'll give you an overview of when, where and how you can use jQuery on your pages.

### CLASS 8

#### jQuery II

Getting comfortable with exploring jQuery will include learning events and effects, and working in the jQuery API.

PROJECT ONE

# HackerYou Course Syllabus

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### CLASS 9

ONE

#### jQuery III

Now that you're more comfortable with jQuery, we'll learn data attributes and utility methods, and you'll learn how to create and append elements using jQuery.

### CLASS 10

PROJECT TWO

#### Project II

Our next project will focus on using jQuery to interact with the user's interface. Students can build their own project that incorporates both the jQuery library, and interacts with the HTML (such as a click).

### CLASS 11

#### Transforming Data

When working with data, we often need to tweak and bend it to our needs. Not every array is exactly what we need for every purpose, so in this class, we'll learn native methods and external libraries that help us accomplish this task!

### CLASS 12

#### Developer Tools Extended

To wrap up our intro course, we'll dive deeper into the Dev Tools available at your disposal. These are powerful tools that can help you better debug your websites and applications.

There will be two projects in Introduction to JavaScript & jQuery.

#### PROJECT ONE

Your first project will compile everything you've learned so far! Because it's early on in the course, this project will seem limiting, and we intend it to be! We want you to get comfortable with the core concepts of JavaScript before diving into the HTML interface (project two). Some example projects include: a rock, paper, scissors app, a name generator, or a calorie intake calculator.

#### PROJECT TWO

For this second project, you will build an app that uses the jQuery library, and interacts with HTML using events (such as a click!). This project will focus on the integration of jQuery and HTML, so it should be visually appealing, as well as capable of taking input from the user. Example projects include: invoicing system, flashcard game, or a break timer.

# HackerYou Course Syllabus

## Advanced JavaScript and jQuery

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### CLASS 1

#### **jQuery Plugins**

Welcome to Advanced JavaScript and jQuery! Today we'll learn how to install and read documentation for plugins. You'll learn about flex slider, and we'll cover table sorters and colour pickers.

### CLASS 2

#### **Best Practices, Code Organization and jQuery UI**

As you become more comfortable writing jQuery code, it's a good idea to learn some best practices to help your code be more efficient and organized. Today we'll cover some of the best techniques.

### CLASS 3

#### **HTML5 Video and Audio**

Let's expand your HTML5 knowledge with video and audio. If you're wondering why you haven't learned these before, it's because although they're HTML, they're actually controlled by JavaScript!

### CLASS 4

#### **Hardware Access**

jQuery is just one small part of the JavaScript landscape. There are a lot of other tools that can help us accomplish our tasks. Today we'll learn about how you can allow programs to access a user's webcam and microphone.

### CLASS 5

#### **Mapping and GeoLocation**

Browsers are neat because they can give us the geolocation of a user, and there are a few ways to do this. Today we'll also look at Google Maps and learn to style its API.

### CLASS 6

#### **Introduction to Ajax + APIs**

What's an API? An "Application Programming Interface" is a fancy way of saying: a service that lets two websites talk to each other. Today, let's get chatty on the web!

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## Advanced JavaScript and jQuery

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### CLASS 7

#### Ajax + APIs II

Learning how an API works can take some time. But well-made APIs have a lot of examples and documentation to help you get started. Today, we'll learn how to read that documentation.

### CLASS 8

#### Project III + Promises

Welcome to the final project! This project will encompass everything we've learned so far, so you can be as creative as you want. In this class, we'll also learn about Promises, which are a way for JavaScript to listen for something that needs to be done.

### CLASS 9

#### Review/Worktime

As students prepare their final project, today's a chance for class-directed review and project work time.

### CLASS 10

#### HTML5 Canvas

Students will learn how to utilize the Canvas tag in HTML to draw on the page.

### CLASS 11

#### Firebase

Students will get an introduction to Firebase (a backend as a service platform) that allows you to have persistent data. This is an important component to creating more robust applications.

### CLASS 12

#### Charting

In our final class, students will learn how to use a popular charting tool to display their data in a meaningful way.

PROJECT ONE

There will be one project in Advanced JavaScript & jQuery.

#### PROJECT THREE

This project will encompass everything we've learned so far. This is your time to push yourself and show off what you've learned. Your only requirement is to challenge yourself!