alchemy [university]

**All courses**  ❯  JS  Learn JavaScript

# Learn

3 week crash course to learn how to code and become a JavaScript expert, a core foundation to web3 development. No experience necessary.

**49 lessons**

**Beginner skill level**

**No pre-requisite**

▶

**Start course**

**Join 18K+ enrolled students**

# About the

This JavaScript crash course covers the basics of programming through advanced topics like asynchronous requests and promises. The most used developer tools and libraries for Ethereum are JavaScript based, making it a key foundation to web3 development.
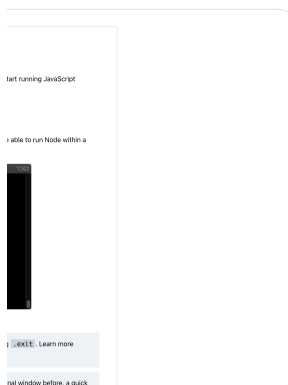
Recommended but not required for the Ethereum Dev. Bootcamp!
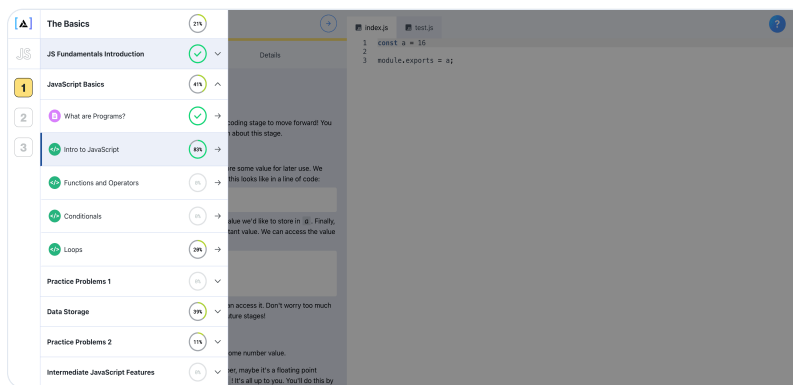
## Skills you'll obtain

**Master JavaScript**
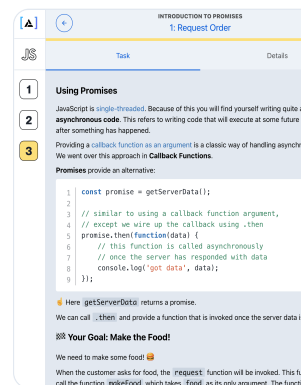
**Coding Basics**

**Server Setup**

er    Learn JavaScript syntax    Write

# Student

> JS gets you running with coding in one of the most popular programming languages in the world. Great start prior to jumping into EVM development.

**Alvaro L., @Alchemy**

Developer Relations

# Syllabus

50 lessons

## The Basics ⌃

Learn Coding Basics in JavaScript

**34 lessons**

### JS Fundamentals Introduction: ⌃
Itemized advice on maximizing your AU learning experience!

📄 **JS 101: Tips & Tricks**

### JavaScript Basics: ⌃
Starting from Square One

📄 **What are Programs?**

</> **Intro to JavaScript**

- </> **Functions and Operators**

- </> **Conditionals**

- </> **Loops**

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## Practice Problems 1:
Practice JavaScript Basics with these Challenges          ⌃

- </> **Even Numbers**

- </> **Smaller Number**

- </> **Message Interpolation**

- </> **Check Number**

- </> **Max Sum**

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## Data Storage:
Store and Manipulate Data in Basic Structures          ⌃

- </> **String Manipulation**

- </> **Working with Arrays**

- </> **Objects**

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## Practice Problems 2:
Practice your skills with Arrays, Strings and Objects          ⌃

- </> **Shortest String**

- </> **Half Value**

- </> **Count C**

- </> **Count Vowels**

- </> **Reverse**

- </> **Palindrome**

- </> **Sum Together**

- </> **Count the Elements**

- </> **Player Hand Score**

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**Intermediate JavaScript Features:**  ︿
Learn about other key JavaScript Concepts

- </> **Logical Operators**

- </> **Exceptions**

- </> **Type Conversion**

- 🗒 **Destructuring, Spread & Rest**

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**Practice Problems 3:**  ︿
Practice Intermediate JavaScript Concepts

- </> **Either Not Both**

- </> **Fizz Buzz**

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**Classes & Prototypes:**  ︿
Share Functionality across Object Instances

- </> **This Keyword**

- </> **Prototype Chain**

- </>

**Classes**

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### Binary & Hexadecimal: ⌃
Understand the role of these Number Systems in Computer Science

 📄 **Understanding Binary**

 📄 **Working with Hexadecimal**

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# Data Structures ⌃
Learn to Build, Search and Manipulate Data Structures

**8 lessons**

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### Array Manipulation: ⌃
Techniques for Manipulating Lists of Data

 </> **Array Sort**

 </> **Array Map**

 </> **Array Filter**

 </> **Array Reduce**

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### Building Data Structures: ⌃
Build Data Structures and Understand Their Respective Tradeoffs

 </> **Recursion**

 </> **Stacks**

 </> **Linked Lists**

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### Practice Problems: ⌃

Practice your Data Structure Skills

</> **Deep Retrieval**

## Networks ⌃

Writing Code to Communicate Within Networks

**8 lessons**

### Local Development: ⌃
Setup a Local JavaScript Development Environment

📄 **Setup Node.js**

📄 **Node Package Manager**

### Asynchronous JavaScript: ⌃
Write Code that Executes Later

</> **Callback Functions**

</> **Introduction to Promises**

</> **Pact: A Promise Library**

### Building a Server: ⌃
Write Code that Responds to Network Requests

📄 **Running a Node Server**

📄 **An HTML Node Server**

### Wrap Up: ⌃
Course Complete!

**Course Completion**

The web3 development platform

**Products**

Supernode

NFT API

SDK

Webhooks

Custom Webhooks

Websockets

Transfers API

Token API

Transact

Transaction Simulation

Account Abstraction

Spearmint

**Developers**

Docs

Status

Sepolia Faucet

Mumbai Faucet

GWEI Calculator

Create Web3 Dapp

Smart Contracts

Chain Connect

Request a Chain

## Community

Alchemy University

Web3 Jobs

Dapp Store

Overviews

Case Studies

WAGBI Grant

Newsletter

Blog

## Company

About us

Careers

Customers

Newsrooms

Press Kit

Security

Terms of Service

Dapp Store Terms

Privacy Policy

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Discord