

The Complete Full-Stack Web Development Bootcamp

Learn HTML, CSS, JavaScript, Node, React, PostgreSQL, Web3 and DApps in One Course for Beginners and Career Changers.

Programming Instructor: Jordan Taylor • 5 sections • 56 lessons • 18.25h total

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About this course

Many web development courses focus on a single technology, leaving gaps in your skills and forcing you to piece together multiple resources. This bootcamp solves that by covering the full stack from frontend basics to blockchain applications, so you can build complete, modern websites and apps with confidence.

You'll progress through video lessons, real-world case studies, and hands-on projects. Starting with HTML, CSS, and JavaScript, you'll move to backend development with Node.js and PostgreSQL, master React for dynamic frontends, and finish with Web3 and decentralized applications. The course includes projects like a portfolio site, a to-do app, a REST API, a single-page application, and a capstone DApp.

Course curriculum

Frontend Foundations - HTML & CSS

- **Introduction to Web Development and HTML Basics (12m)**
Get started with web development fundamentals and learn how to structure pages using HTML elements.
- **Semantic HTML5 Elements for Structured Pages (18m)**
Use semantic tags to improve accessibility and SEO in your web pages.
- **CSS Fundamentals: Selectors, Properties, and Box Model (25m)**
Master the core concepts of CSS to style your HTML content effectively.
- **Modern Layouts with Flexbox (18m)**
Create flexible and responsive layouts using CSS Flexbox.
- **CSS Grid for Complex Layouts (25m)**
Build grid-based layouts for advanced page designs.
- **Custom Properties and CSS Variables (12m)**
Learn to use CSS custom properties for maintainable and dynamic styles.
- **Responsive Design and Mobile-First Workflow (18m)**
Ensure your sites work on all devices with responsive design techniques.
- **Accessibility Best Practices (WCAG Compliance) (12m)**
Make your web content accessible to all users following WCAG guidelines.
- **Project: Build and Deploy a Responsive Portfolio Site (32m)**
Apply all frontend skills to create and deploy a personal portfolio website.

Programming with JavaScript

- **JavaScript Basics: Variables and Data Types (18m)**
Start with JavaScript fundamentals, including variables, data types, and operators.
- **Functions and Control Flow (25m)**
Learn to write functions and control program flow with conditionals and loops.
- **Working with the DOM (18m)**
Manipulate the Document Object Model to dynamically update web pages.
- **Event Handling and Browser Events (12m)**
Handle user interactions through events and event listeners.
- **Form Validation Techniques (18m)**
Validate user input in forms for better user experience and security.
- **ES2026+ Features: Modules and Destructuring (18m)**
Use modern JavaScript features like modules and destructuring for cleaner code.
- **Async/Await and Promises (25m)**
Manage asynchronous operations with Promises and async/await syntax.
- **Iterators and Generators (12m)**
Understand iterators and generators for efficient data handling.

- **Algorithmic Thinking and Problem-Solving (18m)**
Develop problem-solving skills with algorithmic challenges.
- **Project: Building an Interactive To-Do App (32m)**
Create a to-do application with local storage to practice JavaScript skills.

Backend Development with Node.js & PostgreSQL

- **Introduction to Node.js and Server-Side Programming (12m)**
Get started with Node.js for building server-side applications.
- **Setting Up Express for Web Servers (18m)**
Learn to create web servers using the Express framework.
- **Designing RESTful APIs (25m)**
Design and structure RESTful APIs for web applications.
- **Middleware and Request Processing (18m)**
Use middleware functions to process requests and responses.
- **Implementing Authentication with JWT (25m)**
Secure your APIs with JSON Web Tokens for authentication.
- **PostgreSQL Basics and Database Design (18m)**
Learn relational database concepts and design tables in PostgreSQL.
- **Writing SQL Queries and Managing Data (25m)**
Write SQL queries to perform CRUD operations on your database.
- **Environment Configuration and Security Practices (12m)**
Set up environment variables and implement security best practices.
- **Error Handling and Debugging (12m)**
Handle errors gracefully and debug backend applications.
- **Project: Building a REST API with Auth and Database (32m)**
Build a complete REST API with user authentication and database integration.

Frontend Frameworks - React

- **Introduction to React and Component-Based Architecture (12m)**
Understand the fundamentals of React and how components work.
- **JSX Syntax and Rendering Elements (18m)**
Learn JSX to write HTML-like code in JavaScript.
- **Props and Component Composition (18m)**
Pass data between components using props.
- **State Management with useState (18m)**
Manage component state using the useState hook.
- **Handling Side Effects with useEffect (25m)**
Use the useEffect hook for side effects like data fetching.
- **Context API for Global State (18m)**
Share state across components without prop drilling using Context API.
- **Modern State Libraries (e.g., Zustand or Recoil) (12m)**
Explore state management libraries for complex applications.

- **Client-Side Routing with React Router (18m)**
Implement navigation in single-page applications with React Router.
- **Data Fetching and API Integration (25m)**
Fetch data from APIs and integrate it into React components.
- **Performance Optimization Techniques (18m)**
Optimize React app performance with memoization and lazy loading.
- **Code-Splitting and Lazy Loading (12m)**
Split code bundles for faster loading times.
- **Testing React Components with Modern Tools (18m)**
Write tests for React components using Jest and React Testing Library.
- **Project: Developing a Single-Page Application (32m)**
Build a full-featured SPA that consumes your backend API.

Full-Stack Integration, Web3 & DApps

- **Connecting Frontend and Backend in a MERN-Stack App (18m)**
Integrate React frontend with Node.js backend for a full-stack application.
- **Deployment Strategies for Web Applications (25m)**
Learn various deployment methods for web apps.
- **Cloud Hosting Platforms and Setup (18m)**
Set up and deploy on cloud platforms like AWS or Azure.
- **Continuous Integration and Delivery (CI/CD) Pipelines (25m)**
Automate testing and deployment with CI/CD pipelines.
- **Containerization with Docker (25m)**
Containerize your applications using Docker for consistent environments.
- **Introduction to Blockchain and Ethereum (12m)**
Understand blockchain technology and the Ethereum network.
- **Setting Up Wallets and Interacting with Blockchain (18m)**
Create and use cryptocurrency wallets for blockchain interactions.
- **Smart Contracts with Solidity Basics (25m)**
Write basic smart contracts using the Solidity language.
- **Advanced Smart Contract Development (18m)**
Develop more complex smart contracts with advanced features.
- **Building DApps with Web3.js or ethers.js (25m)**
Connect to Ethereum from web apps using Web3.js or ethers.js.
- **Decentralized Storage with IPFS (12m)**
Use IPFS for decentralized file storage in DApps.
- **Integrating DApps with Traditional Web Frontends (18m)**
Combine DApp functionality with standard web interfaces.
- **Security Considerations in Web3 (12m)**
Address security issues specific to blockchain and DApps.
- **Capstone Project: Designing and Deploying a DApp (32m)**
Design, build, and deploy a complete decentralized application.

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