

# Full-Stack & React Essentials

## Syllabus



Email: [hello@bignerdranch.com](mailto:hello@bignerdranch.com)

P: 770-817-6373

## Course Overview

The web is the ubiquitous app development and content delivery platform. In this 4.5-day course, students craft responsive websites, build a node.js backend, and tame complexity through maintainable user interface components. We give them a solid foundation for today's web technologies: HTML5, CSS3, ES6, Node.js, ReactJS. Students don't leave knowing only those tools; they are prepared to pick up and apply whatever the web ecosystem throws at them in years to come.



### Who Should Take This Course

- Native developers who want to create a web presence that supports an app, grows a user base and collects user feedback.
- Backend developers who need to create full-stack web apps.
- Enterprise developers building apps that need to work on any device or screen.

### Prerequisites

- Basic understanding of object-oriented or functional programming is expected.
- Software development experience is necessary, though it does not have to be with JavaScript.

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## Building Responsive, Mobile-Friendly Websites

- Style and lay out an application with HTML and modern CSS.
- Create a responsive web page with Flexbox and Media Queries.
- Implement visual effects and animation using CSS3 transitions.
- Write JavaScript functions to respond to user interactions with the page.

## Building Backends with Node.js

- Build a simple HTTP server.
- Manage module installation and build steps with npm.

## Creating Web Applications With React

- Split your interfaces into easily-managed, reusable components using the React framework.
- Utilize JSX to describe how the interfaces should be rendered.
- Persist and synchronize state between components using React's Component class.
- Optimize asynchronous data fetching with component lifecycle methods.
- Manage the state of your application using the latest libraries and techniques.
- Manage routing with React Router.

## Writing Effective JavaScript with Design Patterns and Build Tools

- Use HTML5 form elements to create a coffee order form.
- Ensure correct input via the Custom Validity API.
- Access remote server data using AJAX.
- Handle asynchronous events, including data fetching, with Promises and `async/await`