



COURSE SYLLABUS

React JavaScript Programming

Build interactive, maintainable web applications with React components, state management, hooks, client-side routing and unit tests.

\$1,800 per person

18 course hours (on-demand video and labs) plus 1.5 hours of coaching

On-demand asynchronous training with online support, plus 1.5 hours of coaching.

React JavaScript Programming

Build interactive, maintainable web applications with React components, state management, hooks, client-side routing and unit tests.

Credential type	Certificate, issued by We Can Code IT
Clock hours	19.5 (18 course hours plus 1.5 hours of coaching)
Price	\$1,800 per person
Time	18 course hours (on-demand video and labs) plus 1.5 hours of coaching
Delivery	On-demand asynchronous training with online support, plus 1.5 hours of coaching.
Credential	Certificate of completion from We Can Code IT
Who it is for	This course is for front-end and full-stack developers, web designers who code, and back-end developers moving into user interface work.
Prerequisites	Working knowledge of modern JavaScript (ES6 and later): let and const, arrow functions, modules, destructuring, promises and async/await; HTML and CSS
Requirements	Works on Windows, macOS or Linux; Node.js and npm (free); A code editor such as Visual Studio Code (free) and a modern browser

About this course

This course teaches you to build a modern React application as a working JavaScript developer. You will create components, manage state, load data with effects, use the core and custom hooks, add client-side routing, and write unit tests. You finish with a small multi-page React app that loads data from an API and ships with a passing test suite.

What you will be able to do

- You will be able to build React function components with JSX and props, including lists with keys and conditional rendering.
- You will be able to manage component and shared state with useState, useReducer and useContext, including controlled form inputs.
- You will be able to load data from an API with useEffect, handle loading and error states, and extract the logic into a custom hook.
- You will be able to add client-side routing with React Router, including route parameters, query strings and nested layouts.
- You will be able to write unit tests for components with a test runner and React Testing Library, including user events and mocked fetch calls.

Syllabus

Module	Hours
1. Setup, JSX and components Creating a project with a current build tool, JSX, Function components and props, Lists and keys, Conditional rendering. Lab: You will create a new React project and build a product list from reusable components driven by props.	2.5 h
2. State and events useState, Event handling, Controlled form inputs, Lifting state up, Immutable state updates. Lab: You will add a filter form and a shopping cart to your product list, sharing state between components.	2.5 h
3. Effects and data useEffect and its dependencies, Fetching data from an API, Loading and error states, useRef. Lab: You will replace your sample data with data fetched from an API, with clear loading and error messages.	2 h
4. Hooks beyond the basics useContext for shared state, useReducer for complex state, useMemo and useCallback, The rules of hooks, Writing custom hooks. Lab: You will move your cart into a context with a reducer and pull your data loading into a custom hook.	3 h
5. Routing React Router routes, Links and navigation, Route parameters, Query strings, Nested layouts. Lab: You will turn your app into a multi-page site with a shared layout, a detail page per product and a searchable list.	2.5 h
6. Unit testing React A test runner (Vitest or Jest), React Testing Library queries, Simulating user events, Testing async behavior, Mocking fetch. Lab: You will write tests for your components, forms and data loading, including a mocked API call.	3 h
7. Capstone Routed multi-page app, Data loading, Shared state through context, Passing test suite. Lab: You will build a small routed app that loads data, shares state through context and ships with passing tests, then review it with your coach.	2.5 h
Coaching sessions 1.5 hours of coaching. One-on-one or small-group coaching, scheduled with your coach.	1.5 h

Live online or in-person sessions are available for an additional fee. Email admissions@wecancodeit.org for details.

Provider

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