Mastering React | React Foundation (TT4195)

Category: Software Development & Programming | **Vendor:** Trivera Tech

Duration: 40.00 hours (5 days) **32.5 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

Mastering React is a comprehensive hands-on course that aims to be the single most useful resource on getting up to speed quickly with React. Geared for more experienced web developers new to React, this course provides students with the core knowledge and hands-on skills they require to build reliable, powerful React apps. After the first few modules, you ll have a solid understanding of React's fundamentals and will be able to build a wide array of rich, interactive web apps with the framework. The first module is an introduction to the new functionality in ECMAScript 6 (JavaScript). Client-side routing between pages, managing complex state, and heavy API interaction at scale are also covered. This course consists of two parts. In the first part of the course students will explore all the fundamentals with a progressive, example-driven approach. You ll create your first apps, learn how to write components, start handling user interaction, and manage rich forms. We end the first part by exploring the inner workings of Create React App (Facebook's tool for running React apps), writing automated unit tests, and building a multi-page app that uses client-side routing. The latter part of the course moves into more advanced concepts that you ll see used in large, production applications. These concepts explore strategies for data architecture, transport, and management: Redux is a state management paradigm based on the Flux architecture. Redux provides a structure for large state trees and allows you to decouple user interaction in your app from state changes. GraphQL is a powerful, typed, REST API alternative where the client describes the data it needs. Hooks is the powerful, new way to maintain state and properties with functional components and the future of React according to Facebook.

About This Course

Mastering React is a comprehensive hands-on course that aims to be the single most useful resource on getting up to speed quickly with React. Geared for more experienced web developers new to React, this course provides students with the core knowledge and hands-on skills they require to build reliable, powerful React apps. After the first few modules, you ll have a solid understanding of React's fundamentals and will be able to build a wide array of rich, interactive web apps with the framework. The first module is an introduction to the new functionality in ECMAScript 6 (JavaScript). Client-side routing between pages, managing complex state, and heavy API interaction at scale are also covered. This course consists of two parts. In the first part of the course students will explore all the fundamentals with a progressive, example-driven approach. You ll create your first apps, learn how to write components, start handling user interaction, and manage rich forms. We end the first part by exploring the inner workings of Create React App (Facebook's tool for running React apps), writing automated unit tests, and building a multi-page app that uses client-side routing. The latter part of the course moves into more advanced concepts that you ll see used in large, production applications. These concepts explore strategies for data architecture, transport, and management: Redux is a state management paradigm based on the Flux architecture. Redux provides a structure for large state trees and allows you to decouple user interaction in your app from state changes. GraphQL is a powerful, typed, REST API alternative where the client describes the data it needs. Hooks is the powerful, new way to maintain state and properties with functional components and the future of React according to Facebook.

Who Should Attend

This introductory-level, fast-paced course is for skilled web developers new to React who have prior experienced working HTML5, CSS3 and JavaScript.

Prerequisites & Entry Requirements

General Prerequisites:

This fast-paced course is for intermediate skilled web developers new to React who are proficient in HTML5, CSS3 and
JavaScript. This course is not for beginners.

Learning Outcomes

Upon successful completion of this course, participants will be able to:

Our engaging instructors and mentors are highly experienced practitioners who bring years of current 'on-the-job' experience into every classroom. Working in a hands-on learning environment, guided by our expert team, attendees will learn about and explore:

A basic and advanced understanding of React components

An advanced, in-depth knowledge of how React works

A complete understanding of using Redux

How to build, validate, and populate interactive forms

How to use inline styles for perfect looking components

How to test React components

How to build and use components

How to get control of your build process

A deep understanding of data-driven modeling with props and state

How to use client-side routing for pages in your apps

How to debug a React application

Detailed Course Outline

ES6 Primer (Optional)

- Prefer const and let over var
- Arrow functions
- Modules
- Object.assign()
- Template literals
- The spread operator and Rest parameters
- Enhanced object literals
- Default arguments
- Destructuring assignments

Your first React Web Application

- Setting up your development environment
- JavaScript ES6 /ES7
- Getting started
- Whats a component
- Our first component
- Building the App
- Making the App data-driven
- Your apps first interaction
- Updating state and immutability
- Refactoring with the Babel plugin transform-class-properties

JSX and the Virtual DOM

- React Uses a Virtual DOM
- Why Not Modify the Actual DOM
- What is a Virtual DOM
- Virtual DOM Pieces
- ReactElement
- JSX
- JSX Creates Elements
- JSX Attribute Expressions
- JSX Conditional Child Expressions
- JSX Boolean Attributes
- JSX Comments
- JSX Spread Syntax
- JSX Gotchas
- JSX Summary

Components

- A time-logging app
- Getting started
- Breaking the app into components
- The steps for building React apps from scratch
- Updating timers
- Deleting timers
- Adding timing functionality
- Add start and stop functionality
- Methodology review

Advanced Component Configuration with props, state, and children

- ReactComponent
- props are the parameters
- PropTypes
- Default props with getDefaultProps()
- context
- state
- Stateless Components
- Talking to Children Components with props.children

Forms

- Forms 101
- Text Input
- Remote Data
- Async Persistence
- Redux
- Form Modules

Unit Testing & Jest

- Writing tests without a framework
- What is Jest
- Using Jest
- Testing strategies for React applications
- Testing a basic React component with Enzyme
- Writing tests for the food lookup app
- Writing FoodSearch.test.js

Routing

- Whats in a URL
- React Routers core components
- Building the components of react-router
- Dynamic routing with React Router
- Supporting authenticated routes

Intro to Flux and Redux

- Why Flux
- Flux is a Design Pattern
- Flux implementations
- Redux & Reduxs key ideas
- Building a counter
- The core of Redux
- The beginnings of a chat app
- Building the reducer()
- Subscribing to the store
- Connecting Redux to React

Intermediate Redux

- Using createStore() from the redux library
- Representing messages as objects in state
- Introducing threads
- Adding the ThreadTabs component
- Supporting threads in the reducer
- Adding the action OPEN_THREAD
- Breaking up the reducer function
- Adding messagesReducer()
- Defining the initial state in the reducers
- Using combineReducers() from redux

React Hooks

- Motivation behind Hooks
- How Hooks Map to Component Classes
- Using Hooks Requires react 'next'
- useState() Hook Example
- useEffect() Hook Example
- useContext() Hook Example
- Using Custom Hooks

Using Webpack with Create React App

- JavaScript modules
- Create React App
- Exploring Create React App
- Webpack basics
- Making modifications
- Hot reloading; Auto-reloading
- Creating a production build
- Ejecting
- Using Create React App with an API server
- When to use Webpack/Create React App

Using GraphQL

- Your First GraphQL Query
- GraphQL Benefits
- GraphQL vs. REST
- GraphQL vs. SQL
- Relay and GraphQL Frameworks
- Chapter Preview
- Consuming GraphQL
- Exploring With GraphiQL
- GraphQL Syntax 101 .
- Complex Types
- Exploring a Graph
- Graph Nodes ; Viewer
- Graph Connections and Edges
- Mutations
- Subscriptions
- GraphQL With JavaScript
- GraphQL With React

, Your first React Web Application

Setting up your development environment

JavaScript ES6 /ES7

Next.js Introduction

Getting started

Functional Components

What's a component

Functional components - Motivation behind Hooks

Our first component

Building the App

Props - Making the App data-driven

Events - Your app's first interaction with useEffect() Hook

State - Updating state with useState() Hook

JSX and the Virtual DOM

React Uses a Virtual DOM

Why Not Modify the Actual DOM

What is a Virtual DOM

Virtual DOM Pieces

ReactElement

JSX

JSX Creates Elements

JSX Attribute Expressions

JSX Conditional Child Expressions

JSX Boolean Attributes

JSX Comments

JSX Spread Syntax

JSX Gotchas

Forms

Forms 101

Text Input

Multiple fields

Validation

Routing

What's in a URL

React Router's core components

Building the components of react-router

Advanced Component Configuration with context

Context - Provider/Consumer

useContext() Hook Example

Unit Testing & Jest

Writing tests without a framework

What is Jest

Using Jest

Testing strategies for React applications

React Testing Library

Debugging React

Using React Developer Tools

Using Visual Studio Code

OPTIONAL - Using the Chrome Debugger

React Custom Hooks

Writing and Using Custom Hooks

REST

REST Basics

Using fetch

Using Axios

A larger Component React Application:

A time-logging app

Getting started

Breaking the app into components

The steps for building React apps from scratch

Step 2: Build a static version of the app

Step 3: Determine what should be stateful

Step 4: Determine in which component each piece of state should live

Step 5: Hard-code initial states

Step 6: Add inverse data flow

Updating timers

Deleting timers

Adding timing functionality

Add start and stop functionality

Methodology review

Flux and Redux Basics

Why Flux

Flux is a Design Pattern

Flux implementations

Redux's key ideas

Building a counter

The core of Redux

The beginnings of a chat app

Building the reducer()

Subscribing to the store

Connecting Redux to React

Intermediate Redux

Building the redux store

Representing messages as objects in state

Introducing chat threads for the chat application

Adding the ThreadTabs component

Supporting threads in the reducer

Adding another action to the reducer

Bonus Content / Time Permitting

ES6 Primer

Prefer const and let over var

Arrow functions

Modules

Object.assign()

Template literals

The spread operator and Rest parameters

Enhanced object literals

Default arguments

Destructuring assignments

Using Vite:

Using Vite to create the TypeScript React application

Start it up and watch it run

Unique features of Vite

Why combine TypeScript and Vite

Benefits of using React with Vite

Creating a Vite project

Project structure

Running the application

Building a blog application

Creating the blog data

Creating a blog component

Adding authentication with Okta to the application

Performance comparison: CRA vs. Vite

Legacy Class Components:

Class components

Props €œ this.props vs props

How Hooks Map to Component Classes

Events €œ Class component lifecycle

State €œ this.state object and this.setState()

Additional Course Details

Nexus Humans Mastering React | React Foundation (TT4195) training program is a workshop that presents an invigorating mix of sessions, lessons, and masterclasses meticulously crafted to propel your learning expedition forward.

This immersive bootcamp-style experience boasts interactive lectures, hands-on labs, and collaborative hackathons, all strategically designed to fortify fundamental concepts.

Guided by seasoned coaches, each session offers priceless insights and practical skills crucial for honing your expertise. Whether you're stepping into the realm of professional skills or a seasoned professional, this comprehensive course ensures you're equipped with the knowledge and prowess necessary for success.

While we feel this is the best course for the Mastering React | React Foundation (TT4195) course and one of our Top 10 we encourage you to read the course outline to make sure it is the right content for you.

Additionally, private sessions, closed classes or dedicated events are available both live online and at our training centres in Dublin and London, as well as at your offices anywhere in the UK, Ireland or across EMEA.

Frequently Asked Questions

Q: What delivery options are available for Mastering React | React Foundation (TT4195)?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: How many CPD hours does this course provide?

The 5-day Mastering React | React Foundation (TT4195) course provides up to 32.5 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Mastering React | React Foundation (TT4195) training?

The training takes place over 5 day(s), with each day lasting approximately 40.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Mastering React | React Foundation (TT4195)?

Yes, we provide corporate training, dedicated training, and closed classes for Mastering React | React Foundation (TT4195). Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: What related terms do people search for?

Popular related searches include: JavaScript; React

Q: Why choose Nexus Human for Mastering React | React Foundation (TT4195)?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Mastering React | React Foundation (TT4195) training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

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