



React

Duration: 4 Days **Course Code: REACT** **Delivery Method: Virtual Learning**

Overview:

The React course comprises sessions dealing with setting up for and creating a React app, JSX and element rendering, components and props, state and lifecycle, hooks, event handling, lists and keys, forms, composition and inheritance, React Router, Flux, and Redux. React Native is not covered on this course.

Exercises and examples are used throughout the course to give practical hands-on experience with the techniques covered.

The delegate will learn and acquire skills as follows:

Setting up a React project
Coding ES6 arrow functions and classes
Using Node, webpack and Babel
Creating a React app
Embedding JSX tags in JavaScript code
Creating and rendering components
Managing component props and state
Managing local state using Hooks as an alternative to classes
Managing a component's lifecycle
Event handling
Creating and rendering lists of components
Creating and extracting information from a form within a component
Creating composite components
Using React Router to build an SPA
Using Flux to manage application state
Using Redux to manage application state

Virtual Learning

This interactive training can be taken from any location, your office or home and is delivered by a trainer. This training does not have any delegates in the class with the instructor, since all delegates are virtually connected. Virtual delegates do not travel to this course, Global Knowledge will send you all the information needed before the start of the course and you can test the logins.

Target Audience:

The React course is designed for JavaScript developers who are interested in using React to build fast, single page, client-side web applications.

Objectives:

- This course aims to provide the delegate with the knowledge to be able to build a Single Page Application (SPA) composed of React components and incorporating React Router. The delegate will also be exposed to application state containers including Flux and Redux and local state management via Hooks.
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Prerequisites:

Delegates should be able to:

- Build and style simple web pages using HTML & CSS
- Build JavaScript applications that exploit all fundamental elements of the language including variables and expressions, conditions and loops, functions, objects, arrays, the DOM, and event handling

This knowledge can be gained by attendance on the pre-requisite HTML & CSS and JavaScript 1 courses.

Follow-on-Courses:

- HTML5 & CSS3 with JavaScript (H5CSS3)
- JavaScript 2 (JS2)
- Bootstrap (BOOTS)
- PHP Programming (PHP)

Content:

React Training Course Course Contents - DAY 1

Course Introduction

- Administration and Course Materials
- Course Structure and Agenda
- Delegate and Trainer Introductions

Session 1: INTRODUCTION

- Understanding React
- Using Babel
- Create-React-App
- Setup ; Project Structure

Session 2: MODERN JAVASCRIPT

- Single Page Applications
- Transpilers ; Polyfills
- ES6 Features
- Primitive ; Reference Types
- Template Literals
- Destructuring
- Let,Const ; Var
- Arrow Functions
- Understanding Classes
- Decorators
- Spread and Rest Operators
- Default Parameters and Values
- Exports and Imports
- Modules
- Array Functions
- Promises
- Generator Functions
- Sets and Maps
- Functional JavaScript
- Typescript

Session 3: JSX ; ELEMENT RENDERING

- Virtual DOM
- JSX
- Lists and Keys

Session 4: COMPONENTS ; PROPS

- What is a Component
- Functional vs. Class Components
- React Props
- State in Brief
- Typechecking
- Composition ; Inheritance React Training Course Course Contents - DAY 2

Session 5: STATE ; LIFECYCLE

- State vs. Props
- Adding State
- Lifting State Up
- Component Lifecycle
- Component Lifecycle Methods
- Immutability

Session 6: EVENT HANDLING

- Handler Assignment
- Binding to *this*
- Passing Arguments to Event Handlers
- Custom Components ; Events
- Synthetic Event

Session 7: FORMS

- Controlled Components
- Uncontrolled Components
- Using Refs
- Forms JSX Summary
- Validation
- Form Libraries

Session 8: REACT ROUTER

- Using react-router
- Core Components React Training Course Course Contents - DAY 3

Session 9: HOOKS

- Motivation: Stateful Logic Re-Use
- Functional Vs Class Components Refactored
- Local State Without A Class: Internals
- Standard Hooks
- Custom Hooks: The Anticipated Future
- The (Only) Rules of Hooks

Session 10: FURTHER REACT

- Testing React
- React Performance
- Production Build/Deploy
- Refs ; DOM
- React Patterns
- Authentication
- JSON Web Token
- Third Party Components React Training Course Course Contents - DAY 4

Session 11: FLUX

- Flux vs MVC
- Flux Main Components
- Flux Flow in Action
- Flux Utils
- Flux Implementations

Session 12: INTRODUCING REDUX

- Redux: Inspired by Flux
- Core Redux: Actions,Action Creators,Reducers,Store
- Redux Data Flow

Session 13: REDUX ; REACT

- Introduction and Setup Environment
- Components of React Redux
- React Data Flow
- Redux Recipes
- Redux DevTools

Session 14: FURTHER REDUX

- Middleware
- Redux Thunk
- Redux Saga

Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

info@globalknowledge.co.uk

www.globalknowledge.com/en-gb/

Global Knowledge, Mulberry Business Park, Fishponds Road, Wokingham Berkshire RG41 2GY UK