**React Application Development with JPMC tools - (3 virtual days – 12 hours)**

Course: React Application Development with JPMC tools

**Duration**: 3 virtual days – 12 hours

**Skill Level**: Intermediate

**Audience**: Targeted for experienced web developers with hands-on experience in web development using HTML5, CSS3, and JavaScript

**Hands-on Learning:** 60% hands-on lab to 40% lecture ratio

Audience & Pre-requisites: Who Should Attend

This is an intermediate-level React development course, designed for experienced web developers that need to further extend their skills in modern web development.

Attendees are required to have current, hands-on, experience in web application development, and be versed in HTML5 and CSS3. Students must have a very high-level of modern JavaScript knowledge.

**Soft pre-requisite courses:**

# Learn Basic HTML5 and CSS3 by Building Your First Web Page

<https://app.pluralsight.com/library/courses/basic-html5-css3-building-first-web-page/table-of-contents>

# JavaScript Fundamentals

<https://app.pluralsight.com/library/courses/jscript-fundamentals/table-of-contents>

## Software Requirements:

1. Editor: Visual Studio Code.
2. Node and NPM

## Hardware:

1. OS: Windows or MAC
2. Core2Duo/i5/i7 Processor
3. HDD: 40 GB
4. RAM: 8 GB Recommended

# Day 1

# Everything is a function

|  |  |
| --- | --- |
| Introduction to Functional Java-script & Essential JavaScript for React (1 hrs) | |
| * + Introduction to functional concepts   + Differences between OO & functional programming | * + ES6 Classes   + ES6 Arrow Functions   + ES6 const and let |

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| --- | --- |
| Introduction to React (1 hrs) | |
| * + React history   + Comparison with other frameworks   + Advantages over other frameworks   + Smart DOM | * + Understanding the component   + Understanding JSX   + Function vs Class Component |

# Lab

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| --- | --- |
| Building First React App (1 hrs) |  |
| * + Component – nothing but a function   + Working with Props   + Understanding and Using State   + Handling events with methods   + Manipulating the state | * + Node and NPM installation   + Using React CLI: Create React App   + Understanding the folder structure   + Using setState without race condition   + Component Life cycle in detail |

# Day 2

# Building Enterprise Application

|  |  |
| --- | --- |
| Introduction to Redux (1 hrs) | Introduction to Webpack & Babble (1 hrs) |
| * + Understanding Redux Framework   + Separation of concerns   + Setting Up Reducer and Store   + Dispatching Actions   + Adding Subscriptions   + Connecting React to Redux   + Connecting the Store to React | * + Understanding Webpack   + Understanding Loaders   + Typescript loader   + Babel loader   + Working with Custom Loaders   + Configuring multiple environment   + Switching between multiple environments |

# Lab

|  |  |
| --- | --- |
| Upgrading Enterprise App with Redux (1 hrs) | Working with HTTP/AJAX (1 hrs) |
| * + Implementing createStore   + Implementing combineReducers   + Implementing applyMiddleware | * + Connecting to Rest API   + Understanding AXIOS & Fetch   + Creating HTTP Request to Get Data   + Mapping Fetched Data to Component |

# Day 3

# Securing React App

|  |  |
| --- | --- |
| Introduction to OAuth (1 hrs) | Introduction to IDAnywhere (1 hrs) |
| * + OAuth 2.0   + OpenID Connect   + JSON Web Tokens   + Token storage   + API Authorization   + Integrating Roles and Scopes   + Token Renewal | * + IDAnywhere introduction   + Resource on-boarding   + Client on-boarding   + Callback urls   + Validation API |

# Advanced Topics

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| --- | --- |
| Advance Topics introduction (1 hrs) | Working with React Hooks (1 hrs) |
| * + Immutable Data Structures   + React Router’s core components   + Containing errors with error boundaries | * + Why use react hooks   + useState, useEffect, and useRef   + Implementing Custom Hooks |