

Career Enabler Program with React JS Course

Course Duration: 112 Hours

Course Code: CEP-RJS101

1. Course Overview

The **Career Enabler Program with React JS** is designed to provide learners with end-to-end knowledge of modern front-end development using React JS. This course focuses on building interactive, responsive, and scalable web applications while preparing learners for real-world industry challenges. Along with React fundamentals, students will also learn state management, API integration, deployment, and best practices to boost their career as front-end developers.

2. What You'll Learn?

- Core concepts of **React JS** including components, props, and state.
- **Hooks and Context API** for state and lifecycle management.
- Advanced topics such as **Redux Toolkit, React Router, and performance optimization.**
- Integration of **RESTful APIs and GraphQL** in React applications.
- Building **responsive UI with Material-UI / Tailwind CSS.**
- Deployment of React applications to **cloud platforms.**
- Hands-on projects to build **portfolio-ready applications.**
- Job-ready skills with **interview preparation and coding challenges.**

3. Target Audience

- Students and fresh graduates looking to start a career in web development.
- Front-end developers who want to **specialize in React JS**.
- Professionals transitioning to modern JavaScript frameworks.
- Anyone aiming to become a **React JS Developer** or **Full-Stack Developer**.

4. Pre-Requisites

- Basic knowledge of **HTML, CSS, and JavaScript**.
- Familiarity with ES6+ JavaScript features is recommended.
- No prior knowledge of React is required.

5. Course Content

Module 1: Introduction to React JS

- What is React and why use it?
- Setting up the development environment
- JSX and Virtual DOM

Module 2: Components and Props

- Functional vs Class Components
- Props and component communication
- Rendering lists and conditional rendering

Module 3: State Management

- useState and useEffect Hooks
- Event handling in React

- Controlled and uncontrolled components

Module 4: React Router

- Client-side routing with React Router
- Nested routes and dynamic routing
- Navigation best practices

Module 5: Advanced React Concepts

- Context API for global state management
- useReducer and custom hooks
- Performance optimization with memo, useCallback, and useMemo

Module 6: Redux and Redux Toolkit

- Introduction to Redux architecture
- Setting up Redux store and actions
- Redux Toolkit for simplified state management

Module 7: API Integration

- Fetching data with Fetch API and Axios
- Handling asynchronous operations
- GraphQL integration in React

Module 8: UI Libraries and Styling

- Material-UI basics
- Tailwind CSS integration
- Responsive design best practices

Module 9: Testing React Applications

- Unit testing with Jest
- Component testing with React Testing Library
- Test-driven development (TDD) basics

Module 10: Deployment and Career Enablement

- Deploying React apps on Vercel/Netlify
- CI/CD with GitHub Actions
- Resume building and interview preparation
- Real-world project presentation

