React Training Curriculum (Hooks + ES6 Focused)

Last updated by | Subramanya Dixit | May 5, 2025 at 9:21 PM GMT+5:30

🗨 React Training Curriculum Overview

No.	Topic	Sub-Topics	Description	Reference Links	Est. Time
1	**Introduction to React**	What is React? Benefits, SPA Architecture	Overview of React, component-based architecture, and why React is widely used.	[React Docs - Getting Started](#)	1 hr
2	**ES6+ JavaScript for React**	`let`, `const`, Arrow Functions, Destructuring, Spread/Rest, Array methods, Modules	Review of essential ES6+ features that power modern React apps.	[MDN - ES6 Features](#)	2.5 hrs
3	**Project Structure & Tools**	CRA, Vite (optional), Prettier, ESLint	How to scaffold and structure a React project.	[CRA Docs](#)	1 hr
4	**JSX & Components**	JSX Syntax, Functional Components, Props, Children	Writing clean UI components using JSX and functional patterns.	[JSX Docs](#)	2 hrs
5	**State Management with Hooks**	`useState()`, Controlled Inputs	Managing component state using hooks.	[useState Hook](#)	1.5 hrs
6	**Side Effects with `useEffect`**	Basics, Dependency Array, Cleanup	Handling API calls, timers, and subscriptions.	[useEffect Docs](#)	2 hrs
7	**Handling Events**	onClick, onChange, Synthetic Events	Managing UI interactions and event handling.	[Handling Events](#)	1.5 hrs
8	**Conditional Rendering**	`if`, Ternary, Logical `&&`	Displaying UI conditionally in React.	[Conditional Rendering](#)	1 hr
9	**Lists and Keys**	`map()`, Keys, Dynamic Rendering	Creating dynamic lists in React.	[Lists and Keys](#)	1.5 hrs
10	**Forms and Input Handling**	Controlled vs Uncontrolled, Submission	Handling form data in React.	[Forms in React](#)	1.5 hrs
11	**Custom Hooks**	Reusable logic, Naming convention	Creating abstracted logic in reusable hooks.	[Custom Hooks](#)	1.5 hrs

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12	**Context API**	`createContext()`, Provider/Consumer	Replacing prop drilling and sharing state globally.	Context API	2 hrs
13	**useReducer Hook**	Reducer logic, Dispatching actions	Alternative to `useState` for complex state.	useReducer	2 hrs
14	**useRef and useMemo**	DOM refs, Memoization	Managing refs and optimizing render performance.	useRef , useMemo	1.5 hrs
15	**React Router (v6+)**	Routes, `useNavigate`, Nested Routes	Navigation and routing in React apps.	React Router Docs	2 hrs
16	**Error Handling & Boundaries**	Try/Catch, Error UI, Boundaries	Catching and handling runtime errors in React.	Error Boundaries	1.5 hrs
17	**API Integration**	`fetch()`, `axios`, Loading/Error	Integrating and managing data from APIs.	Fetch API	2 hrs
18	**Deployment Basics**	CRA Build, Netlify/Vercel	Hosting and deploying React projects.	Netlify , Vercel	1 hr
19	**Testing Fundamentals**	Jest, RTL, Unit & Integration Testing	Writing and organizing tests for React.	React Testing Library	2 hrs
20	**Capstone Project**	Plan, Build, Deploy	Apply full knowledge in a real-world project.	—	4–6 hrs
21	**Styling in React**	CSS, Inline, CSS Modules, Styled Components	Styling React apps with scalable options.	Styled Components	2 hrs
22	**SASS and PostCSS**	Nesting, Mixins, Variables, Plugins	Advanced styling using preprocessors and postprocessors.	SASS Guide , PostCSS Docs	1 hr

⏳ **Total Estimated Duration: ~50–52 hours**

💡 Other Topics

- React Advanced Topics

- Advanced Patterns in React

- Internationalization (i18n) in React

- Progressive Web Apps (PWAs) in React

- State Management - Redux with Redux Thunk