**🗓️ 30-Day JavaScript + React Mastery Plan**

1. **Phase 1 (Days 1–10): Modern JavaScript (ES6+)** → solidify all concepts used in React.
2. **Phase 2 (Days 11–20): React Fundamentals** → building blocks, components, props, state, hooks.
3. **Phase 3 (Days 21–30): React Advanced + Projects** → routing, context, performance, real-world projects.

👉 The idea: learn → practice → build. Each day will have **study + small exercises**.

**Phase 1: Modern JavaScript (Days 1–10)**

Goal: Get rock-solid with JS fundamentals used heavily in React.

**Day 1: JavaScript Basics**

* Variables: let, const, var
* Data Types: string, number, boolean, null, undefined, symbol, bigint
* Operators (arithmetic, comparison, logical)
* Practice: build a simple calculator.

**Day 2: Functions & Scope**

* Function declarations vs expressions
* Arrow functions
* Scope & block-level variables
* Practice: write a function that reverses a string.

**Day 3: Objects & Arrays**

* Object literals & methods
* Arrays and array methods: map, filter, reduce, forEach
* Practice: implement a to-do list array with add/remove.

**Day 4: Destructuring & Spread/Rest**

* Object & array destructuring
* Spread/rest operators
* Template literals
* Practice: merge objects & arrays using spread.

**Day 5: DOM & Events (basic awareness)**

* document.querySelector, event listeners
* Changing DOM elements with JS
* (React will handle the DOM, but you should see how vanilla JS works.)
* Practice: counter button (increase/decrease).

**Day 6: ES6+ Features**

* Default parameters
* for...of, for...in
* Optional chaining ?.
* Nullish coalescing ??
* Practice: refactor old JS code to ES6.

**Day 7: Asynchronous JS (Part 1)**

* Callbacks & promises
* setTimeout, setInterval
* Practice: simulate fetching data with setTimeout.

**Day 8: Asynchronous JS (Part 2)**

* async/await
* try...catch
* Fetch API basics (fetch())
* Practice: fetch posts from JSONPlaceholder API.

**Day 9: Modules & Classes**

* Import/export modules
* Classes & object-oriented JS
* Inheritance
* Practice: create a User class with methods.

**Day 10: Advanced JS Concepts**

* Closures
* Higher-order functions
* Event loop & call stack
* Practice: explain difference between == vs ===, and closure example.

**Phase 2: React Fundamentals (Days 11–20)**

Goal: Build strong foundation in React.

**Day 11: React Intro**

* What is React? Why React?
* JSX basics
* First React app with Vite/CRA
* Practice: render a “Hello World” component.

**Day 12: Components**

* Function components
* Props
* Practice: create a Card component that receives props (title, description).

**Day 13: State**

* useState hook
* Controlled vs uncontrolled components
* Practice: counter app with increment/decrement/reset.

**Day 14: Events & Forms**

* Handling onClick, onChange
* Controlled forms with useState
* Practice: login form (email + password).

**Day 15: Lists & Keys**

* Rendering lists
* Keys in React
* Practice: dynamic to-do list with add/remove.

**Day 16: Conditional Rendering**

* if/else, ternary operator, logical &&
* Practice: show/hide component with button.

**Day 17: useEffect (Side Effects)**

* useEffect basics
* Dependency array
* Cleanup functions
* Practice: fetch API data on component mount.

**Day 18: React Styling**

* CSS in React (modules, inline styles)
* Tailwind / Bootstrap basics (optional)
* Practice: styled card component.

**Day 19: React Router (Basics)**

* Setup react-router-dom
* Routes, Links, useParams
* Practice: multipage app (Home, About, Contact).

**Day 20: Mini Project 1**

* Build a small project (Ideas: Weather App, Notes App, Movie Search).
* Focus: props, state, lists, forms, API fetch.

**Phase 3: Advanced React & Projects (Days 21–30)**

Goal: Learn advanced topics & build real-world apps.

**Day 21: Context API**

* Why context?
* createContext, useContext
* Practice: theme toggle (light/dark).

**Day 22: useReducer Hook**

* Reducer pattern
* Difference between useState & useReducer
* Practice: counter with reducer.

**Day 23: Custom Hooks**

* Reusable logic in custom hooks
* Practice: useLocalStorage hook.

**Day 24: Performance Optimization**

* React.memo, useMemo, useCallback
* Practice: optimize slow rendering list.

**Day 25: React Router (Advanced)**

* Nested routes
* Protected routes
* Practice: authentication-based routing.

**Day 26: Forms with Libraries**

* React Hook Form / Formik
* Validation with Yup
* Practice: signup form with validation.

**Day 27: State Management**

* Redux basics (actions, reducers, store) OR Zustand (simpler alternative).
* Practice: shopping cart with Redux/Zustand.

**Day 28: Testing in React**

* Jest & React Testing Library basics
* Practice: test a button click.

**Day 29: Deployment**

* Deploy on Netlify / Vercel
* Practice: deploy your mini project online.

**Day 30: Capstone Project**

* Build a **full app** (choose one):
  + Blog app with CRUD
  + E-commerce store (cart + checkout)
  + Chat app using Firebase
* Use all concepts: props, state, hooks, context, router.

✅ **After 30 Days:** You’ll have **2–3 mini projects + 1 capstone project**, solid React foundations, and advanced understanding.