



# React Native

Industry-Ready React Native Developer – Complete Curriculum



## Module 1: React Native & Mobile App Fundamentals

- Journey to React Native
- Why React Native (vs Native / Flutter)
- React vs React Native (Core Differences)
- How React Native Works (Bridge / JSI overview)
- Setting Up Environment (Windows/Mac/Linux)
- React Native CLI vs Expo (When to use what)
- Project Structure & Folder Architecture
- Debugging Basics (Console, Flipper, Dev Menu)
- Building for Android & iOS (Overview)
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## Module 2: JavaScript + React Essentials (for RN)

- ES6+ Must-Know for React Native
- Variables, Scope, Hoisting, Closures (Practical)
- Arrow Functions, Destructuring, Spread/Rest
- Promises, Async/Await, Fetch Basics
- React Fundamentals (JSX, Components)
- Props vs State
- Hooks Overview (useState, useEffect)
- Event Handling & Conditional Rendering
- Lists & Keys (FlatList basics intro)
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## Module 3: Core Components & Styling (UI Basics)

- Core Components Overview (View, Text, Image, ScrollView)
- TextInput & Forms (Basics)
- Buttons & Pressable (Touchable ecosystem)
- Flexbox Layout Deep Dive (RN way)
- Styling in RN (StyleSheet, Inline, Composition)
- Responsive UI (Dimensions, Platform, SafeArea)
- Images (Local/Remote, Resize Modes)
- Custom Reusable Components (UI kit approach)
- Best Practices for Clean UI

## Module 4: Navigation (App Flow)

- Navigation Concepts (Stack / Tab / Drawer)
- React Navigation Setup (CLI projects)
- Stack Navigation (Auth Flow)
- Bottom Tabs (Icons & Badge)
- Drawer Navigation (Side menu)
- Nested Navigators & Deep Navigation Patterns
- Passing Params & Route Props
- Custom Headers & Screen Options
- Deep Linking Basics

## Module 5: Forms, Validation & User Input

- Handling Forms in React Native
- Keyboard Handling (KeyboardAvoidingView)
- Validation Rules (Empty, Length, Regex, etc.)
- Formik Basics (Optional)
- Yup Validation (Optional)
- Date & Time Pickers
- Dropdowns / Select Inputs
- OTP Inputs & Masked Inputs
- Form Submit Patterns (Loading, Disable, Errors)

## Module 6: Networking & REST API Integration

- HTTP Fundamentals (GET/POST/PUT/DELETE)
- Fetch vs Axios (Best Practice)
- Base URL Setup & API Service Layer
- Query Params, Headers, Auth Tokens
- Multipart Upload (Image/File upload)
- Pagination & Infinite Scroll
- Search API Integration
- Error Handling (Try/Catch, Status Codes)
- Retry / Timeout Handling

## Module 7: State Management

- Local State vs Global State (When & Why)
- Context API (Practical Use)
- Redux Fundamentals (Store, Actions, Reducers)
- Redux Toolkit (Slices, createAsyncThunk)
- Persisting State (redux-persist)
- State Patterns for Cart / Wishlist / Auth
- Avoiding Over-Rendering (Memo, useCallback)
- Handling Complex Lists State
- Best Practices for Scalable State

## Module 8: Storage & Data Persistence

- AsyncStorage Basics
- Secure Storage Concepts (Tokens)
- SQLite / Local DB Overview
- Realm Overview (Optional)
- Caching API Data Locally
- Storing User Preferences (Theme, Language)
- Session Handling (Login persistence)
- Clearing Cache & Logout Flow
- Offline-First Basics

## Module 9: Authentication & Security

- Authentication Flow (Login/Register)
- JWT Basics (Access/Refresh Token concept)
- Social Login Overview (Google / Apple / Facebook)
- Role-Based Access (Admin/User)
- Protecting Routes (Auth Guard)
- Secure API Calls (Headers, Token refresh concept)
- Biometric Login Overview (Optional)
- Common Security Mistakes in Mobile Apps
- App Privacy Basics

## Module 10: Advanced UI/UX & Animations

- Professional UI Patterns (Cards, Lists, Skeletons)
- Theming (Light/Dark mode)
- Reusable Design System (Colors, Spacing, Typography)
- Animations with Animated API (Basics)
- Reanimated Overview (Optional advanced)
- Gesture Handling (Swipe, Drag)
- Bottom Sheets & Modals (UX patterns)
- Image Optimization (FastImage concept)
- Accessibility Basics (Readable UI)

## Module 11: Native Device Features & Permissions

- Permissions (Camera, Location, Storage)
- Camera Integration (Overview)
- Image Picker (Gallery/Camera)
- Geolocation + Maps (Markers, Region, Directions basics)
- Push Notifications Overview (FCM concept)
- Deep Links & App Links (Overview)
- Share API & Clipboard
- Contacts/Calendar Access (Optional)
- Handling Android vs iOS Differences

## Module 12: Performance Optimization

- Performance Issues in React Native (Common causes)
- FlatList Optimization (keyExtractor, getItemLayout, memo)
- Avoiding Unnecessary Re-renders
- Image Performance (Resize, Cache)
- API Performance (Debounce, Throttle)
- Bundle Size & Lazy Loading Concepts
- Monitoring with Flipper/Profiler
- Memory Leaks & Cleanup in useEffect
- Best Practices for Smooth UI (60 FPS)

## **Module 13: Testing & Quality**

- Testing Basics (Why it matters)
- Unit Testing (Jest)
- Component Testing (React Native Testing Library)
- Mocking APIs & AsyncStorage
- E2E Testing Overview (Detox concept)
- Linting (ESLint) & Formatting (Prettier)
- Code Quality Checklist
- Bug Fix Workflow
- Versioning Strategy
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## **Module 14: Deployment & Release (Android + iOS)**

- Android Signing (Keystore, Release Build)
- Generate APK vs AAB
- Play Store Release Process
- iOS Certificates & Provisioning (Basics)
- Xcode Archive & Upload to App Store Connect
- Build Configs (Debug/Release, Env configs)
- Crash Reporting Overview (Firebase Crashlytics)
- App Updates & Version Increment
- Post-Release Monitoring Checklist

## **Module 15: Capstone Projects (Industry Style)**

- Project 1: E-commerce App (Products, Cart, Orders)
- Project 2: Food/Grocery Delivery App (Search, Address, Checkout)
- Project 3: Social/Event Planner App (Map, Nearby Users, Chat concept)
- Project 4: Booking App (Slots, Payments concept)
- Admin Panel + API Integration (Optional)
- Full App Architecture + Folder Structure
- Complete Deployment (Android + iOS)
- Portfolio + GitHub + Resume Guidance
- Interview Prep (RN + JS common questions)