

Best Job Courses

Syllabus

Mobile App Development – React Native Full-Stack Course

Duration: 8 Months (Approx. 32 Weeks)

Structure: Two Phases – Frontend Foundations (4 Months) and Full-Stack Mobile Development (4 Months)

Technologies Covered: HTML5, CSS3, JavaScript (ES6), React Native, Node.js, MongoDB

Course Overview

This course provides a complete pathway for students to become full-stack mobile app developers. The first half of the course focuses on building strong foundations in front-end web technologies such as HTML5, CSS3 and modern JavaScript (ES6). The second half transitions students into mobile app development using React Native and backend development with Node.js and MongoDB. The curriculum blends practical assignments, real-world projects and final app deployment to ensure hands-on learning and professional readiness.

Phase 1: Frontend Foundations (4 Months)

Month 1 – HTML5 Core Concepts & Responsive Layouts

Students begin by learning the structure and semantics of HTML5. Concepts such as document anatomy, tags and elements, along with modern semantic elements like header, footer, section and article are thoroughly covered. Form creation, input types, and validation techniques using HTML5 attributes are also taught. Learners gain experience embedding multimedia content, including videos, audio and canvas elements and study basic SEO integration through meta tags and accessibility attributes.

By the end of this month, students will create a personal portfolio website showcasing multiple sections and responsive design elements.

Month 2 – CSS3 and Modern Styling Techniques

This module explores Cascading Style Sheets (CSS3) in depth, starting from basic selectors and properties to advanced layout systems. Students study the box model,

positioning and display properties to understand how elements flow on the page. Modern layout systems such as Flexbox and CSS Grid are introduced for creating responsive designs. Concepts such as colors, gradients, shadows, and animations are explored along with frameworks like Bootstrap and Tailwind CSS for faster UI development. By the end of this module, students will have designed and styled a complete company landing page, featuring responsive navigation, a hero banner and animated service sections.

Month 3 – JavaScript (ES6 Advanced Programming)

This month focuses on transforming students into modern JavaScript programmers. ES6 topics such as block-scoped variables, arrow functions, template literals and destructuring are discussed in detail. Students learn about objects, arrays, asynchronous code with promises and `async/await`, and modular programming using imports and exports. Functional programming concepts like `map`, `filter` and `reduce` are practiced. They will also interact with the Document Object Model (DOM) to create interactive web experiences.

Students apply their knowledge in practical exercises such as building dynamic lists, fetching data from public APIs and managing data in local storage. The month concludes with an activity where each student develops an interactive product catalog dynamically powered by API data.

Month 4 – Front-End Integration Project

During the fourth month, learners bring together everything they have studied. They will integrate HTML, CSS and JavaScript into fully functional projects that communicate with public APIs. Students practice debugging and optimizing their front-end code using browser tools while learning basic Git version control operations.

By the end of this phase, students complete their first capstone project: an e-commerce front-end prototype featuring product listings, cart functionalities and responsive layouts suitable for different devices.

Phase 2: Mobile and Backend Development (4 Months)

Month 5 – React Native Fundamentals

The second phase begins with an introduction to React Native and the Expo CLI environment. Students learn about native versus hybrid apps and discover the React Native project structure. Through a component-based approach, they build reusable UI

components using JSX and manage component data using state and props. The course introduces functional components, hooks such as `useState` and `useEffect` and navigation setup using React Navigation (Stack, Tab and Drawer). Styling techniques within React Native, based on StyleSheet and Flexbox are also covered.

By the end of the module, students develop a complete mobile news reader application with data fetched via APIs and navigation across multiple screens.

Month 6 – Intermediate React Native Concepts

In this month, students expand their knowledge by implementing advanced features such as Context API for global state management, AsyncStorage for local data persistence and animations using Reanimated and the Animated API. They learn how to integrate device features such as the camera, geolocation and notifications. UX enhancements like theme toggling and form handling using libraries such as Formik and Yup are practiced rigorously.

By the end of the month, each student will have completed a mobile fitness tracker app incorporating authentication, offline storage and advanced UI interactions.

Month 7 – Backend Development with Node.js

This module introduces backend development using Node.js and Express.js. Students learn to create and manage RESTful APIs and understand HTTP methods such as GET, POST, PUT and DELETE. They design and connect a MongoDB database using Mongoose and perform CRUD operations efficiently. Authentication and authorization systems are set up using JWT (JSON Web Tokens). Learners explore middleware, error handling, and API security. APIs created in this phase are tested with Postman and integrated with the React Native frontend for data flow management.

By the end of the month, each student will have built a fully functional backend for a task management system, complete with user authentication.

Month 8 – Full-Stack Project and App Deployment

In the final month, learners focus on full-stack integration by connecting their React Native frontends with Node.js and MongoDB backends. They implement advanced state management using either Context or Redux, handle environment variables and prepare production builds. The module concludes with an in-depth look at app deployment processes for both Android and iOS. Students also deploy their backend APIs to platforms such as Render or Vercel followed by Git-based collaboration and version

control practice.

