

3-Month Full Stack React Developer Syllabus



Month 1: Frontend Foundations with React

Week 1: JavaScript & Web Basics

- HTML5, CSS3, and responsive design
- JavaScript ES6+ (let/const, arrow functions, destructuring)
- DOM manipulation and events

Week 2: React Basics

- Introduction to React and JSX
- Functional components and props
- State and event handling
- Conditional rendering

Week 3: React Advanced Concepts

- React Hooks: useState, useEffect
- Lists and keys
- Forms and controlled components
- Lifting state up

Week 4: Routing & Styling

- React Router (v6): nested and dynamic routes
- CSS Modules, Styled Components, or Tailwind CSS
- Component lifecycle and cleanup



Month 2: Backend Development with Node.js & Express

Week 5: Node.js Fundamentals

- Node.js architecture and modules
- npm and package management
- File system and asynchronous programming

Week 6: Express.js & REST APIs

- Setting up Express server
- Routing and middleware
- RESTful API design
- Error handling

Week 7: Database Integration

- MongoDB with Mongoose or PostgreSQL with Sequelize
- CRUD operations
- Data validation and sanitization

Week 8: Authentication & Security

- JWT-based authentication
- Role-based access control
- CORS, Helmet, and rate limiting



Month 3: Full Stack Integration & Deployment

Week 9: Connecting Frontend & Backend

- Axios or Fetch for API calls
- Handling async data in React
- Environment variables and config

Week 10: State Management & Testing

- Redux Toolkit or Context API
- Unit testing with Jest and React Testing Library
- Backend testing with Supertest

Week 11: DevOps & Deployment

- Git & GitHub workflows
- CI/CD basics
- Deploying frontend (Netlify/Vercel)
- Deploying backend (Render/Heroku)

Week 12: Capstone Project

- Build a full-stack app (e.g., task manager, blog, e-commerce)
- Implement authentication, CRUD, and deployment
- Final presentation or portfolio review