MERN Full Stack Development

12 Weeks • Beginner to Advanced

Course Overview

A practical MERN Full Stack Development program covering MongoDB, Express.js, React, Node.js, modern frontend development, backend REST APIs, authentication, databases, and real-world full stack web development.

Course Module Structure

Web Development Fundamentals

HTML5 • Semantic elements • Forms • Tables • CSS fundamentals • Selectors • Box model • Flexbox • Grid • Responsive design

JavaScript Programming

JavaScript fundamentals • Variables • Data types • Functions • Arrays • Objects • DOM manipulation • Events • ES6 concepts • Async programming

React Library

React introduction • Components • JSX • Props • State • Events • Conditional rendering • Lists • Forms • React Hooks

React Application Development

Component-based architecture • React Router • Context API • Form handling • Custom hooks • API integration • State management • Reusable components

Node.js & Express.js

Node.js introduction • npm • Modules • File system • Express.js • Routing • Middleware • Controllers • REST APIs • Error handling

MongoDB & Mongoose

MongoDB fundamentals • Documents • Collections • CRUD operations • Queries • Filtering • Sorting • Aggregation • Indexing • Mongoose schemas

Authentication & API Integration

JWT authentication • Registration • Login • Password hashing • Authorization • Protected routes • React–Express integration • API security

Full Stack Project & Deployment

Project architecture • Frontend-backend integration • Environment variables • Git & GitHub • Production build • Deployment basics • Testing • Real-world project