

MEAN Stack (MongoDB, Express, Angular, Node.js) Course Content

1. Web Fundamentals (Hands on)
2. JavaScript and TypeScript (Hands on)
3. Node.js (Hands on)
4. Express.js (Hands on)
5. MongoDB (Hands on)
6. Angular Fundamentals (Hands on)
7. Angular Advanced (Hands on)
8. Real-Time and Advanced Features
9. Testing and Security
10. Deployment and DevOps Basics
11. Capstone Projects

Web Fundamentals (Hands on)

- HTML5, CSS3, Flexbox, Grid, Responsive Design
- Bootstrap or Angular Material
- Git and GitHub

JavaScript and TypeScript (Hands on)

- ES6+ Features, Closures, Promises, Async/Await
- TypeScript: Types, Interfaces, Classes, Generics, Decorators

Node.js (Hands on)

- Node Architecture, Event Loop, NPM, Modules
- File System, Streams, Events, Environment Variables

Express.js (Hands on)

- Routing, Middleware, Error Handling
- REST API Design, Validation, File Uploads
- Authentication with JWT, bcrypt, and Sessions

MongoDB (Hands on)

- Documents, Collections, CRUD, Indexing
- Aggregation Pipeline, Schema Design

- Mongoose ODM, MongoDB Atlas

Angular Fundamentals (Hands on)

- Angular CLI, Architecture, Modules, Standalone Components
- Components, Templates, Data Binding, Directives, Pipes
- Services, Dependency Injection

Angular Advanced (Hands on)

- Routing, Guards, Lazy Loading
- Template-Driven and Reactive Forms
- HttpClient, Interceptors, RxJS Observables
- State Management with NgRx
- Signals and Performance Optimization

Real-Time and Advanced Features

- WebSockets and Socket.io
- Payment Gateway Integration, Email Services
- Cloud File Storage

Testing and Security

- Jasmine, Karma, Jest, Supertest
- CORS, Helmet, Rate Limiting, OWASP Basics

Deployment and DevOps Basics

- Docker, CI/CD with GitHub Actions
- Deployment on Render, Netlify, and AWS

Capstone Projects

- E-Commerce, Learning Management, or Task Management Application
- Portfolio and Interview Preparation