

Full Stack MERN Developer - 8 Week Course Curriculum

Week 1-2: HTML, CSS & JavaScript Fundamentals

HTML5:

- Structure of an HTML document
- Semantic elements: <header>, <nav>, <main>, etc.
- Forms and accessibility

CSS3:

- Selectors, Box Model, Positioning
- Flexbox, Grid, Responsive Design

JavaScript (ES6+):

- Variables, functions, loops
- DOM manipulation
- Event handling, ES6 features

Project: Personal Portfolio Website

Week 3-4: React.js Frontend Development

React Fundamentals:

- Components, JSX, Props

Hooks & State:

- useState, useEffect, Context API

Routing:

- React Router v6 basics

Forms & Validation:

- Controlled forms, Formik/Yup

Project: Task Management Application

Week 5-6: Node.js & Express Backend Development

Node.js:

- Introduction, npm, modules

Express.js:

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- RESTful APIs, routes, middleware

Security:

- JWT Auth, bcrypt, Role-based access

Error Handling:

- Centralized error handling

Project: RESTful API for E-Commerce

Week 7-8: MongoDB & Full Stack Integration

MongoDB:

- CRUD, Schema design

Mongoose:

- Models, validation, population

Full Stack Integration:

- Connect frontend & backend
- Axios/fetch, state management

Deployment:

- Netlify/Vercel (frontend)
- Render (backend)
- MongoDB Atlas

Final Project: Complete MERN Stack Application

Course Outcomes

- Build and deploy full stack apps
- Real-world projects
- Git & GitHub workflow
- Resume & interview prep

Bonus:

- DevOps basics
- CI/CD pipelines

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- Group collaboration tools