

# MEAN Angular Full Stack Web Developer Course

**Course Duration: 80 Hours**

**Course Code: MFSWD-401**

## 1. Course Overview

The MEAN Angular Full Stack Web Developer Course is designed to provide hands-on training in MongoDB, Express.js, Angular, and Node.js. This course equips learners with the skills to build scalable, secure, and high-performance full-stack web applications. By the end of the course, students will be able to design and deploy dynamic web solutions, making them industry-ready MEAN stack developers.

## 2. What You'll Learn?

- Fundamentals of **MEAN Stack architecture**.
- Building scalable **RESTful APIs with Express.js & Node.js**.
- Frontend development with **Angular framework**.
- Data modeling and operations with **MongoDB**.
- Implementing **authentication & security** (JWT, OAuth).
- Integration of **Angular frontend with Node.js backend**.
- Version control with **Git & GitHub**.
- Deployment of applications on **cloud and DevOps tools**.

### 3. Target Audience

- Beginners and professionals aspiring to become **Full Stack Developers**.
- Frontend or backend developers who want to master the **MEAN stack**.
- Students looking for **career opportunities in web development**.
- Software engineers aiming to build **real-world, enterprise-grade applications**.

### 4. Pre-Requisites

- Basic knowledge of **JavaScript, HTML, and CSS**.
- Familiarity with programming concepts (variables, functions, loops).
- Prior exposure to databases is helpful but not mandatory.

### 5. Course Content

#### **Module 1: Introduction to Full Stack Development**

- Overview of full-stack development
- MEAN stack architecture and workflow

#### **Module 2: MongoDB – Database Management**

- NoSQL vs SQL
- CRUD operations in MongoDB
- Schema design and indexing

#### **Module 3: Express.js – Backend Development**

- Setting up Express server
- RESTful API development
- Middleware and routing

## **Module 4: Angular – Frontend Development**

- TypeScript essentials
- Angular components, directives & services
- Forms, validation, and data binding
- Consuming REST APIs with Angular HTTP Client

## **Module 5: Node.js – Server-Side Development**

- Node.js environment setup
- Event-driven architecture
- File system and streams
- Asynchronous programming

## **Module 6: Authentication & Security**

- JWT (JSON Web Tokens)
- Role-based authentication
- Securing APIs and Angular routes

## **Module 7: MEAN Stack Integration**

- Connecting Angular with Node.js APIs
- Real-time applications with Socket.IO
- Deployment-ready project setup

## **Module 8: Testing & Debugging**

- Unit testing in Node.js with Mocha/Chai
- Angular testing with Jasmine & Karma

## **Module 9: DevOps & Deployment**

- Version control with Git/GitHub
- Docker basics for containerization
- Deployment on AWS/Heroku/Google Cloud

## Module 10: Capstone Project

- End-to-end MEAN stack project
- Presentation & evaluation

