



# MEAN Training Curriculum

## STRUCTURE



## MEAN (MongoDB, Express, Angular, Node JS) Training Curriculum

*“Full stack web developer course allows you to learn top skills such as MongoDB, Express.js, Angular, Node.js (“MEAN”), JavaScript, and more”*

### **About Croma Campus:**

Croma Campus Training & Development Private Limited is an education platform since 2010 providing rigorous industry-relevant programs designed and delivered in collaboration with world-class faculty and industry.

- Hands-On Live Projects
- Simulation Test Papers
- Industry Cases Studies
- 61,640+ Satisfied Learners
- 140+ Training Courses
- 100% Certification Passing Rate
- Live Instructor Classroom / Online Training
- 100% Placement Assistance

### **Course Objectives:**

- Learn core computer science concepts from leading industry experts with content structured to ensure industry relevance
- Build an end-to-end application with exciting features and test it
- Earn an industry-recognized course completion certificate
- Make you career-ready as a full stack MEAN developer upon successful completion of the program.
- Brush up on your knowledge of software development fundamentals; Agile and Scrum methodologies.
- Learn HTML, CSS, JavaScript to create dynamic websites; and GIT to manage version control systems.

### **Croma Campus Training Program Deliverables:**

- **Session Recordings** - Original Class Room Voice & Video Recording
- **Training Material** - Soft Copy Handbooks
- **Assignments** | Multiple Hands-on Exercises
- **Test Papers** - We provide **Practice Test** as part of our course to help you prepare for the actual certification exam.
- **Live Case Studies**
- **Live Projects** - Hands-on exercises and Project work. You will work on real time industry-oriented projects and assignments for each module to practice.
- **Key focus on Hands-on exercises and Project work.** You will work on real time industry-oriented projects.
- Faculty with more than **10+ Years of Experience** in the Industry.
- **Technical Resume Designing & Job Assistance:** With more than 100+ Clients across the Globe and we help learners to get a good job in their respective field. We also help learners with resume preparation.
- **Interview Q&A**

- **About Croma Campus Training Certificate:** Croma Campus will provide you with an industry-recognized (Certified by **ISO 9001:2015 & E-Cell IIT Jodhpur**) course completion certificate which has lifelong validity.
- **How I Unlock my Croma Campus Certificate:** Attend Complete Batch & Submit at least One Completed Project.

## Course Description:

This program will advance your career as a MEAN stack developer. You'll learn top skills such as MongoDB, Express.js, Angular, and Node.js ("MEAN"), plus GIT, HTML, CSS, and JavaScript to build and deploy interactive applications and services.

Our MEAN Full-Stack Developer Course at Croma Campus is designed as per the Industrial trends with 100% Job Assistance. We have a team of highly experienced professionals' faculties with more than 12 years of experience in MEAN and other related Technologies.

Our faculty members are fully aware of industry requirements and ready to deliver full-fledged and industrial based Training to students across India. We provide our students with a perfect platform to learn and explore the subject from corporate trainers & industry experts.

This MEAN stack developer program offers a comprehensive curriculum using our unique Blended Learning approach to make you career-ready as a full stack MEAN developer upon successful completion of the program. So, what are you waiting for?

Make yourself as one of most skilled and knowledgeable resource today!

## Course Contents:

### JavaScript with ECMAScript

#### Module 1: Introduction to JavaScript Framework

- History of JavaScript
- What is ES6 (ECMAScript 6/JavaScript 6)
- ES6 Module System
- A Word on Bable
- Block Scope, Let & Const
- Template Literals
- Arrow Functions
- Spread and Rest Operators
- Object Literal Improvements
- De-structuring
- Classes
- Inheritance
- Static Properties and Methods
- Promises
- Iterators and Iterables
- Generators
- Modules
- New Features in ES6

- JavaScript let
- JavaScript const
- JavaScript Arrow Functions
- JavaScript Classes
- Default parameter values
- Array.find()
- Array.findIndex()
- Exponentiation (\*\*) (ECMA Script 2016)

## **Node.JS: (Node.JS Coding Standards & Best Practices)**

### **Module 1: Introduction**

- Audience
- Pre-requisites
- About Node
- Execute Node
- Features
- Who use Node
- Concepts
- Where to use
- Where not to use

### **Module 2: Environment Setup**

- Text Editor
- NodeJs Run Time
- Download NodeJs
- Installation
- Executing

### **Module 3: First Application**

- Creating a NodeJs Application
- Make a request to NodeJs Server

### **Module 4: REPL Terminal**

- What is REPL?
- Starting REPL
- REPL Commands
- Stopping REPL

### **Module 5: Packager Manager (NPM)**

- Installing Modules using NPM
- Global vs Local Installation
- Using packages.json

- Attributes of packages.json
- Uninstalling Module
- Updating Module
- Searching Module
- Create a Module

## **Module 6: Call backs Concept**

- Using Props
- Default Props
- State and Props

## **Module 7: Event Loop**

- Validating Props

## **Module 8: Event Emitter**

- Set State
- Force Update
- Find DOM Node

## **Module 9: Buffers**

- Lifecycle Methods

## **Module 10: Streams**

- Simple
- Complex

## **Module 11: File System**

- Simple
- Child

## **Module 12: Global Objects**

- What is Refs
- Using Refs

## **Module 13: Utility Modules**

- What is Keys
- Using Keys

## **Module 14: Web Modules**

- Install a React Router
- Add a Router
- Create Components

## **Module 15: Express Framework**

- What is Flux
- Flux Elements
- Flux Props

## **Module 16: Restful API**

- Install REDUX
- Create Files and Folders
- Actions
- Reducers
- Store
- Root Component
- Other Components

## **Module 17: Scaling Application**

- Install React CSS Transitions Group
- Add a CSS File
- Appear Animation
- Enter and Leave Animations

## **Module 18: MongoDB**

- Connecting Node and MongoDB
- Database Creation, Drop
- Collection Operations
- Documents Operations

## **Module 19: Application**

- Node and MongoDB Application

## Express JS – Web Application Framework

### Module 1: Express.JS Basics

- Introduction, Advantages
- Environment Setup
- Basic Application

### Module 2: Advanced Concepts of Express.JS

- Request
- Response
- GET
- POST
- Routing
- HTTP Methods
- URL Building
- Middleware
- Templates
- Static Files
- Form Data
- Database
- Cookies
- Sessions
- File Upload
- Authentication
- REST FUL API's
- Scaffolding
- Debugging

## **MongoDB – No SQL Database**

### **Module 1: MongoDB Basics**

- Introduction, Advantages
- History, Features
- No SQL Databases
- Advantages over RDBMS

### **Module 2: Environment Setup**

- Install MongoDB
- MongoDB Shell
- MongoDB Data Model
- MongoDB Datatypes

### **Module 3: Database**

- Create Database
- Drop Database

### **Module 4: Collection**

- Create Collection
- Drop Collection

### **Module 5: CRUD Documents**

- Insert Documents
- Update Documents
- Delete Documents
- Query Documents

### **Module 6: Methods**

- Limit ()
- Sort ()
- Skip ()



## Angular JS Course Content:

### Module 1: Angular Overview

- History of Angular
- The leap from AngularJS to Angular
- What's new in Angular 10
- Angular 10 vs Angular 9
- Desktop Application class User Experience
- Productivity and Tooling
- Performance
- Community
- Full-featured Framework
- Supported Browsers (Angular 10)
- Platform for Targeting Native Mobile not just Web Browsers

### Module 2: All about TypeScript

- Introduction
- What is Typescript?
- Why Typescript?
- Setup and installation
- IDE support
- Different typescript versions
- Typescripts 3.8 for Angular 10
- Scoping using let and const Keywords (ES6)
- Template Literals (ES6)
- Rest and Spread Parameters (ES6)
- De-structuring (ES6)
- Introduction to Types
- Type inference
- Type Annotations
- Number
- Boolean
- String
- Array
- Tuple
- ENUM
- Any
- Void
- Null and Undefined
- Never
- Introduction to Functions
- Using types in functions
- Function as types
- Optional and default parameters

- Arrow functions
- Introduction to Classes
- Inheritance
- Access modifiers
- Getters and setters
- Read-only & static
- Introduction to Interfaces
- Optional properties and methods
- Strict structural contract
- Extending interface
- Implementing interface
- Introduction to Modules
- Import / Export
- Default
- Decorators

### **Module 3: Angular CLI**

- Angular CLI
- Anatomy of the project
- Setting up a workspace
- Updating Angular apps using ng update
- Adding support for external libraries using ng add
- Debugging Angular apps
- Working with Augury
- Using the Angular Language Service with Microsoft VS Code

### **Module 4: Angular building blocks**

- Modules
- Components
- Templates
- Metadata
- Data binding
- Directives
- Services
- Dependency injection
- Angular Ivy

### **Module 5: Angular Modules**

- Why modules?
- How to create modules?
- Built-in modules
- Root Module
- feature module

## **Module 6: Components in Angular**

- Introduction
- @Component decorator
- Component configuration object
- Custom components
- Component with templates
- Inline
- External
- Component with Styles
- Inline
- External
- Angular Elements

## **Module 7: Templates in Angular**

- HTML basic syntax
- Template expressions
- Template syntax
- Attribute, class, and style bindings
- @Input ()
- @Output
- Template reference variables
- Safe navigation operator

## **Module 8: Data binding**

- Interpolation
- Event binding
- Property binding
- two-way binding
- uses and examples

## **Module 9: Angular Directive and Pipes**

- Introduction to Directives
- Built in Structural Directives
- Built in Attribute Directives
- Building Custom Attribute Directives
- Building Custom Structural Directives
- Introduction to Pipes in Angular
- Using Built-in Pipes
- Creating Custom Pipes in Angular
- Pure and Impure Pipes in Angular

## **Module 10: Angular Forms**

- Types of Form in Angular

- Reactive form in Angular
- Dynamically Adding or Removing Form Control (s) or Form Group (s) using Form Array(s)
- Adding Synchronous Custom Validations to your Reactive Form
- Adding Asynchronous Custom Validations to your Reactive Form
- Resetting the value of a form

## **Module 11: Dependency Injections**

- Introduction
- Why DI?
- @Injectable decorator
- Custom service development
- Registering the service with Ng Module using providers key
- Provider Types
- Class
- Factory
- Value

## **Module 12: Angular Routing with Guards**

- Implementing Routing in an Angular App
- Abstracting the user link to a separate component
- Implementing Child Routes
- Path Match and Route Types
- Introduction to Route Guards in Angular
- CanActivate and CanActivateChild Guards in Angular
- CanDeactivate Guard in Angular
- Prefetching Data for a Component using Resolve

## **Module 13: RxJs Primer**

- Introduction
- Why RxJs?
- Observable interface
- Streams
- Operators
- Subscription
- Subject
- Schedulers

## **Module 14: Back-end services, HTTP Client**

- Setup installing the module
- Making a request for JSON data
- Type checking the response
- Error handling
- Sending data to the server

- Making a POST request
- Configuring other parts of the request

### **Module 15: Angular Advanced Features**

- Creating Libraries
- Angular Material Essentials
- Lazy Loading
- Customizing the Angular CLI using the Builder API
- Server Side Rendering with Angular Universal
- Working with Service Workers
- Building a Progressive Web App

### **Module 16: Testing**

- Creating Libraries
- Angular Material Essentials
- Lazy Loading
- Customizing the Angular CLI using the Builder API
- Server Side Rendering with Angular Universal
- Working with Service Workers
- Building a Progressive Web App

### **Module 17: Learn Deployment**

- Manually
- Using the Angular CLI with ahead-of-time (AOT) Compilation and Tree-Shaking (removing unused library code)
- Deployment Platforms for Angular Apps

### **Module 18: Placement Guide**

- Tips to clear an Interview
- Common Interview questions and answers
- Angular Interview Questions and Answers
- Resume Building Guide
- Attempt for Angular Global Certification Exam
- Earn Credentials and Start applying for Jobs