

MERN Stack Development Course (Beginner to Advanced)

Institute: Arrow Multimedia
Course Duration: 6 Months

Module 1: Web Development Fundamentals

- Introduction to Web Technologies
- How Internet & Web Works
- Client-Server Architecture
- HTML5 Structure & Elements
- CSS3 Styling & Layouts
- Responsive Design Basics
- Introduction to Git & GitHub

Module 2: JavaScript Fundamentals

- JavaScript Basics & Syntax
- Variables, Data Types & Operators
- Functions & Scope
- DOM Manipulation
- Events & Forms Handling
- ES6 Features
- Basic Problem Solving with JS

Module 3: Advanced JavaScript & Backend Basics

- Asynchronous JavaScript
- Promises & Async/Await
- JSON & APIs
- Introduction to Node.js
- NPM & Package Management
- Backend Concepts Overview

Module 4: Node.js & Express.js

- Node.js Architecture
- Express.js Framework
- RESTful API Development
- Routing & Middleware
- Authentication & Authorization
- Error Handling
- API Testing with Postman

Module 5: MongoDB Database

- Introduction to NoSQL Databases
- MongoDB Architecture
- CRUD Operations
- Schema Design with Mongoose
- Relationships & Indexing
- Database Security Basics

Module 6: React.js Frontend Development

- Introduction to React
- JSX & Components
- Props & State
- Hooks (useState, useEffect)
- Routing with React Router
- API Integration
- Form Handling & Validation

Module 7: Advanced React & State Management

- Context API
- Redux Basics
- Performance Optimization
- Reusable Components
- Authentication in React
- UI Libraries Integration

Module 8: Full Stack Integration

- Connecting Frontend with Backend
- JWT Authentication
- Role-Based Access Control
- File Uploads
- Environment Variables
- Deployment Basics

Module 9: DevOps & Deployment

- Hosting Concepts
- Deploying MERN Apps
- Cloud Platforms Overview
- CI/CD Basics
- Security Best Practices
- Application Monitoring

Module 10: Projects, Freelancing & Career

- Real-time Live Projects
- Full Stack Project Development
- Portfolio & GitHub Profile Creation
- Freelancing Platforms Overview
- Interview Preparation

- Final Assessment & Certification

Arrow Multimedia – Industry-Oriented Full Stack Development Training