



Zestminds Academy

MERN Stack Training Syllabus

45 Days | 3 Months | 6 Months MERN Pro Track

Zestminds Academy, Mohali

Training Mode	Offline classroom training in Mohali
Program Options	45 Days MERN Foundation, 3 Months MERN Stack Program, 6 Months MERN Pro Track
Batch Timings	10:00 AM - 1:00 PM / 2:00 PM - 5:00 PM
Fees	Please confirm current fee during counselling
Suitable For	B.Tech, BCA, MCA, diploma students, final-year students, freshers and beginners
Contact	+91-9056277961 Zestminds Academy, Mohali

This syllabus is designed to help students understand what they will learn in each MERN Stack training track before joining. Exact module depth, assignments and project scope may vary by batch, student readiness and selected duration.

No fake placement or salary guarantee is claimed. The focus is practical learning, project guidance, GitHub documentation and interview preparation support.

OVERVIEW

MERN Stack Training Overview

MERN Stack helps students build complete web applications using MongoDB, Express.js, React.js and Node.js. A practical MERN learner should understand frontend, backend, database and API flow as one connected development process.

Program Options

45 Days MERN Foundation Short-duration practical training for students who want web development foundations, JavaScript, React basics and beginner full stack flow.	3 Months MERN Stack Program Structured MERN learning for beginners and freshers with frontend, backend, database, APIs and connected project workflow.
6 Months MERN Pro Track First 3 months for MERN learning and full stack foundation. Next 3 months for major project development with GitHub documentation.	Offline Classroom Mode Students learn in Mohali with mentor support, doubt discussion, assignments, debugging and practical full stack practice.

Students Will Learn

- HTML, CSS and responsive web design basics
- JavaScript fundamentals required for React and Node.js
- React components, props, state, events and routing
- Node.js and Express.js backend basics
- REST API creation and API testing
- MongoDB database basics and Mongoose models
- Authentication basics and protected routes
- Git, GitHub and project documentation
- Deployment basics and project explanation practice

Suitable For

- B.Tech, BCA, MCA and diploma students
- Final-year students who need project or industrial training exposure
- Freshers preparing for web development roles
- Beginners who want a structured full stack roadmap
- Career switchers moving into software development
- Students from Mohali, Chandigarh, Kharar, Zirakpur and Panchkula

Learning Order

Web basics -> JavaScript -> React -> Node.js -> Express -> MongoDB -> APIs -> Authentication -> Projects -> Deployment -> Interview preparation

45 Days MERN Foundation Syllabus

This syllabus is for 45 Days. It is suitable for students who want practical exposure to web development foundations, JavaScript, React basics, backend introduction and beginner-level full stack flow.

Duration: 45 Days | Mode: Offline Classroom | Fee: Please confirm during counselling

Module 1: Web Basics Refresh

Students revise the base skills needed before MERN.

- HTML structure
- CSS basics
- Responsive layout basics
- Forms and page sections
- Common frontend mistakes

Module 2: JavaScript Foundation

Students build the JavaScript base needed for React and backend work.

- Variables and data types
- Functions
- Arrays and objects
- DOM basics
- Events and basic error handling

Module 3: React Introduction

Students learn how React handles UI and data display.

- Components
- JSX
- Props
- State
- Events
- Lists and forms

Module 4: Backend and Database Intro

Students get beginner-level exposure to full stack flow.

- Node.js introduction
- Express routes
- MongoDB basics
- API request-response flow
- Mini assignment

45 Days Practical Assignments

- Responsive landing page
- JavaScript to-do list or quiz app
- React student card listing
- Basic Express API practice
- MongoDB CRUD introduction task

3 Months MERN Stack Program Syllabus

This syllabus is for 3 Months. It is suitable for beginners and freshers who want to learn frontend, backend, database, APIs and a complete connected MERN project workflow.

Duration: 3 Months | Mode: Offline Classroom | Fee: Please confirm during counselling

Module 1: HTML, CSS and Responsive UI

Students build clean and responsive frontend layouts before moving into React.

- Semantic HTML
- Forms
- CSS layout
- Flexbox and Grid
- Responsive pages

Module 2: JavaScript for MERN

Students learn the JavaScript concepts needed for React and Node.js.

- Functions
- Arrays and objects
- ES6 basics
- Promises
- Fetch API
- Error handling

Module 3: React Frontend Development

Students learn component-based frontend development.

- Components and JSX
- Props and state
- Events
- Forms
- React Router
- API integration

Module 4: Node.js and Express Backend

Students learn backend routes and API structure.

- Server setup
- Express routes
- Middleware basics
- Controllers
- JSON responses
- Error handling

Module 5: MongoDB and Mongoose

Students learn how data is stored and managed in MERN apps.

- Collections and documents
- CRUD operations
- Schemas and models
- Validation basics
- Database thinking

Module 6: Full Stack Integration

Students connect frontend, backend and database.

- React form submission
- API calls
- Backend validation
- MongoDB storage
- UI updates
- Success/error messages

3 Months Practical Assignments

Frontend UI Assignment

Build responsive pages, form UI, reusable cards and dashboard layout using HTML, CSS and React components.

React API Integration Task

Connect React with API data and handle fetch requests, list rendering, search/filter and error display.

Backend CRUD API

Create backend APIs using Node.js and Express with GET, POST, PUT, DELETE, controllers, routes and Postman testing.

Full Stack Mini Project

Build a connected MERN application with React frontend, Express backend, MongoDB database and GitHub README.

Possible 3-Month Project Ideas

- Student management system
- Task management app
- Blog application
- Product listing app
- Basic admin dashboard

6 Months MERN Pro Track Syllabus

This syllabus is for 6 Months. The 6 Months MERN Pro Track is divided into 3 months of MERN learning and full stack foundation, followed by 3 months of major project development with GitHub documentation.

Duration: 6 Months | Mode: Offline Classroom | Project-Focused Training

6-Month Track Structure

First 3 Months	MERN learning, full stack foundation, assignments, debugging, APIs, MongoDB, authentication basics and deployment basics.
Next 3 Months	Major project development with GitHub documentation, project improvement, testing, debugging, deployment discussion and interview preparation.

First 3 Months: Learning and Full Stack Foundation

- HTML, CSS and responsive layout revision
- JavaScript fundamentals and ES6 concepts
- React components, state, props, routing and API integration
- Node.js and Express backend basics
- MongoDB and Mongoose database work
- REST API development and API testing
- Authentication basics using JWT concepts
- Git and GitHub workflow
- Deployment basics and project organization

First 3 Months Practical Assignments

1. React Frontend UI Assignment Build responsive React screens with components, props, state, forms, reusable cards and clean layout structure.	2. Node.js and Express REST API Assignment Create backend APIs with routes, controllers, middleware basics, JSON responses and API testing.
3. MongoDB CRUD Application Build database operations using MongoDB and Mongoose for create, read, update and delete workflows.	4. Authentication and Dashboard/Admin Panel Assignment Practice login flow concepts, protected route thinking, dashboard UI and basic admin panel workflow.

Next 3 Months: Major Project with GitHub Documentation

The last 3 months of the 6-month MERN training are focused on a guided major project. Students apply frontend, backend, database, authentication, API and deployment concepts in one structured application.

Major Project Work Includes

- Project idea discussion and requirement understanding
- Feature planning and module breakdown
- Frontend UI development with React
- Backend API development with Node.js and Express
- MongoDB database design and integration
- Authentication and protected route basics where suitable
- Form handling, validation and error handling
- Testing APIs and fixing integration issues
- Deployment discussion and project sharing basics
- GitHub repository organization and README writing
- Project explanation and interview discussion practice

Possible Major Project Ideas

- Learning management mini app
- Job portal basic version
- E-commerce product and order module
- Appointment booking system
- Event registration system
- Inventory or student management system

Expected Major Project Outcomes

Working MERN Project Structure Students learn how to organize frontend, backend, routes, controllers, models, components and API folders.	GitHub Repository Students upload and maintain project files in GitHub with clear folder structure and version history.
README Documentation Students prepare a README that explains project purpose, features, setup steps, tools used and project flow.	Project Explanation Students practice explaining frontend flow, backend APIs, database structure and project decisions.

Tools and Technologies Students May Use

Frontend Tools Tools and concepts used for building the user interface. ● HTML ● CSS ● JavaScript ● React ● React Router ● Responsive design	Backend Tools Tools and concepts used for server-side development. ● Node.js ● Express.js ● REST APIs ● Middleware ● Controllers ● JSON responses
Database Tools Database concepts used for data storage and retrieval. ● MongoDB ● Mongoose ● Collections ● Documents ● CRUD operations ● Schema design basics	Development Workflow Tools used for professional project practice. ● VS Code ● npm ● Git ● GitHub ● Postman or Thunder Client ● Environment variables

Students Will Practice

- Writing clean frontend components
- Building backend APIs
- Connecting React with Express APIs
- Storing and fetching data from MongoDB
- Debugging frontend and backend errors
- Documenting projects on GitHub
- Explaining project architecture and data flow

Certificate, Career Direction and Important Notes

Certificate Support

Training completion certificate support may be available as per selected program, attendance, assignments and completion criteria.

Internship Training / Project Phase

In the 6-month MERN Pro Track, the first 3 months are for learning and full stack foundation. The next 3 months are focused on a major project with GitHub documentation and project explanation practice.

Students Can Move Toward

- Frontend developer path
- React developer path
- Node.js backend development
- Full stack MERN development
- API development
- Internship or fresher-level web development preparation

Important Note

Zestminds Academy does not promise guaranteed jobs or salaries. The training supports practical learning, project work, GitHub presentation, interview preparation and career guidance. Final results depend on student practice, skill level, project quality, communication and interview performance.

Book Counselling	Call or WhatsApp +91-9056277961
Visit	Zestminds Academy, E-45, Industrial Area, Phase 8, Mohali
Best Next Step	Compare 45 Days, 3 Months and 6 Months tracks with a training counsellor before admission.

