



LIVE COURSE (BLENDED)

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#### **COURSE OVERVIEW**

The course is designed where students collaboratively build an e-commerce platform. Leveraging MongoDB for data storage, Express.js for server-side development, React for the dynamic user interface, and Node.js for the runtime environment, students integrate these technologies to create a robust full-stack application. The project encompasses database design, RESTful API development, state-of-the-art UI/UX implementation, and deployment strategies. With an emphasis on real-world application, the MERN project empowers students to showcase their proficiency in the MERN stack through the development of a fully functional, scalable, and deployable e-commerce platform.

#### **COURSE OBJECTIVE**

The MERN project aims to empower students with practical proficiency in MongoDB, Express.js, React, and Node.js. By building a collaborative e-commerce platform, students will apply their knowledge in database design, RESTful API development, and full-stack integration, showcasing their ability to create and deploy robust web applications using the MERN stack.

## WHAT YOU WILL LEARN

React JS , Node JS , Express JS and MongoDB
Database Design
Server-Side Development
Dynamic UI Design
Runtime Environment Management

## **COURSE SKILL SET**

Full-Stack Integration RESTful API Development UI/UX Implementation Deployment Strategies

## **PROGRAM HIGHLIGHTS**

Instructor- Dr. Priti Maheshwary Instructor- Dr. Pooja Bijlani Access - 1 Year Duration - 144 hours



Eligibility- Any graduate with a Science stream
No. of Modules - 9 modules
Language - English
Shareable certificate - Yes
Webinar- Yes

Module 1 - Introduction To Web Development:

Chapter 1 - Overview of web development concepts and technologies.

Chapter 2 - Understanding the role of front-end and back-end development.



Module 2 - MongoDB Basics:

Chapter 1 - Introduction to MongoDB as a NoSQL database.

Chapter 2 - CRUD operations (Create, Read, Update, Delete) in MongoDB.

Chapter 3 - Data modeling and schema design.

Module 3 - Node.Js Foundations:

Chapter 1 - Introduction to Node.js and its event-driven architecture.

Chapter 2 - Asynchronous programming in Node.js.

Chapter 3 - NPM (Node Package Manager) usage.



Module 4 - Express.Js Fundamentals:

Chapter 1 - Building RESTful APIs with Express.js.

Chapter 2 - Middleware and routing in Express.

Chapter 3 - Handling requests and responses.

Module 5 - React.Js Essentials:

Chapter 1 - React.js fundamentals and component-based architecture.

Chapter 2 - State and props management in React.

Chapter 3 - Handling events and forms in React.

Module 6 - Building Full-Stack Applications:

Chapter 1 - Integrating React.js with Node.js and Express.js.

Chapter 2 - Connecting the front-end and back-end for full-stack development.



Chapter 3 - Managing data flow between components and the server.

Module 7 - Authentication And Authorization:

Chapter 1 - Implementing user authentication using JWT (JSON Web Tokens).

Chapter 2 - Authorization and role-based access control.

Module 8 - Advanced React.Js Concepts:

Chapter 1 - React Hooks for State Management.

Chapter 2 - Context API for global state management.

Chapter 3 - React Router for navigation in single-page applications.



Module 9 - Deployment And Hosting:



