Gurcademy™

MERN Stack Course

Course Overview

This comprehensive MERN Stack Development course is designed to equip you with the skills needed to build robust, scalable, and dynamic web applications. You'll delve into the core technologies of the MERN stack: MongoDB, Express.js, React.js, and Node.js. Through hands-on projects and expert guidance, you'll gain a solid understanding of each technology and learn how to integrate them seamlessly to create full-stack web applications.

Why Choose This Course?

- **Industry-Relevant Skills:** Learn the most sought-after skills in web development.

- **Hands-On Projects:** Gain practical experience by building real-world applications.

- **Expert Instructors:** Learn from experienced professionals who are passionate about teaching.

- **Flexible Learning:** Choose from a variety of learning formats to fit your lifestyle.

- **Career Advancement:** Boost your career prospects and land high-paying jobs.

What You'll Learn

- **Frontend Development with React.js:**

- Component-based architecture

  - JSX and virtual DOM

  - State management with Redux

  - Routing with React Router

  - API integration and data fetching

  - Advanced React concepts (hooks, context API, etc.)

- **Backend Development with Node.js and Express.js:**

  - Server-side JavaScript with Node.js

  - Building RESTful APIs with Express.js

  - Database interactions with MongoDB

  - Authentication and authorization

  - Error handling and middleware

  - Deployment strategies

- **Database Management with MongoDB:**

  - NoSQL database concepts

  - MongoDB data modeling and querying

  - CRUD operations

  - Aggregation pipelines

  - Indexes and performance optimization

Tools & Technologies

- **Frontend:** React.js, JavaScript, HTML, CSS

- **Backend:** Node.js, Express.js

- **Database:** MongoDB

- **Version Control:** Git

- **IDE/Code Editor:** Visual Studio Code or similar

Curriculum

Month 1: Frontend Fundamentals with React.js

- Introduction to React.js

- JSX and Components

- State and Props

- Handling Events

- Lists and Keys

- Conditional Rendering

- Forms and Input Handling

- Routing with React Router

- State Management with Redux

Month 2: Backend Development with Node.js and Express.js

- Introduction to Node.js

- Building RESTful APIs with Express.js

- MongoDB Basics

- Database Interactions with Mongoose

- Authentication and Authorization

- Error Handling and Middleware

- Deployment Strategies (Heroku, Netlify, etc.)

Month 3: Full-Stack Advanced Topics

- Building a Full-Stack MERN Application

- Advanced React Concepts (Hooks, Context API, etc.)

- Advanced MongoDB Concepts (Aggregation Pipelines, Indexing)

- Testing and Debugging

- Deployment and Optimization

- Real-world Project: Building a Social Media App or E-commerce Platform

Additional Notes:

- **Hands-on Projects:** Incorporate regular hands-on projects throughout the curriculum to reinforce learning and build a portfolio.

- **Code Reviews and Feedback:** Provide constructive feedback on students' code to improve their skills.

- **Industry Best Practices:** Teach industry-standard practices for code quality, security, and performance optimization.

- **Career Guidance:** Offer guidance on job search strategies, resume writing, and interview preparation.