



## MERN Stack Web Development Course Syllabus

### Introduction to Web Development and MERN Stack

- Overview of web development
- Introduction to the MERN stack
- Setting up the development environment (Node.js, npm, MongoDB)
- Basics of Git and version control

### MongoDB - NoSQL Database

- Introduction to MongoDB
- CRUD operations (Create, Read, Update, Delete)
- Data modeling and schema design
- Indexing and querying in MongoDB

### Express.js - Backend Framework

- Introduction to Express.js
- Routing and middleware
- RESTful API design principles
- Express.js and MongoDB integration

### React - Frontend Library

- Introduction to React.js
- Components, props, and state
- React Router for navigation
- State management and hooks in React

### Node.js - Server-side JavaScript

- Introduction to Node.js
- Asynchronous programming with callbacks and Promises
- Building RESTful APIs with Node.js and Express.js
- Connecting React with Node.js backend

### Full-Stack Application Development

- Integrating MongoDB, Express.js, Node.js, and React
- User authentication and authorization
- Error handling and debugging in a full-stack environment
- Deploying a MERN stack application to a cloud platform

**Final Course Outcomes**

- Hands on experience with real time projects
- Industry Recognized Certificate
- Placement Assistance